# MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM.

## INTERNATIONAL FISHERY INVESTIGATIONS.

P74

# SECOND REPORT (SOUTHERN AREA)

ON

# FISHERY AND HYDROGRAPHICAL INVESTIGATIONS IN THE NORTH SEA AND ADJACENT WATERS.

CONDUCTED

FOR HIS MAJESTY'S GOVERNMENT

BY THE

MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM.

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SECOND REPORT (PART II.) of the COUNCIL of the MARINE BIOLOGICAL ASSOCIATION of the UNITED KINGDOM on work carried out in connection with the INTERNATIONAL FISHERY INVESTIGATIONS.

TO THE NORTH SEA FISHERIES INVESTIGATION COMMITTEE.

GENTLEMEN,

I AM instructed by the Council of the Marine Biological Association to submit for the information of the North Sea Fisheries Investigation Committee Part II. of their Second Report, which deals chiefly with observations made at sea during the years 1904–1905.

The Council desire to draw attention to the following points in the special memoirs, drawn up under their direction by the members of the scientific staff, which in their opinion seem worthy of particular consideration.

## I.—FISHERY INVESTIGATIONS IN THE NORTH SEA.

### *Vitality of Trawl-caught Plaice.*

Experiments have been made on the s.s. *Huxley*, in order to obtain definite information as to the amount of injury which is done to fish during the ordinary processes of trawling, with a view especially of determining what proportion of small plaice would be likely to survive, if they were returned to the sea after they had once reached the deck of a commercial steam trawler. This has always been recognised as a question of importance in connection with proposals to prohibit the landing or sale of small fish.

The plaice from 38 hauls of the commercial Otter- and Beam-trawls, made on grounds where small fish are abundant, have been examined and tested in such a way as to obtain a measure of their vitality or the probability of their survival in case they were returned to the sea. The fish to be tested were placed in tanks of running sea-water on the deck of the *Huxley*, and after an interval of time in the tanks varying from 20 minutes to, in one case, 55 hours, they were examined and classed either as healthy, moribund, or dead, the percentage belonging to each of these classes being recorded. Some fish were tested in this way immediately after leaving the net, and others were tested after different intervals of exposure on deck and after exposure under different conditions. In this way it has been possible to estimate the amount of injury to the fish which took place in the trawl itself, and that which was caused by conditions, such for example as hot sunshine, operating after the fish had left the water.

The experiments have shown that the Otter-trawl injures the fish to a greater extent than the Beam-trawl, and that fish from a haul of long duration are much more unlikely to survive than those from a short haul, especially when the Otter-trawl is used. Hot sunshine and a high temperature whilst the fish remain on deck, are also injurious, and fish stored in baskets quickly perish.

One hour may be taken as the shortest time that would be likely to elapse between the arrival of the trawl on deck and the shovelling overboard of any unmarketable small fish under the ordinary conditions of commercial trawling. In the case of hauls of the Otter-trawl the experiments show that, out of 12 hauls, half the small fish (under 10 inches in length) could not be classed as healthy in a single case after one hour's exposure on deck, nor did the numbers of probable survivors exceed 25 per cent. in more than two of the experiments. In the case of hauls of the Beam-trawl relatively fewer fish appear to be fatally injured, though even with this net 50 per cent of the small fish were considered to be healthy in only 5 of the 16 experiments. It is probable that these estimates of the percentage of fish, which would recover if thrown overboard, overstate rather than understate the chances of survival of small plaice caught and reliberated by commercial fishing vessels.

These experiments on the vitality of trawl-caught plaice give some indication that the power of resisting the effects of injury is not the same for fish of all sizes, and that it is somewhat different for the two sexes. Fish of each sex appear to increase in vitality with size, but not in a uniform way in each sex.

### *Lowestoft Trawler Records.*

In order to supplement the trawling investigations carried out by the special research steamer, it was arranged, at an early period of the investigations, that certain selected captains of trawling vessels, working from different ports, should keep detailed

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records of each haul made in the course of their ordinary fishing, and the collection of information in this manner has been continued. Three captains of Lowestoft trawling smacks have kept such records, and the detailed returns regularly furnished by them of 4,794 hauls made during the years 1903–1906 have been analysed, so far as they concern the catches of plaice and soles. The thanks of the Council of the Association are due to the owners of the fishing vessels in question for allowing these records to be used, and to the captains of the vessels for the very careful and intelligent manner in which the records have been kept.

From the information thus provided, much valuable evidence has been obtained concerning the seasonal distribution, in the years under investigation, of plaice and soles in the southern bight of the North Sea, which supports and confirms the results of other investigations, which the Association has carried out.

As regards plaice, it is shown that in the northern part of the region worked over by the Lowestoft trawlers, these fish occur in maximum quantity by weight during the summer, and in minimum quantity during the winter months. In the southern part of the area, on the other hand, there is a maximum in winter and a minimum in summer. In the intermediate region between these two parts of the area, the maxima occur in spring and autumn. These results are clearly in agreement with the movements indicated by the marking experiments in this part of the North Sea, namely a southward migration for the purpose of spawning in the late autumn and early winter, and a northward migration in spring.*

A remarkable feature of these records is the steady decline of the average catch of plaice during the years investigated, though the period is too short to show whether this decline is or is not due to temporary fluctuations.

The records show, further, that whereas plaice are not numerous on the shallow inshore grounds off the English coast, but increase in numbers as we proceed eastward, and become most abundant on the shallow continental grounds, soles, on the other hand, are most numerous on the English side, small soles especially being abundant on all the inshore grounds along our east coast from the Thames to the Norfolk coast. On these grounds the greatest numbers of soles are taken during the spring months, whilst the maximum abundance of large soles on the outer and deeper grounds occurs in autumn and winter.

### *Size and age of Plaice at Maturity.*

In our previous Reports observations have been recorded on the age of plaice of different sizes, as determined by the number of annual rings shown by the otoliths or ear stones. These observations have now been extended with special reference to the size and age at which plaice reach maturity for the first time, and important conclusions have been arrived at. Although there is a considerable range of individual variation in the age, as well as in the size at which plaice become ripe for the first time, the average sizes at first maturity have definite values, which are different in different regions.

In the central part of the North Sea, around the Dogger Bank, female plaice are on the average 40 centimeters (16 inches) long and the majority are just six years old, when they become mature for the first time ; whilst male plaice are about 32 centimeters (12½ inches) long and five years old, when they first reach maturity. These figures correspond closely with the average size at first maturity recorded for the east coast of Scotland and are apparently consistent with the records of Danish observers for the Horn Reef area.

In the southern bight of the North Sea, the average size of females at first maturity is about 33 centimeters (13 inches) and the average age five years, that is to say a year earlier than in the more northern region. These figures agree with the average size as recorded for the German and Dutch coasts by other observers.

In the western part of the English Channel the average size at first maturity appears to be the same as in the southern bight of the North Sea, but the corresponding age is about a year less, owing to the more rapid rate of growth of the young plaice in the Devon Bays.

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* Garstang. Report on experiments with Marked Fish during 1902–3. *Internat. Inves. Mar. Biol. Assoc. Report I.* 1902–3 [1905] *Cd.* 2670. There is also much unpublished information on later marking experiments, which confirms these migrations.

In this connection some observations made by a member of our staff on board a steam trawler working in the Barents Sea may be mentioned. These show that the average size at first maturity in that extreme northern region is the same as in the central parts of the North Sea, although the age at first maturity there is higher, presumably owing to the slower rate of growth. (*Journal of the Marine Biological Association, Vol. VIII.*, 1908, *p.* 82.)

These observations are of importance in showing that the regional differences as to size and age of plaice at first maturity are more extensive and numerous than has hitherto been recognised, and are of interest in connection with the hypothesis of the existence of two races of plaice, a northern and a southern one, in the North Sea.

*Trawling Investigations.*

In addition to the detailed memoirs, dealing with the subjects already referred to, a series of tables is presented, recording the particulars of the trawling stations worked by the "Huxley" in the years 1904–05, with a record of the number of fish captured at each station arranged in groups of 10 centimeter lengths for each species, whilst for the plaice, the measurements of each individual fish are also given. These detailed figures are put forward as a contribution to the general scheme of trawling investigations, which is being carried out by the International Council for the Study of the Sea. As they have already been summarised and discussed, together with similar figures supplied by other countries, extending over the period 1902 to 1907, in the Report of the Convener of Committee B of the International Council, it is not considered useful to deal with them further in this Report. A detailed discussion is better reserved until the figures for a further number of years are available.

## II.—HYDROGRAPHICAL INVESTIGATIONS IN THE ENGLISH CHANNEL.

Records of the observations on the salinity and temperature of the waters of the English Channel have been published at regular intervals in the Quarterly Bulletin issued by the International Council for the Study of the Sea. In the present Report the observations made in the years 1904–1905 are all brought together in the form of Tables and Charts, and are subjected to a detailed discussion.

It has been possible to compare the hydrographical conditions during the years under consideration not only with those of the year 1903, which were described in a previous report, but also with the average condition over a number of years, as calculated by the Hydrographical Staff of the International Council. From these comparisons it appears that the year 1903 was abnormal as regards the degree of salinity of the water in the English Channel, the salt Atlantic water having advanced into the Channel to an exceptional extent. Similar conditions were found by foreign observers to obtain during that year in other regions bordering the coasts of the North Atlantic.

In both the years 1904 and 1905 the salinities in the English Channel reached a maximum in the early months of the year, and fell to a minimum in the summer, but the range of salinity was much greater in 1904 than in 1905. In 1904 there was much more horizontal division of the water into layers of different salinity at the western end of the Channel than was the case in 1905. Both the greater range of the salinities and the increased division into layers point to more frequent and rapid movement of the water in 1904 than in 1905.

At the western end of the Channel the presence of the two currents, which were shown to exist in 1903, was again apparent, namely, a current of water of high salinity entering the Channel from the south-west, and a current of low salinity moving southwards from the Irish Channel. In 1904 the low salinity current had a minimum strength in the early months of the year, and a maximum strength in summer. In 1905 both the currents were relatively weak.

I am,

Gentlemen,

Your obedient Servant,

E. J. ALLEN,

*Director and Secretary to the Council.*

Marine Biological Laboratory,
Plymouth,
31st March, 1909.

# REPORT

ON

# THE VITALITY OF TRAWL-CAUGHT PLAICE.

BY


## J. O. BORLEY, M.A.

*Assistant Director of the Lowestoft Laboratory.*


With Figures 1-3 in the Text.

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# REPORT

ON

# THE VITALITY OF TRAWL-CAUGHT PLAICE.

BY

J. O. BORLEY, M.A.

## I.—PRELIMINARY.

The protection of young plaice by the imposition of size-limits must take the form either of preventing their capture, or of securing their liberation in a healthy condition after capture. It is possible that certain grounds possess a population of small plaice so nearly free from admixture of more valuable fish (of any species), that an appropriate size-limit would prevent all but a few casual visits of fishing vessels, and afford the desired protection by practically closing the ground. In other cases, however, fishing operations would continue, owing to the presence of other species of fish or of larger plaice. The effective protection would, in these cases, depend on the condition of the plaice which the size-limit excluded from the market, when these were returned to the sea by the fishermen. It is the purpose of the experiments presently to be described, to test this condition in the case of small trawl-caught plaice, with a view to ascertaining, approximately, what proportion of the catch might be expected to survive if returned to the sea, and thus whether any good purpose would be served by so returning them.

The way in which it was designed to make this test will be seen on reading the first of the two forms reproduced in Appendix A. This form was drawn up by Professor Garstang, to whose initiative the general plan of the operations is due; it was used as a guide in the earlier experiments (Experiments 1–4), and although some modifications were introduced as time went on (the second form of Appendix A. being used in the remaining experiments), its directions were observed in all essentials throughout the work.

The first experiment took place in May, 1904. It and its immediate successors were briefly described by Garstang,* and a tabular statement of the results of the first 11 experiments was subsequently drawn up by myself at Professor Garstang's request, and published in the "Summary Report on the Present State of our Knowledge with regard to the Plaice and Plaice-Fishery" of Petersen, Garstang, and Kyle.† This report mentions the vigorous condition of the fish captured by small Dutch and German sailing trawlers, states that "practically all" the fish from Danish vessels are landed alive, and after referring to the reasons furnished by the tables for expecting but a small survival from larger trawlers, expresses the need for more evidence (p. 70).

The information to hand has greatly increased since the publication of the report quoted. Twenty-eight experiments have taken place, involving a total of 16,163 fish, and each experiment consists of several sections, which for many purposes can be treated independently; taking the series as a whole there are 89 sections. The collection of this information is the work of Professor Garstang (Experiment 2), Mr. Todd (Experiment 3), Mr. Atkinson (Experiment 4 and the long series 12–28), Dr. Wallace (Experiments 9–11), and myself (Experiments 1 and 5–8) who carried out the work at sea.

I take this opportunity of expressing my thanks both to the colleagues whom I have mentioned for the arduous sea-work involved in the experiments, and to Professor Garstang, Dr. Allen, Dr. Schuster, and Miss Lee for criticism and advice. To Professor Garstang I owe valuable suggestions throughout the work, and to Miss Lee advice in the section on the comparative vitality of the different sexes and sizes of fish.

* Rapports et Procès-Verbaux, Vol. III., 1905, Appendix H., pp. 15, 16.

† Rapports et Procès-Verbaux, Vol. V I., 1907, Tables XXXVII. and XXXVIII.

## II.—METHOD.

All experiments were made on the "Huxley" upon the catches, either of a 43-foot Beam trawl, or of an Otter trawl with an 86-foot headline. The fish to be tested were placed in iron tanks through which a constant circulation of sea-water was kept up, and remained there for a time varying from twenty minutes to four hours.¶ They were then taken out singly, classed as healthy,† moribund, or dead, and were measured and recorded. The distinction made between healthy and moribund fish depends for its value solely upon the judgment of the operator, and of course cannot be said to be absolute. Of the two terms, moribund probably more accurately describes the fish to which it was applied, the term healthy being used for all fish neither dead nor moribund. A fish was considered to be moribund if only capable of such feeble movements as a slight raising of the gill cover; in Experiments 12–28 it was only classed as healthy if it attempted to regain its normal position, when placed with its white side upwards while in the tank—a position to which flat fish apparently greatly object. The time spent in the tanks was not of uniform duration throughout the experiments; partly because it frequently happened that doubt arose as to the class to which a fish belonged, and the stay was extended in the hope of resolving the doubt.

As a rule, some fish were put into the tanks at once on arrival, with a view to testing the injuries, or the freedom from injuries, at the end of the actual operations of trawling and heaving in. After this, batches of fish were put in the tanks at intervals to test their vitality after various periods out of water or under known conditions, until either all were found to be dead or no more remained. Some idea of the maximum vitality has thus been attained. The treatment of each of these batches of fish, although drawn from the same haul, involves independent testing, measuring and recording, and so really constitutes an independent experiment. To avoid confusion, however, the word "experiment" is applied only to the treatment of the whole haul, that of the separate batches being spoken of as sections of the experiment. Until a fish reached the tank, it was, as far as possible, subject to the conditions that would pertain on an ordinary trawler, unless it was placed in special conditions whose effect on it was to be observed: for instance, on one occasion some fish were left in the sun, others shielded from it. The temperature of the air was in each experiment taken with a whirling thermometer, the reading of the black-bulb thermometer was noted, as were also the contents of the trawl other than plaice, the weight of the catch, and other particulars.

The division of plaice into three classes will be seen to yield in any given case two estimates of the chances of survival: one, based on the assumption that all fish not actually dead would recover if liberated, and one based on the proportion of the fish neither dead nor moribund. The first is a maximum estimate, and probably excessive: the second is in the opinion of the observers more nearly accurate. The following table is given to indicate roughly the relation between the proportions of healthy, moribund and dead fish; the 28 experiments have been divided into four sets of seven, taken chronologically, and the percentages of living, moribund and dead expressed to the nearest integer for each set.

TABLE I.—SHOWING the numbers of fish under 25 cm. in length which were tested on hauling and after exposure on deck, and the percentage of these classed as healthy, moribund, and dead.

| Experiment. | On hauling. | | | | After one hour or less on deck. | | | | After more than one hour on deck. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Percentage Healthy. | Percentage Moribund. | Percentage Dead. | Total No. | Percentage Healthy. | Percentage Moribund. | Percentage Dead. | Total No. | Percentage Healthy. | Percentage Moribund. | Percentage Dead. | Total No. |
| 1 to 7 ... | 74 | 7 | 19 | 285 | 37 | 8 | 55 | 1156 | 25 | 5 | 70 | 2540 |
| 8 to 14 ... | 54 | 29 | 16 | 408 | 5 | 17 | 78 | 881 | 2 | 2 | 96 | 1738 |
| 15 to 21 ... | 66 | 22 | 12 | 803 | 12 | 11 | 77 | 1461 | 1 | 5 | 94 | 803 |
| 22 to 28 ... | 32 | 34 | 35 | 1638 | 2 | 6 | 92 | 2507 | 0 | + | 100 | 834 |
| Grand Total | 47 | 28 | 25 | 3134 | 12 | 9 | 79 | 6005 | 11 | 4 | 85 | 5915 |

+ Indicates an inconsiderable percentage.

¶ The method of testing the fish was thus that used by Fulton and Herdman (*vide infra*, p. 45), but the time the fish remained in the tanks was generally longer, and the classification was into three instead of two classes.

† Throughout this paper the term "living" is applied to the healthy together with the moribund.

It will be seen that the percentage moribund decreases rapidly with exposure on deck, except in the first group, where it is almost constant and is small ; by the end of an hour it averages 9 per cent., never being above 17 per cent ; after longer periods it is never over 5 per cent. of the whole. Many of the results of the experiments are so marked that this percentage is quite insufficient to invalidate their character, similar conclusions being reached whether the healthy fish alone or the whole of the fish alive, are considered as survivors. As, however, even a small percentage of the small plaice trawled commercially is of considerable importance from an economic point of view, it may be well to examine the trustworthiness of the determination of " healthy " fish rather more closely.

Examining first the particulars of the observations made upon plaice put into tanks within a few minutes of hauling, Experiments 1-7 will be seen to have a very low percentage of moribund and dead fish. This is probably due to the exceptionally favourable conditions under which these hauls were carried out (see Table 5 p. 11). In the three remaining groups there is some approach to uniformity among the percentages of moribund fish, none of which differ from the average for all the experiments by more than 6 per cent. : further, there is some parallelism between the percentages of moribund and dead fish in the three groups, the group with the most dead fish having also the most moribund, and so on. Turning next to the condition of the fish after exposure for an hour or more on deck, the relatively small increase in the percentage dead in Experiments 1-7, compared with that in the other experiments, confirms the high estimate of the vitality on hauling in the first group. Similarly Experiments 22-28 give further indications of being the most fatal group, as they were judged to be on hauling. The great decline in the percentage classed as moribund, as exposure increases in duration, is a natural result of the depletion of the " healthy " class from which the " moribund " class is recruited.

Thus although the percentages recorded as healthy, moribund, and dead differ to some extent in the four groups of experiments, this appears from internal evidence to be due to actual differences in the hauls, and need not be put down to the use of different standards by different observers. The consistency of the results after exposure with those on hauling point to a substantial correctness of classification.

There is some slight evidence of a tendency to overestimate rather than underestimate the number of healthy fish, but it can hardly be considered conclusive, and certainly points to no very serious errors. The first indication arises in the examination of the effects of exposure. Supposing the estimation of healthy fish to be accurate, the decline in the proportion in any one catch classed as healthy should depend solely on the duration and conditions of exposure, and not at all on trawling conditions. In three Beam and four Otter catches tested after half an hour's exposure this is the case : in five Otter catches tested after an hour on deck it is not. Details of the results referred to will be found on pp. 15, 16. Again injuries inflicted by Medusae appear very difficult to detect at once, (see pp. 13, 14.) The facts thus suggest that some fish which would cease to be vigorous during the second half hour out of water owing to injuries contracted in the trawl have been, in the Otter experiments at any rate, wrongly called healthy. These fish however form but a very small proportion of the whole. Again, in Experiment 20 a few fish were left in the tanks twelve hours, and showed a lower proportion of survivors than those put in with them and tested soon after. The number left in the tanks was however small.

On the whole, it appears to me that we have good grounds for concluding (i) that the personal bias of individual observers does not seriously affect the comparability of the results recorded for these experiments, (ii) that the proportion of fish classed as healthy gives a fairly correct though rough estimate of the numbers that would survive if thrown overboard, and (iii) that this estimate tends to be somewhat too high rather than too low.

It may be well to point out that the observers were accustomed to co-operation in the work of marking and transplanting plaice. In this work the same tanks were used, and there was the same necessity of judging from the behaviour of the fish in the tanks, whether it could be considered sufficiently vigorous and uninjured to have a good chance of survival on liberation ; and co-operation in carrying out such experiments should go far towards producing a common standard of judgment, and eliminating such personal bias as would make the vitality results incomparable.

The experiments were carried out in the spring and summer months (April to August), in which the trawlers most frequent the small fish grounds.

## III.—COMPARATIVE VITALITY OF THE TWO SEXES AND OF VARIOUS SIZES.

Before discussing the experimental results it is necessary to decide in what groups the fish are to be considered. Should marked differences in vitality be found between the two sexes or between various sizes the fish would need grouping accordingly, both for the study of these differences and to avoid their confusing the indications of other phenomena.

In studying comparative vitality, the fish treated were, in each sex, first tabulated in 2-cm. groups, viz., 12-13 cm., 14-15 cm., etc. These groups were chosen because their members were numerous enough for study, yet of very nearly uniform length. The proportion of healthy fish of each size-group in each sex in each section of an experiment was then expressed as a fraction whose numerator is the number of fish surviving, and whose denominator is the total number of fish in the group. In Experiment 20, section I., for instance, of 20 female fish in the 14-15 cm. group six survived. This is indicated by the fraction $\frac{6}{20}$. The fractions so formed will for brevity be spoken of as the vitalities of the groups to which they belong. The comparison of vitality of the sexes is simple. The vitality of each 2-cm. male group is divided by the corresponding female vitality *in the same section of the same experiment.* For instance the male vitality of the males of 14-15 cm. of experiment 20, section I. is $\frac{9}{27}$. If $\frac{9}{27}$ is divided by $\frac{6}{20}$ the resulting quotient 1·11 expresses the male vitality relatively to the female. This process has been carried out throughout, with the results shown in the table and curve. (Table 2, Fig. 1.)

TABLE 2.—The vitality of male fish relative to that of female fish of the same size.

| Size of Fish (cm.). | 12–13 | 14–15 | 16–17 | 18–19 | 20–21 | 22–23 | 24–25 | 26–27 |
|---|---|---|---|---|---|---|---|---|
| Average ... ... ... | 0·85 | 1·29 | 1·08 | 1·15 | 1·29 | 1·15 | 1·18 | 0·96 |
| Number of Fish treated ... | 651 | 1214 | 1094 | 973 | 775 | 727 | 389 | 64 |
| Number of comparisons made. | 15 | 21 | 31 | 35 | 31 | 27 | 16 | 4 |
| Probable error of average | 0·05 | 0·04 | 0·04 | 0·04 | 0·03 | 0·04 | 0·08 | — |
| Probable error of difference of averages. | | 0·06 | 0·06 | 0·06 | 0·05 | 0·05 | 0·09 | |

[NOTE.—From these calculations are omitted (1) all groups of less than five fish (as too small to give useful results), and (2) all groups in which none survived, since to include them would have introduced infinite quantities into the results.

Groups in which all survive also present a difficulty, since though treated as having (say) twice the vitality of another group half of whose numbers live, they may, strictly speaking, be in more than twice as good condition. To lessen this defect the experiment of omitting groups in which all survived was tried, and the averages were also weighted to diminish the importance of such cases. No considerable effect being produced, the simple numbers were retained.

This note applies to all similar calculations made in the paper.

The distinction of sex among small plaice is somewhat uncertain except by the aid of dissection, some females being quite possibly recorded as males. Such errors would not occur to any considerable extent among plaice above ca. 15 c.m., though some might occur at smaller sizes. The result of the mistake would be to approximate the apparent male vitality to the female, and hence to make the apparent relative vitality closer to unity than its true value. Supposing the error to affect Table 2 and Curve 1, its correction would thus cause the entries in the table to recede from unity and the curve to become somewhat more convex.

This correction could not, however, greatly affect the values given. The true relative vitality of the males is given by the formula

$$R_n = \frac{r_n - F_n E_n}{1 - E_n}$$

where $R_n$, $r_n$, $F_n$, are respectively the true and apparent relative vitalities and the female vitality of the n group, and E the proportion of the "male" class really females. This, even assuming that a quarter of all the so-called males below 20 cm. were females, only results in the following slightly changed relative vitalities :—

12-13 cm. 0·80 14-15 cm. 1·03 16-17 cm. 1·11 18-19 cm. 1·20]

It will be seen that at 20-21 cm. the male vitality is given as rather over one and a quarter times that of the females, and that on each side of this point it falls off, becoming at 26-27 cm. (though this group is very poorly represented) less than that of the other

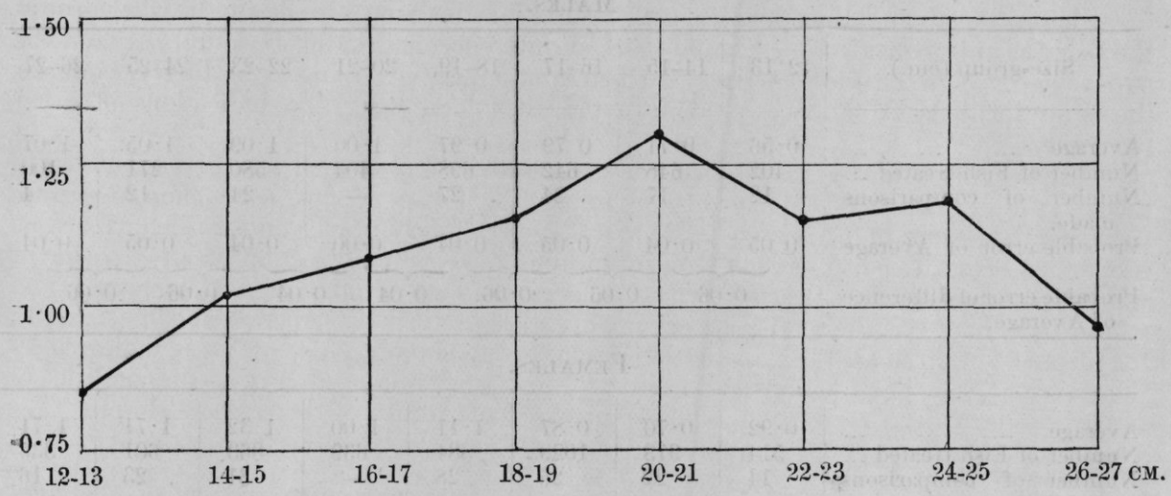


FIG. 1.—SHOWING the comparative vitality of the two sexes at the sizes named. The ordinates express the value obtained by dividing the proportion of male fish found to be healthy by the proportion of healthy female fish of the same size.

sex, as it was at the 12-13 cm. group. The probable errors of the differences of the averages seem to justify this general description of the character of the curve.

There is therefore reason for concluding that at 12-13 cm. the female fish are more vigorous than the male, that from this size onward to a length of ca. 20-21 cm. group the increase in vitality of the male is more rapid than in the female, after which it is less rapid, the result being that from 14-15 cm. to 24-25 cm. the male fish are the stronger, but from this size onward it is very possible they are the weaker. It would also appear that the operation of a size limit of 25 cm. or less would protect male plaice in rather more numerous cases than it would benefit the females.

These results agree with the indications of Figures 2 and 3.

The comparison of the vitality at different sizes presents more difficulty. Were the vitalities within each 2 cm. group to be averaged, the result might be vitiated by the presence of certain size-groups (say the large fish) only in hauls whose conditions were more than usually detrimental to the fish ; the average of such group would be unduly depressed. To obviate this, relative vitalities have been substituted for actual ones, in a manner which will be clear from an example. Experiment 20, Section I., females, has the following vitalities :—

| Size Group (cm.) | 12-13 | 14-15 | 16-17 | 18-19 | 20-21 | 22-23 | 24-25 | 26-27 |
|---|---|---|---|---|---|---|---|---|
| Vitality. | $\frac{0}{1}$ | $\frac{6}{20}$ | $\frac{15}{34}$ | $\frac{13}{20}$ | $\frac{13}{20}$ | $\frac{10}{12}$ | $\frac{2}{2}$ | $\frac{1}{1}$ |

Dividing by the vitality at 20-21 cm., and omitting certain groups for reasons already given, we have all vitalities expressed in relation to that at 20-21 cm. We have :—

| Size Group (cm.) | 14-15 | 16-17 | 18-19 | 20-21 | 22-23 |
|---|---|---|---|---|---|
| Vitality relative to that at 20-21 cm. | 0·46 | 0·68 | 1·00 | 1·00 | 1·28 |

Such relative vitalities I consider comparable with others from other sections and experiments. For however good or bad the conditions of a 2 cm. group, they are the same for the 20-21 cm. group of the same section of the same experiment. Accordingly all such comparisons with this 20-21 cm. group will yield statements of vitality in the same terms, and from which the influence of conditions other than size is eliminated. Relative vitalities furnish, of course, no information as to the absolute chances of survival. The 20-21 cm. group was chosen as a standard because it was present in a greater number of sections than were other groups.

The results of the process are the following Tables and Fig. 2.

TABLE 3.—VITALITY relative to that at 20-21 cm.

MALES.

| Size-group (cm.). | 12–13 | 14–15 | 16–17 | 18–19 | 20–21 | 22–23 | 24–25 | 26–27 |
|---|---|---|---|---|---|---|---|---|
| Average* ... ... ... | 0·56 | 0·71 | 0·79 | 0·97 | 1·00 | 1·09 | 1·05 | 1·07 |
| Number of Fish treated ... | 402 | 648 | 642 | 698 | 404 | 580 | 271 | 100 |
| Number of comparisons made. | 12 | 17 | 24 | 27 | — | 24 | 12 | 4 |
| Probable error of Average | 0·05 | 0·04 | 0·05 | 0·04 | 0·00 | 0·04 | 0·05 | 0·04 |
| Probable error of difference of Average. | 0·06 | 0·06 | 0·06 | 0·04 | 0·04 | 0·06 | 0·06 | |

FEMALES.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Average ... ... ... | 0·92 | 0·70 | 0·87 | 1·11 | 1·00 | 1·32 | 1·71 | 1·71 |
| Number of Fish treated ... | 514 | 973 | 1029 | 884 | 639 | 863 | 601 | 335 |
| Number of comparisons made. | 14 | 22 | 26 | 28 | — | 31 | 23 | 16 |
| Probable error of Average | 0·07 | 0·04 | 0·05 | 0·05 | 0·00 | 0·04 | 0·13 | 0·04 |
| Probable error of difference of Average. | 0·08 | 0·06 | 0·05 | 0·05 | 0·04 | 0·14 | 0·14 | |

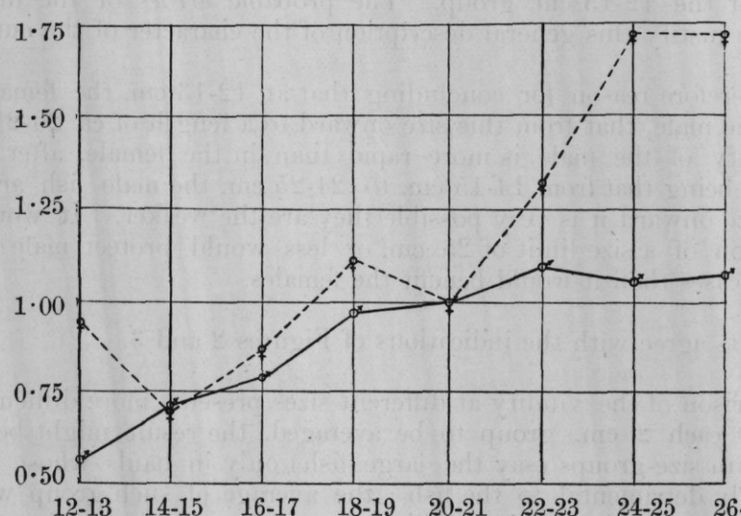


FIG. 2.—Showing the vitality of plaice of various sizes compared with that of plaice of the same sex and 20-21 cm. in length. The ordinates express the values obtained by dividing the proportion at the given sizes found to be healthy by the proportion of healthy of 20-21 cm. length. Males, continuous line; females, broken line.

The vitality of the male fish is seen to rise regularly till the 22–23 cm. group, after which it tends to remain stationary. The female vitality also rises, though the curve is irregular. Its rate of increase is rather more rapid than is that of the male and continues longer; but in the end (24–25 cm.) it shows signs of remaining unaltered. It is just these final groups (22–23, 26–27 cm.) that the probable error of difference of the averages shows to be untrustworthy as evidence of vitality.

As the female averages are uneven another method was also used. Instead of a fixed standard group, in terms of which all vitalities were expressed, the standard became the group 6 cm. smaller. Thus the vitality of the 18–19 cm. group was divided by that of the 12–13 cm. group, and so on, the result giving the vitality relative not, as before, to a fixed standard but to a defined but moving one.

* Adopting the notation of the note p. 6, the true male values in this table are given by—

$$\frac{M_n}{M_{20,21}} = \frac{m_n}{M_{20,21}\,(1-E_n)}\left(1-\frac{1}{r_n}\right),$$

where $M_n$ is the true and $m_n$ the apparent male vitality of the group n. Assuming even that a quarter of all so-called males below 20-21 were females (a most unlikely proportion), the values of the above average become—12-13 cm. 0·53, 16-17 cm. 0·81, 18-19 cm. 1·01. The rest are unaltered. The error, if any, cannot therefore be serious.

TABLE 4.—VITALITY relative to a group of Smaller Fish.

| Size (cm.) | Male.* | | | | | Female. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 18–19 | 20–21 | 22–23 | 24–25 | 26–27 | 18–19 | 20–21 | 22–23 | 24–25 | 26–27 |
| | 12–13 | 14–15 | 16–17 | 18–19 | 20–21 | 12–13 | 14–15 | 16–17 | 18–19 | 20–21 |
| Average ... ... ... ... | 1·89 | 1·93 | 1·81 | 1·34 | 1·07 | 1·65 | 1·65 | 1·69 | 1·63 | 1·71 |
| Number of fish treated ... | 616 | 648 | 456 | 222 | 100 | 498 | 825 | 624 | 450 | 335 |
| Number of comparisons made | 15 | 17 | 18 | 10 | 4 | 14 | 20 | 23 | 18 | 16 |
| Probable error of average ... | 0·19 | 0·15 | 0·19 | 0·08 | 0·04 | 0·07 | 0·10 | 0·11 | 0·10 | 0·04 |
| Probable error of difference of average ... ... ... | 0·24 | 0·24 | 0·21 | 0·09 | | 0·12 | 0·15 | 0·15 | 0·11 | |

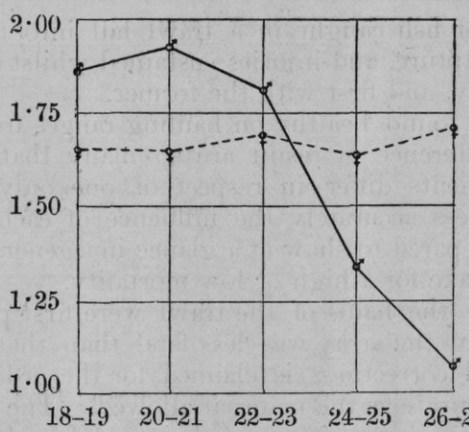


FIG. 3.—SHOWING the vitality of plaice of various sizes compared with that of others of the same sex and smaller size. The ordinates express the values obtained by dividing the proportion at the given sizes, which were found to be healthy, by the proportion of healthy among others of the same sex and 6 cm. smaller. Males, continuous line ; females, broken line.

The curve for the males corroborates in a general way that of Fig. 2. That for the females agrees also until the 26–27 cm. group, up to which its constant rate of increase continues, instead of as in Fig. 2 slackening, though in the two cases in the 28–29 cm. group complete arrest of increase has taken place, the vitality being equal to that of the 22–23 cm. group.

The number of fish represented in these curves (Figs. 2 and 3) is considerable, the indications consistent and, since the 2 cm. groups available for the various methods are not always the same,† one curve is to some extent a check on the other. It seems probable, therefore, that the indications furnished as to change of vitality with size are not accidental ; and as power to resist the effects of trawling and exposure to air is probably in the main a matter of general stamina, the method may be capable of contributing to our knowledge of plaice-biology. It is even possible that the differences of vitality of the two sexes is one of the causes of the marked difference found to exist between the numbers of large male and female plaice trawled in the North Sea.‡ It is to be regretted that no considerable number of large plaice occurred in the catches treated. The clear evidence of a marked diminution of the rate of increase of vigour among the males, and the almost complete absence of such increase among the females, coupled with the fact that the male plaice matures at a smaller size than the females of the same area, suggest that the approach of maturity may be concerned in the changes observed ; but the number of larger fish treated is insufficient to test the suggestion satisfactorily.

* Assuming the same notation as in previous notes, the true value of the male averages, supposing errors to have occurred in sex determination, is given by—

$$\frac{M_l}{M_s} = \frac{m_l}{m_s} \cdot \frac{r_l}{r_s} \cdot \frac{E_s\,(1-r_s) + r_s}{E_l\,(1-r_l) + r}.$$

Where $M_l$, $M_s$, $m_l$, $m_s$, are the real and apparent male vitalities of the large and of the corresponding small group.

If in all groups below 20 cm. even a quarter of the so-called "males" were females, the values for the males in Table 4 become—18–19 cm., 2·09 ; 20–21 cm., 1·55 ; 22–23 cm., 1·70 ; 24–25 cm., 1·31 ; 26–27 cm., 1·07. Thus the curve is not materially affected by errors made as to sex.

† For example, a section of an experiment is useless for curve 2 if the 20–21 cm. group is absent, but not for curve 3.

‡ Wallace : Age and growth rate of Plaice. Internat. Investigations Mar. Biol. Assoc., Second Report, Southern Area, Part I. (Cd. 3837), 1907, p. 34.

From the consideration of the above results it was decided to deal with the fish of 10–19 cm., 20–24 cm., and 25–29 cm. separately, but not to distinguish sexes, since, for the study of differences of vitality as marked as those from which it would be safe to draw conclusions of any value for the purpose in hand, the error introduced by the preponderance of different sexes in the groups compared would not greatly influence the result. An examination of the distribution of the fish within these groups showed that there was no serious danger of this distribution being other than fairly uniform throughout. The test applied was the comparisons of the medians of each 5 cm. group in each section of an experiment.

## IV.—THE EFFECTS OF TRAWLING.

### A. General.

The causes of death of fish caught in a trawl fall into two main groups, namely, injuries sustained during capture, and injuries sustained whilst on deck. It is convenient to deal with these separately, and first with the former.

The percentage of fish found healthy on hauling ranges from 100 to 0. The factors that lead to this great difference of result are so many that out of 28 tests it rarely happens that two experiments differ in respect of one only of these factors. It is therefore impossible to assess accurately the influence of each in a simple way, and the following table has been prepared to show at a glance in a general manner what conditions, alone or in combination, make for a high or low mortality.

In preparing this table the hauls of the trawl were first placed in descending order of vitality, *i.e.*, each haul in the array was less fatal than that on its right. Although nothing more than general correctness is claimed for the order given, considerable care was taken to make it as accurate as the material allowed. The percentages of both living and healthy fish were studied in the size-groups given, and where the order indicated by the two groups or by the living and healthy fish differed, the number of fish involved was also taken into account. Below the numbers indicating experiments were added the percentage of fish below 25 cm. found to be vigorous on hauling, and particulars of any accompanying condition, either physical or connected with the nature of the catch, which appeared likely to affect the vitality of the plaice.

TABLE 5.—General synopsis of the conditions of the hauls, the hauls being arranged in descending order of vitality of the fish.

| Experiment. | 2 | 1 | 5 | 6 | 10 | 7 | 16 | 17 | 21 | 19 | 26 | 8 | 27 | 23 | 3 | 20 | 14 | 11 | 22 | 18 | 4 | 9 | 25 | 13 | 15 | 24 | 12 | 28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10-19 cm. Healthy .. .. | 100 | 100 | — | — | — | — | 89 | — | 89 | 76 | — | 85 | 80 | 67 | 52 | **46** | **49** | 52 | **35** | **32** | — | **40** | **29** | **24** | — | **4** | — | **0** |
| 20-24 cm. Healthy .. .. | 100 | 100 | 100 | — | 100 | — | 99 | — | 71 | 97 | 99 | 81 | 87 | 91 | — | 74 | **48** | **40** | 79 | 55 | 52 | **40** | **33** | **12** | **20** | **1** | — | 2 |
| Soil .. .. .. .. .. | f.s. | f.l.s. | f.s.m. oz. | f.s. oz. | f.s. | s.oz. bl.m. | **s.** | m.s. | **s.** | **s.** | **s.** | s.m. | **s.** | **s.** | f.g.s. | **s.** | **s.c.s.** | f.s. | **s.** | **s.** | f.g.s. | f.s. | **s.** | **s.** | **s.** | **s.** | **s.** | f.s. |
| Depth (fathoms) .. .. .. | 7½ | **15-14** | 7½-7 | 6-7½ | **15** | 7½-9 | **17-12** | 9-8 | **17 14** | **12-12** | **13-13** | 7-9 | **13-13** | **11-9** | 9 | **12-12** | **10-12** | **17-13** | **14-13** | 9-9 | **14-13½** | **13-15** | **13-13** | **16-17** | **12-17** | **12-13** | **14-17** | **13-16** |
| Sea .. .. .. .. .. | m.s. | — | — | — | — | — | m. | — | m. | m. | m. | m.s. | m. | — | — | m. | m.s. | m. | m. | — | — | m.s. | m. | m. | m. | m. | **r.** | — |
| Sun—Black bulb on Hauling.. | N. | g. | g. | **39·4** | None | **56·6** | 23·6 | **35·8** | 18·3 | C | 26·6 | N | **54·5** | **41·9** | **58·9** | 15·8 | 21·6 | **54·4** | N. | **41·7** | **G.** | C | **36·4** | 23·0 | 23·5 | **45·0** | **32·8** | 16·6 |
| Air Temperature °C. (on hauling). | 9·4 | 13·6 | 6·6 | 8·3 | 12·8 | **20·6** | 12·4 | 13·5 | 14·4 | Cw. | 14·4 | 4·8 | — | **15·3** | **22·1** | 11·7 | 12·6 | 10·0 | 14·2 | 13·9 | **25·5** | 11·6 | **15·3** | 13·9 | 13·3 | **15·3** | 13·9 | 13·9 |
| Rain .. .. .. .. .. | r. | — | — | — | r. | — | — | — | r. | — | — | — | — | — | — | — | — | — | — | — | — | r. | — | — | — | — | — | — |
| Spiny fishes .. .. .. | — | **G.** | — | — | **G**W | — | **G.** | R | — | — | — | R | — | **G.** | — | — | **G.** | **G**W. | **G.** | — | WR | **G**W | R | **G.** | **G.** | — | W. | **G**R |
| Medusæ .. .. .. .. | — | — | — | — | — | — | — | M | **ACy.** | **A** | — | — | Cy | **A**Cy Ch | **Ch Cy** | A | M | — | A Cy. | **A** | — | — | A | — | — | — | Cy. | Cy. |
| Other invertebrates .. .. | — | Ai., Ar. | **Ar** | — | — | **Ar** | — | P | — | — | Ar | **Ar** | — | — | — | — | — | — | — | — | — | **Ar** | **Ar** | AiCc. | — | **Ar** | — | Ar. |
| Weight (kg.) .. .. .. | 152 | 83 | 213 | 215 | 65 | 264 | 210 | ca. 68 | 84 | ca. 75 | 96 | 147 | 76 | ca. 77 | — | 74 | 95 | 104 | ca. 35 | — | ca. 84 | 140 | 175 | 142 | **318** | **464** | 48 | 143 |
| Duration of haul (hours) .. | 3 | 3 | 2·5 | 2·5 | **5** | 2·5 | **4** | 1 | 3 | 2 | 1 | 2·5 | 1 | 2 | **4** | 2 | 2 | 3 | 2 | 2 | **7** | **5** | 3 | **4** | **4** | **4** | **5** | **4** |
| Gear .. .. .. .. .. | B. | B. | B. | B. | B. | **O.** | B. | B. | B. | B. | B. | **O.** | B. | B. | **O.** | **O.** | **O.** | **O.** | B. | B. | B. | **O.** | B. | **O.** | **O.** | **O.** | **O.** | **O.** |

SOIL: b, black. c, coarse. f, fine. g, grey. l, light. m, mud. oz, ooze. s, sand. SEA: m, moderate. r, rough. s, smooth. SUN: C, cloudy. G, gentle sunshine. N, night haul. Cw, cold wind. SPINY FISHES: g, grey gurnard (*Trigla gurnardus*). R, various rays, principally *Raja clavata*. W, the greater weever (*Trachinus draco*). MEDUSÆ A, *Aurelia* sp. Ch, *Chrysaora* sp. Cy, Cyanea sp. M, various species. OTHER INVERTEBRATES Ai, *Astropecten irregularis*. Ar, *Asterias rubens*. C.c, *Corystes cassivelaunus*. P, Portunus holsatus. Heavy type is used where an abundance of any invertebrate species or over 100 spiny fishes were present. GEAR: B, Beam trawl. O, Otter trawl.

It will be seen that in some cases the heavy type, which denotes the presence in a high degree of the condition signified, is scattered along the line fairly evenly. The vitality of the fish is naturally but little affected by climatic conditions, and accordingly the air temperatures above 15° and Black-bulb temperatures above 30° are distributed practically indiscriminately. The same may also be said of the symbols recording as common or abundant the invertebrates other than Medusæ. In all other cases the heavy type shows some tendency to concentrate towards the right—that is to furnish some reason for regarding the conditions represented as detrimental to the vitality of the fish. Unfortunately, however, this very unanimity of tendency greatly increases the difficulty of studying the effect of each condition. Thus the least fatal hauls are to some extent those made on the finest soil, but they are at the same time mostly hauls made in shallow water ; and considering the immense pressure that the catch must sustain as the great cone-shaped net, with its meshes drawn taut, is drawn upwards through the water in hauling (a process whose duration increases with the depth), it is highly possible that the depth is the really important influence, the fine texture of the soil being merely incidental. Similarly, the Otter trawl appears destructive : yet it must be noticed that the Otter trawl hauls showing low vitality are usually of long duration, and, moreover, many are taken in moderately rough weather, and result in the capture of spiny fishes. The table, however, does give rise to the impression that the worst conditions for the vitality of the catch appear to be the use of the Otter rather than the Beam trawl, the protraction of the haul, and possibly the presence of an abundance of Medusæ and of a heavy catch.

The following analysis may facilitate the examination of the table. The hauls are grouped according to the percentage of the catch which was classed as healthy, hauls in which no test was made on hauling being classed with their neighbours in the table.

TABLE 6.—Arrangement of Table 5 in four grades of vitality.

| Probable Percentage healthy. | Size Group. | Total No. of Experiments. | Number of hauls with. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Otter. | Duration 4 hours or more. | Moderately rough sea. | Weight over 300 kilograms. | Sand bottom. | Depth over 10 fathoms. | Over 100 Grey Gurnard. | Abundant. | | | |
| | | | | | | | | | | Aurelia. | Cyanea. | Chrysaora. | Asterias. |
| 100–75 | 10–19 c.m. | 13 | 2 | 2 | 5 | — | 5 | 7 | 3 | 2 | 1 | — | 3 |
| | 20–24 c.m. | 14 | 2 | 2 | 5 | — | 6 | 8 | 3 | 2 | — | — | 3 |
| 74–50 | 10–19 c.m. | 3 | 2 | 1 | 1 | 1* | 1 | 2 | — | 1 | 1 | 1 | — |
| | 20–24 c.m. | 5 | 2 | 2 | 2 | 2* | 3 | 3 | — | 2 | 2 | 1 | — |
| 49–25 | 10–19 c.m. | 7 | 3 | 2 | 3 | 1* | 5 | 6 | 1 | 1 | — | — | 2 |
| | 20–24 c.m. | 4 | 3 | 1 | 2 | — | 2 | 4 | 1 | — | — | — | 2 |
| 24–0 | 10–19 c.m. | 5 | 5 | 5 | 4 | 2 | 4 | 5 | 3 | — | — | — | 1 |
| | 20–24 c.m. | 5 | 5 | 5 | 4 | 2 | 4 | 5 | 3 | — | — | — | 1 |
| Total ... | | 28 | 12 | 10 | 13 | 4 | 15 | 20 | 7 | 4 | 2 | 1 | 6 |

## B. The Effect of Physical Conditions.

The sea, it will be seen, was moderately rough in a greater proportion of hauls in the lowest grade of survival than in the higher grades ; there are, however, many influences detrimental to the fish at work in the hauls of the lowest grade, and among the three higher grades the sea was moderately rough in a fairly constant proportion of hauls. The haul in sea described as rough (Experiment 9) has a low vitality, but it also possesses other features probably detrimental to the fish. The hauls in deep water are especially numerous in the lowest grade, as are those carried out on a "Sand" bottom. As these two conditions are not present in gradually increasing proportion from the highest to the lowest grade of vitality, it is probable that within the narrow limits of depth and soil concerned these conditions do not greatly affect the catch.

* These entries assume that the catches of Experiments 3 and 18, which included great masses of Medusæ, exceeded 300 kilograms in weight.

## C. The Effect of the Contents of the Trawl.

Coming next to the contents of the trawl, the same remark may perhaps be applied to the spiny fishes; they are most numerous in the lowest grade hauls, but more numerous in the best than in the intermediate grades, and thus (at least when only from 100 to 300 in number), cannot exert a very marked influence. *Asterias rubens* has obviously no detrimental effect on the fish. Medusæ are absent from the lowest grade, the hauls in which must therefore have been subject to conditions more destructive than abundance of jelly fish. They are present in far greater proportion in the hauls of the second grade of vitality than those of the first, the increase in the proportion of catches containing Medusæ being very much the same as that in the use of the Otter trawl and in the length of haul.

The influence of Medusæ thus needs closer examination. The two hauls in which great masses of Medusæ (Experiments 3 and 18) were present show not only a low initial vitality, but an exceedingly rapid death rate during the first hour on deck. Thus in Experiment 3, all were dead half an hour after hauling, with the exception of two fishes recorded as moribund; in the case of Experiment 18, after one hour 3 per cent. and 4 per cent. of the 10-19 cm. and 20-24 cm. fish were living, and but 2 per cent. of each group vigorous. The great bulk and weight of the jelly fish may, however, have contributed to this result; not only does the substance of the animals envelop the fish, but the net becomes clogged, setting up enormous pressure during the hauling of the trawl, by preventing the escape of water and also by the weight of the mass itself. It is noteworthy that neither catch could be weighed as a whole.

There are experiments more or less free from this complication of excessive mass and weight, though characterised by the presence of Medusæ in considerable quantity. The following table compares hauls in which jelly fish were present with those from which they were absent, hauls succeeded by the same small letter, *a*, *b*, &c., being fairly comparable. The experiments are entered in order of the duration of haul, and an average for the Beam hauls (none of which exceeded three hours in duration), is supplied.

Table 7.—Showing the character of comparable catches with and without Medusæ.

### A. With Medusæ.

| Experiment. | 10–19 cm. | | 20–24 cm. | |
|---|---|---|---|---|
| | Percentage Healthy on Hauling. | Percentage Healthy after one hour on Deck. | Percentage Healthy on Hauling. | Percentage Healthy after one hour on Deck. |
| 27 *a* (Beam) ... ... ... ... | 80 | 0 | 87 | 0 |
| 19 *b* „ ... ... ... ... | 76 | 11 | 97 | 50* |
| 22 *b* „ ... ... ... ... | 35 | 2 | 79 | 9 |
| 23 *b* „ ... ... ... ... | 67 | (33) | 91 | (45) |
| 21 *c* „ ... ... ... ... | 89 | 11 | 71 | 32 |
| 25 *c* „ ... ... ... ... | 29 | 0 | 38 | 0 |
| Average of above ... ... ... | 62·7 | 9·5 | 77·2 | 22·7 |
| 20 *d* (Otter) ... ... ... ... | 46 | 7 | 74 | 19 |
| 28 *e* „ ... ... ... ... | 0 | (0) | 2 | (0) |

### B. Without Medusæ.

| | | | | |
|---|---|---|---|---|
| 26 *a* (Beam) ... ... ... ... | — | 0 | 99 | 4 |
| 5 *b* „ ... ... ... ... | — | 67 | 100 | 72 |
| 6 *b* „ ... ... ... ... | — | 58 | — | 89 |
| 1 *c* „ ... ... ... ... | 100 | (72) | 100 | (73) |
| 2 *c* „ ... ... ... ... | 100 | (75) | 100 | (96) |
| Average of above ... ... ... | 100 | 54·4 | 99·8 | 66·8 |
| 14 *d* (Otter) ... ... ... ... | 49 | (2) | 48 | (9) |
| 13 *e* „ ... ... ... ... | 24 | (9) | 12 | (9) |

Values in brackets are interpolated from observations before and after one hour on deck.
* Only 12 fish tested.

Perhaps in consequence of the irregularity in the quantity of Medusæ present, as well as in other factors, the results are not uniformly striking, and it is evident that the presence of small quantities of jelly-fish, as in Experiment 20, is not incompatible with a high percentage of the catch being apparently healthy on hauling. Over three-quarters of the 10–19 cm. fish were alive in three out of the six short hauls of the Beam trawl in which jelly-fish were present, and in four out of the same experiments over three-quarters of the larger fish were uninjured. The low percentage of survivors after an hour's exposure proves however that Medusæ materially decrease the number of survivors in any catch in which they occur, and that their destructive effects are shown, when given time to develop, to be far more serious than at first appears.

There is no appearance of different degrees of virulence being associated with the *Aurelia*, *Chrysaora*, and *Cyanea* which made up the greater part of the Medusæ taken.

## D. The Effects related with the Process of Trawling.

Dealing lastly with the factors due to trawling, the indications are far more clear. The Otter trawl was used for a far smaller proportion of hauls in the highest grade than in the second, and for a far smaller proportion of those in the third than in the fourth grade: long hauls were far less frequent in the first than in the second grade, far more frequent in the lowest grade than in any other. Thus both Otter trawl and long hauls seem detrimental to the fish: and, though it is impossible from the evidence to separate the effect of each, the smaller proportion of long hauls in the third grade compared with the second constitutes some evidence that it is the Otter trawl that is the more destructive; especially as the third grade, with its short Otter hauls, is nearly free from Medusæ, spiny fish, rough sea, and excessive weight.

Since, however, the comparison of Otter and Beam catches is somewhat important, it will be well to attempt to study it more closely.

Three Beam and three Otter hauls took place in circumstances which permit of their arrangement in pairs whose members differ but little, except in gear used, though in one pair (Experiments 19 and 20) temperature conditions acted unfavourably to the Otter hauls. The first two pairs, being under conditions so nearly identical, give particularly reliable results. The following table shows the percentage of plaice classed as healthy in the catches of these hauls after one hour's exposure on deck.

Table 8.—Comparison of the vitality of Otter and Beam trawl catches.

| Size of Fish (cm.). | Percentage Healthy one hour after Hauling. | | | | | |
|---|---|---|---|---|---|---|
| Experiment | 6. | 7. | 5. | 8. | 19. | 20. |
| Gear ... | Beam. | Otter. | Beam. | Otter. | Beam. | Otter. |
| 10–19 ... ... ... ... | 58 | 33 | 67 | 28 | 11 | 7 |
| 20–24 ... ... ... ... | 89 | 17 | 72 | 10 | 50* | 19 |

* Only 12 fish tested. In experiments 19 and 20 the two size groups taken together give Beam 14 per cent., Otter 10 per cent.

The proportion healthy from the Otter hauls is seen to be far lower than from the Beam hauls.

The deadly nature of the Otter trawl probably results from the far greater pressure which must be set up in its net than in the Beam trawl. It is towed slightly faster than the Beam, the average speed for the Beam hauls in these experiments being 2·16 knots per hour, that of the Otter being 2·56 knots per hour. The increase in speed however by no means represents the increase of pressure. The spread of the Otter net can probably be put down quite safely at 60 feet, against the 43 feet of the Beam, and the headline forming the upper margin of the net's opening, instead of having a fixed position a very few feet above the bottom, as has the actual beam of the Beam trawl, arches up to a height which though variable must be very considerable. Thus the intake of the Otter trawl is far greater than that of the Beam, and as, unlike the latter, the Otter

depends on its movement for keeping it at work, the ship's engines have to be used far more vigorously in Otter trawling. The "Huxley" when using the Beam and Otter trawl works her engines at about 40-50 and 80-86 revolutions per minute respectively when towing with the tide, and 58-60 and as many as 96 respectively when towing against the tide. With the enormous difference of pressure which must exist in the two nets when in use, it is but natural that the condition of the catches should differ markedly. The chafed appearance so common in Otter-caught fish, especially round fish, would alone be eloquent of the violent action of this net.

It is also to be expected that prolonged pressure would prove detrimental to the fish ; and the following comparison of fairly comparable hauls bears out the provisional conclusion to that effect already reached.

TABLE 9.—COMPARISON of the vitality in short and long hauls.

| Size of Fish (cm). | Percentage Healthy on Hauling. | | | |
|---|---|---|---|---|
| Gear ... ... ... | Beam. | | Otter. | |
| Experiment ... ... | 22 | 27 | 9 | 11 |
| Time ... ... ... | 2 hours. | 1 hour. | 5 hours. | 3 hours. |
| 10–19 ... ... ... ... ... ... | 35 | 80 | 40 | 52 |
| 20–24 ... ... ... ... ... ... | 79 | 87 | 40 | 40 |

The shorter Beam haul has a greater percentage of vigorous fish than the longer, especially in the 10-19 cm. group. The vitality of the smaller group is lower in the long than in the short Otter haul also ; and though an equal percentage of the larger group was vigorous in Experiments 9 and 11, the total percentage alive was 77 in the five hour haul and 83 in that of three hours duration.

It does not seem possible to isolate the effect of weight on the catch. None of the catches are of great weight except, in all probability, Experiments 3 and 18, where great masses of jelly-fish filled the trawl. If we regard these two catches as weighing over 300 kgr., hauls of this considerable weight are present in the second grade of vitality in almost the same proportion as in the last, and more prevalent than in the third grade. It is, moreover, as impossible to separate weight-effect from the effect of long Otter hauls in the last grade as from the presence of jelly-fish in Experiments 3 and 18. Thus, although the view of Garstang* as to the fatal character of a heavy catch is inherently probable, the present experiments have nothing decisive to add in its support.

Summing up the results of the present section, it may be said that, among the conditions prevailing in the experiments, the influences found most detrimental to the fish are the use of the Otter trawl, the prolongation of the haul, and the presence in quantity of Medusæ.

## V.—EXPOSURE ON DECK.

### A. GENERAL.

Supposing a number of fish put into sea water immediately after hauling to be a fair sample of the whole, it is possible to study the effect of exposure on their vitality : for if, for example, 50 per cent. of the fish tested at once are found to be alive, and 25 per cent. of another batch tested later are alive, it may be concluded that half the fish alive on reaching the deck have died in the interval between the tests. The study of fish remaining out of the tanks is complicated by the fact that (as has been shown in the section on Medusæ), the mortality on deck is partly due to injuries received in the trawl. The following tables, which are intended to aid in a general search for the conditions most detrimental to the fish when on deck, therefore include entries of the trawling factors already found to be most destructive.

An example may make more clear the way in which the change of condition during exposure has been estimated. In Experiment 25, Section 1, 29 per cent. of the small

* Rapports et Procès verbaux, Vol. III, 1905, App. H, p. 5.

fish tested on hauling were classed as healthy, and 37 per cent. as moribund. Hence there were 66 per cent. alive. In the same experiment, Section 2, 7 per cent. of the fish tested half an hour after hauling were healthy and 32 per cent. living. Since 7 is 24·2 per cent. of 29, the percentage remaining healthy through half an hour's exposure, is entered in Table 10 as 24. Similarly, since 32 is 48·5 per cent. of 66, the percentage remaining alive is entered as 48.

TABLE 10.—SHOWING the percentage of the fish below 20 cm. in length and alive on hauling which survived half an hour's exposure on deck under various conditions.

| Experiment. | Percentage. | | Sun, Black Bulb Thermometer °C. | Air Temperature °C. | Sea. | Medusæ. | Weight (Kilogrammes). | Duration of Haul. (Hours.) | Gear. |
|---|---|---|---|---|---|---|---|---|---|
| | Healthy. | Living. | | | | | | | |
| 16 | 82 | 74 | 23·6 | 12·4 | Moderate | Gy. | 210 | 4 | B. |
| 25 | 24 | 48 | 36·4 | 15·3 | „ | Few | 175 | 3 | „ |
| 27 | 0 | 0 | 54·5 | — | „ | „ | 76 | 1 | „ |
| 28* | — | 13 | 16·6 | 13·9 | Smooth | „ | 143 | 4 | O. |
| 24 | 25 | 13 | 45·0 | 15·3 | Moderate | None | 464 | 4 | „ |
| 11 | 17 | 33 | 54·4 | 10·0 | „ | „ | 104 | 3 | „ |
| 14 | 6 | 67 | 21·6 | 12·6 | „ | Few | 95 | 2 | „ |

Gy., Grey Gurnard, common.
* None healthy on hauling; 1 per cent. of batch tested after an hour, healthy.

Among the three Beam trawl hauls there is no evidence that length of haul, or weight of catch exerted any influence on the fish surviving actual trawling. The best condition shown is that of the haul without Medusæ. The most striking feature is the regular decline of vitality with rise of temperature and increase of sunshine.

Among the four Otter trawl hauls there is no evidence of moderate sea or weight of catch influencing the fish after hauling. The one haul with Medusæ is in the worst condition. There is less evidence of the destructive effects of strong sun than among the Beam experiments, possibly owing to the Medusæ of Experiment 14, and there is less correspondence between the vital scale and temperature. The interesting feature of the Otter experiments is, however, the appearance of relation between percentage living (not remaining healthy) through a half-hour's exposure and the length of haul. The descending order of Otter experiments in respect of the percentage living is 14, 11, 24, 28, which is the ascending order of duration of haul. The Otter experiments thus contrast sharply with the Beam experiments, since the latter furnish no indication that the mortality on deck was due to other causes than exposure. The number of hauls with either gear is however too small to do more than suggest.

Table 11 shows similarly the effects of an hour's exposure.

TABLE 11.—SHOWING the percentage of fish below 20 cm. healthy and alive on hauling, which survived an hour's exposure on deck under various conditions.

| Experiment. | Percentage. | | Sun, Black Bulb °C. | Air Temperature °C. | Sea. | Medusæ. | Weight (Kilogrammes). | Duration of Haul (Hours.) | Gear. |
|---|---|---|---|---|---|---|---|---|---|
| | Healthy. | Living. | | | | | | | |
| 6 | (59) | (93) | 39·4 | 8·3 | Smooth | None | 215 | 2·5 | B. |
| 5 | 67 | 72 | Gentle | 6·6 | „ | „ | 213 | 2·5 | „ |
| 19 | 14 | 23 | Cloudy | Cold wind. | Moderate | Fairly abundant. | 75* | 2 | „ |
| 21 | 12 | 20 | 18·3 | 14·4 | „ | Abundant | 84 | 3 | „ |
| 22 | 6 | 9 | Night | 14·2 | „ | Few | Small | 2 | „ |
| 18 | 6 | 4 | 41·7 | 13·9 | Moderately smooth. | Abundant | Great | 2 | „ |
| 16 | 0 | 5 | 23·6 | 12·4 | Moderate | None | 210 | 4 | „ |
| 25 | 0 | 0 | 36·4 | 15·3 | „ | Several | 175 | 3 | „ |
| 8 | 33 | 57 | None | 4·8 | Moderately smooth. | None | 147 | 2·5 | O. |
| 7 | (33) | (36) | 56·6 | 20·6 | Smooth | „ | 264 | 2·5 | „ |
| 20 | 15 | 39 | 15·8 | 11·7 | Moderate | Few | 74 | 2 | „ |
| 9 | 2 | 2 | Cloudy | 11·6 | Moderately smooth. | None | 140 | 5 | „ |
| 24 | 0 | 1 | 45·0 | 15·3 | Moderate | „ | 464 | 4 | „ |

Percentages in brackets are percentages of the whole section tested after an hour, no fish having been tested on hauling.
* Weight of fish only.

It is difficult to interpret the position of the various Beam experiments in the scale of vitality. On the whole those showing the worst condition took place in warmer air, and the worst two were made upon fish from hauls of longer duration than the rest. Neither correspondence to temperature nor to duration of haul is however at all close ; and none of the other conditions seem to have had any obvious effect.

The vitality in the Otter experiments shows marked dependence on only one condition, namely, duration of haul. As in Table 10, the vitality of the fish from longer hauls is lower than that from shorter hauls. Thus, in spite of the presence of some Medusæ, Experiment 20 is higher in the vital scale than Experiment 9, which is a longer haul made under similar climatic conditions, and lower than Experiment 7 which, though free from Medusæ, has a slightly heavier catch and was carried out at a far higher temperature and under a far hotter sun. It thus appears that the fish dying on deck from injuries received in the trawl are sufficiently numerous to mask any effects of heat and sun, which thus need specially controlled tests, carried out upon fish from the same catch, for their estimation. The effects of duration of haul are also obvious, and since they affect not only the living (which include those recognisably moribund), but the vigorous, it is probable that in these experiments at all events the vigour of the fish was somewhat over-estimated on hauling. In Table 10 the percentage remaining vigorous is quite unaffected by the length of haul. Hence such evidence as the table furnishes suggests that mistaken classification has only occurred in the case of a few fish, which cease to be vigorous during the second half hour on deck—a very small proportion of those tested.

Before passing to the special experiments mentioned, the remarkable length of time which plaice survived, when in certain experiments the conditions were exceptionally favourable to them, seems worthy of mention. In Experiments 2 and 5, an appreciable percentage of fish were found to be healthy after exposure of 7 hours 50 minutes and 12 hours respectively. In Experiment 2 the fish were kept moist by rain and spray, but in Experiment 5 this was not so. The fish were from short hauls, but the long survival was probably due to the exposure occurring during the night : the effects of the sun (and incidentally of high temperature) were thus avoided.

## B.—The Effect of Temperature and Sunshine.

Although on hauling the vitality of fish caught on hot and sunny days was not necessarily low, it might be expected that its decline would be rapid as the fish lay on the deck. In Experiment 6 two attempts were made to test the effect of a bright sun directly, two batches of fish being left in the sun, two in the shade. The difference of conditions was, owing to the ship's motion, not complete, but it was nearly so. The following table expresses the results of the test :—

Table 12.—Showing the effect of sunshine and heat on the vitality of the catch.

| Exposure on deck ... | 2 hours. | | 2 hours. | | 3 hours. | | 3 hours. | |
|---|---|---|---|---|---|---|---|---|
| Temperature of air ... | 11·1° C. | | 11·1° C. | | 17·8° C. | | 17·8° C. | |
| Black bulb thermometer | 41·9° C. | | In shade. | | 51·8° C. | | In shade. | |
| Length of fish (cm.) | Percentage healthy. | Total Number. | Percentage healthy. | Total Number. | Percentage healthy. | Total Number. | Percentage healthy. | Number. |
| 10–19 ... ... ... | 70 | 132 | 85 | 150 | 32 | 68 | 11 | 174 |
| 20–24 ... ... ... | 82 | 45 | 98 | 54 | 23 | 43 | 24 | 50 |
| 25–29 ... ... ... | 100 | 11 | 100 | 12 | 9 | 22 | 100 | 1 |

It will be seen that, during the first two hours exposure, the great majority of the fish in each group were still alive, but among the fish below 25 cm. in length the mortality in the sun was fully twice as great as in the shade. After three hours exposure, on the other hand, the great majority of these fish were dead in each group, and the proportion of survivors was actually greater among the fish in the sun than among those in the shade. The condition of the protected and unprotected fish of larger size was identical in the first test ; the numbers dealt with were, however, very small. In the second test (after three hours on deck) scarcity of fish quite prevents useful comparison.

In view of the general increase in the air temperature, which had taken place while the fish were exposed, (from 8·3° at the beginning of the experiments to 17·8° in the third hour) it seems probable that after two hours exposure the relative effects of sunshine and shade had ceased to be distinguishable, in consequence of the more rapid mortality induced by the increased drying power of the atmosphere. Probably the degree of heat, within the limits usually experienced, exerts its chief effect on the fish as one of the factors determining the rate of desiccation. Wind, rain spray, even the quantity of fish and the rolling of the ship, however, also play their part in accelerating or retarding desiccation, and in the rest of the experiments it is impossible to isolate the effects of the sunshine and heat from those of the other factors.

### C.—The Effect of the Use of Baskets.

The fish were usually left, while on the deck, just as they fell, or else thrown in a low heap. In Experiment 2, after a night haul, at 1.30 a.m. the effect of putting them in a basket was tried at Dr. Petersen's suggestion, as it seemed possible that if kept moist in this way the fish might have a better chance of life. On examination next morning practically all the fish were dead, as were those on the deck. A few of the most promising were put into the tanks. The results were unequivocal, and were diametrically opposite to the expectation. A renewed trial was made in Experiment 5, under more rigorous conditions, with the same result.

Table 13.—Comparing the vitality of fish kept in a basket with those on the deck.

| Exposure. | One hour on deck. | | One hour in basket. | | Two hours twenty minutes on deck. | | Two hours twenty minutes in basket. | | Three hours on deck. | | Three hours in basket. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of fish. | Percentage Healthy. | Total Number. | Percentage Healthy. | Total Number. | Percentage Healthy. | Total Number. | Percentage Healthy. | Total Number. | Percentage Healthy. | Total Number. | Percentage Healthy. | Total Number. |
| 10–19 cm. ... | 67 | 82 | 33 | 172 | 58 | 108 | 11 | 94 | 25 | 119 | 1 | 224 |
| 20–24 cm. ... | 72 | 36 | 43 | 35 | 77 | 48 | 26 | 34 | 63 | 44 | 0 | 45 |
| 25–29 cm. ... | 100 | 3 | 64 | 25 | 86 | 7 | 29 | 7 | 67 | 3 | 0 | 2 |

The vitality of fish kept in a basket in Experiment 11 was also low; but in this case there was no control experiment on deck.

Several causes might be conjectured for this fatal effect of the basket: the weight of the fish on top may keep the gill covers of those below closed, so hastening asphyxiation; and again there is no possibility of a lively fish near the bottom working his way to the top and the fresh air, a frequent occurrence among the fish lying in a heap on deck, owing to the flapping and wriggling of the more lively fish.

## VI.—ACTUAL CHANCES OF SURVIVAL.

The previous sections have been devoted to attempts at detecting the influences most and least prejudicial to the fish, and to their comparison with each other. They are therefore unsuitable for the purpose of finding what was the general condition of the fish from any given haul at a certain time.

An attempt has, therefore, been made to put the results into a form bearing directly on the economic question of chances of survival under trade conditions.

For this purpose neither the vitality on hauling nor the utmost length of time a few fish survive are of moment; the latter being insignificant and the former irrelevant, since the men would doubtless first attend to the duties of their trade, and only afterwards throw or shovel overboard the small fish, which would in the meantime have been left on the decks with the "rubbish." The time occupied by these duties would of course vary greatly with the quantity of fish caught, the nature of it and of the rubbish, and the occurrence or non-occurrence of accidents to the net. The very least it can be placed at, as an average, is I think one hour. The accompanying table accordingly states for the groups, which a size-limit of 25 cm. (10 inches) would affect, the percentage alive or healthy one hour after hauling, in each experiment. The interpolated numbers tend rather towards over- than under-estimation of the vitality of the fish, since in calculating them it is assumed that in exposures of more than one hour in which the survival is nil,

the last fish alive died just as the period of exposure came to an and. The percentage of living (or of the healthy) fish is, in these calculations assumed to decline at a uniform rate.

TABLE 14.—SHOWING condition of the fish after one hour on deck.

| Gear. | Duration of Haul. | Experiment. | Percentage Healthy after One hour's Exposure. | | Percentage Alive after One hour's Exposure. | |
|---|---|---|---|---|---|---|
| | | | 10–19 cm. | 20–24 cm. | 10–19 cm. | 20–24 cm. |
| B. ... ... ... | 1 | 17 | (0) | (16) | (25) | (72) |
| | 1 | 26 | 0 | 4 | 1 | 4 |
| | 1 | 27 | 0 | 0 | 0 | 0 |
| | 2 | 18 | 2 | 2 | 3 | 4 |
| | 2 | 19 | 11 | 50 | 23 | 75 |
| | 2 | 22 | 2 | 9 | 5 | 15 |
| | 2 | 23 | (33) | (45) | (39) | (47) |
| | 2·5 | 5 | 67 | 72 | 72 | 83 |
| | 2·5 | 6 | 59 | 89 | 93 | 100 |
| | 3 | 1 | (72) | (73) | (72) | (74) |
| | 3 | 2 | (75) | (96) | (81) | (96) |
| | 3 | 21 | 11 | 32 | 20 | 41 |
| | 3 | 25 | 0 | 0 | 0 | 3 |
| | 4 | 16 | 0 | 8 | 5 | 18 |
| | 5 | 10 | (38) | (43) | (40) | (65) |
| | 7 | 4 | 5 | 3 | 5 | 7 |
| O. ... ... ... | 2 | 14 | (2) | (9) | (47) | (70) |
| | 2 | 20 | 7 | 19 | 27 | 42 |
| | 2·5 | 7 | 33 | 17 | 36 | 32 |
| | 2·5 | 8 | 28 | 10 | 53 | 61 |
| | 3 | 11 | (6) | (7) | (15) | (13) |
| | 4 | 3 | 0 | 0 | 0 | 0 |
| | 4 | 13 | (9) | (9) | (13) | (9) |
| | 4 | 15 | 0* | 0 | 0* | 0 |
| | 4 | 24 | 0 | 0 | 1 | 2 |
| | 4 | 28 | (0) | 0 | 2 | 4 |
| | 5 | 9 | 1 | 0 | 1 | 2 |
| | 5 | 12 | 0† | 0† | 20† | 35† |

* Ten fish only tested.
† After 40 minutes. Only 5 fish below 20 cm. tested.

The following analysis of the table may be of service.

TABLE 15.—SHOWING the number of hauls in which stated percentages of the catch survived one hour on deck.

| Grades of Survival. | Beam. | | | | Otter. | | | |
|---|---|---|---|---|---|---|---|---|
| | 10–19 cm. | | 20–24 cm. | | 10–19 cm. | | 20–24 cm. | |
| | Healthy. | Alive. | Healthy. | Alive. | Healthy. | Alive. | Healthy. | Alive. |
| 0–24 per cent. ... ... | 10 | 9 | 8 | 7 | 10 | 8 | 12 | 7 |
| 25–49 „ ... ... | 2 | 3 | 3 | 2 | 2 | 3* | — | 3 |
| 50–74 „ ... ... | 3 | 2 | 3 | 3 | — | 1 | — | 2 |
| 75–100 „ ... ... | 1 | 2 | 2 | 4 | — | — | — | — |
| Total Number of Experiments... | 16 | 16 | 16 | 16 | 12 | 12 | 12 | 12 |

* Including Experiment 12.

Thus in the Otter experiments a quarter of the fish survived the hour's exposure in at most five cases out of twelve, while a quarter were apparently vigorous in only two short hauls, made under very favourable circumstances. After the same period on deck, a quarter of the Beam-trawl catches lived and were vigorous in half the experiments in the case of the larger fish, and in a rather smaller proportion in the case of the smaller fish.

An attempt has also been made at estimating the time elapsing before half the fish cease to be healthy and before half are dead. Table 16 states these intervals to the nearest quarter of an hour, interpolated results being bracketed. B. indicates that less than 50 per cent. were living (or healthy) on hauling, H. that this proportion was found on hauling.

TABLE 16.—SHOWING the time elapsing before the percentage healthy or living falls to half of the whole.

| Gear. | Duration of Haul. (Hours.) | Experiment. | Hour's Exposure leaving 50 per cent. Healthy. | | Hour's Exposure leaving 50 per cent. Alive. | |
|---|---|---|---|---|---|---|
| | | | 10–19 cm. | 20–24 cm. | 10–19 cm. | 20–24 cm. |
| Beam ... ... | 1 | 17 | (B) | (B)* | (H) | (1½) |
| | 1 | 26 | (½) | (½) | (½) | (½) |
| | 1 | 27 | (¼) | (¼) | (¼) | (¼) |
| | 2 | 18 | B | (H) | (½) | (½) |
| | 2 | 19 | (½) | 1 | (¾) | (1¼) |
| | 2 | 22 | B | (½) | H | (½) |
| | 2 | 23 | (½) | (1) | (½) | (1) |
| | 2·5 | 5 | (1½) | (1¾) | (1¾) | (3) |
| | 2·5 | 6†† | (2½) | (2½) | (2¾) | (2¾) |
| | 3 | 1 | (1½) | (1½) | (1½) | (1¾) |
| | 3 | 2 | (3) | (4½) | (3½) | (4½) |
| | 3 | 21 | (½) | (½) | (¾) | (¾) |
| | 3 | 25 | B | B | (¼) | (¾) |
| | 4 | 16 | (¾) | (¾) | (¾) | (¾) |
| | 5 | 10 | (¾) | (1¼) | (¾) | (1½) |
| | 7 | 4 | B | H | B | (¼) |
| Otter ... ... | 2 | 14 | B† | B‡ | (1) | (1½) |
| | 2 | 20 | B | (½) | (½) | (¾) |
| | 2·5 | 7 | (½) | (B) | (½) | (½) |
| | 2·5 | 8 | (½) | (½) | (1) | (1¼) |
| | 3 | 11 | H | B | (¼) | (¼) |
| | 4 | 3 | H | H | H | H |
| | 4 | 13 | B | B | H | B |
| | 4 | 15 | B§ | B | (H) | (½) |
| | 4 | 24 | B | B | (¼) | (¼) |
| | 4 | 28 | B | B | B | (¼) |
| | 5 | 9 | B | B | H | (¼) |
| | 5 | 12 | —‖ | —‖ | —¶ | —¶ |

* 8 fish tested. † 49 per cent. healthy on hauling. ‡ 48 per cent. healthy on hauling. § 7 fish tested.
‖ None healthy after 40 minutes exposure. ¶ Less than 40 minutes exposure.
†† Percentages calculated from sections 2–5.

The results of this Table are summarised in Table 17.

TABLE 17.—SHOWING the number of hauls in which 50 per cent. of the small plaice survived after stated periods of exposure.

| Limits of Exposure. | Beam. | | | | Otter. | | | |
|---|---|---|---|---|---|---|---|---|
| | 10–19 cm. | | 20–24 cm. | | 10–19 cm. | | 20–24 cm. | |
| | Fifty per cent. Healthy. | Fifty per cent. Alive. | Fifty per cent. Healthy. | Fifty per cent. Alive. | Fifty per cent. Healthy. | Fifty per cent. Alive. | Fifty per cent. Healthy. | Fifty per cent. Alive. |
| Survival precluded. ... | 5 | 1 | 2 | 0 | 7 | 1 | 8 | 1 |
| Limit 0–½ hour ... ... | 5 | 7 | 6 | 6 | 5* | 9* | 4* | 8* |
| „ ¾–1 „ ... ... | 2 | 4 | 3 | 3 | — | 2 | — | 1 |
| „ 1¼–2 hours ... ... | 2 | 2 | 3 | 4 | — | — | — | 2 |
| „ 2¼–3 „ ... ... | 2 | 1 | 1 | 2 | — | — | — | — |
| „ 3½–4 ... ... | — | 1 | — | — | — | — | — | — |
| „ 4¼–5 „ ... ... | — | — | 1 | 1 | — | — | — | — |
| Total No. of hauls ... | 16 | 16 | 16 | 16 | 12 | 12 | 12 | 12 |

* Including Experiment 12.

Thus, in the Otter trawl experiments, 50 per cent. even of the larger fish survived an exposure of more than an hour's duration in only two out of twelve experiments, while in not one case were 50 per cent. considered healthy, after more than half an hour's exposure. Half an hour is the maximum exposure survived by half the fish (even the larger fish) from any haul of more than 3 hours duration, and this is reached in but one case (Experiment 15), or possibly, with the dubious inclusion of Experiment 12, in two. In three-quarters of the Otter hauls half the smaller fish were dead on hauling.

The fish caught in the Beam trawl survived longer. In almost exactly a quarter of the total number of experiments half the fish were classed as healthy after more than an hour on deck, the remaining hauls including all those (three in number) in which the trawl was down for more than three hours, and the eight hauls in which Medusæ were present in the catch. The number of hauls in which 50 per cent. were alive after over an hour's exposure also forms a quarter of the total number in the case of the 10-19 cm. fish, and about a half (namely, 7 out of 16) in the case of the larger fish. Lastly, the hauls in which half the fish were dead after a maximum exposure of half an hour form half of the experiments in the case of the smaller group, and rather less than half in the case of the 20-24 cm. fish. The proportion in which, after the same period, half the fish were healthy is of course smaller.

In only three of the sixteen Beam hauls did 50 per cent. of either size group live for two hours on deck. These (Numbers 2, 5, and 6) were short hauls on a sandy bottom in less than eight fathoms, with a smooth or but slightly broken sea in the relatively cool months of April and May.

These results, based as has been said on observations on over 16,000 fish derived from 28 hauls of the trawl made under varied conditions, constitute a mass of evidence which tells with great weight against the possibility of saving more than a very small proportion of the small plaice caught by commercial trawlers, as long as trawling on the small plaice grounds is commercially profitable under the regulations in force at the time.

In this connection it may be pointed out, that these experiments have been carried out under conditions of trawling in several respects more favourable to the fish caught than those under which trawling on the small plaice grounds is usually prosecuted. Fine weather has been selected as far as possible, and the weight of the catch has been usually considerably less than the weight which would satisfy a commercial trawler. Fine weather is essential to experiments of this kind, since it is necessary to avoid the artificial injury of the fish in the testing tanks, which would result from any violent movements of the ship ; but commercial trawling can be carried on in much rougher weather than was encountered during these experiments.

The length of the twelve Otter hauls described approximates to those usual with steam trawlers on the Eastern Grounds. Only two of the series exceeded four hours duration, while four were less than three hours. The usual length of haul made is from three to four hours. The " Huxley's " operations, however, differed from those of an ordinary fishing vessel, in that they were not confined to places where the densest accumulations of fish were found. The hauls made with the Beam trawl were of much less duration than is customary with this gear in commercial practice. A smack usually keeps her net down for an entire tide, *i.e.*, six hours ; of the Beam trawl hauls at present treated only three exceeded three hours in time. It will be noticed that in Experiment 4, where the net was down for seven hours, the condition of the fish closely resembles that found in the experiments with the Otter trawl.

The differences in length of haul may counterbalance the greater liability to injury, which fish possibly undergo in a Beam trawl, when worked and hauled from a steamer like the " Huxley ", as compared with the conditions on board a sailing smack. To this difference may be added the difference between the ground ropes in the two cases. The smack frequently uses a much heavier ground rope (often provided with chains and dangles) than that of the " Huxley's " Beam trawl, thus increasing the probability of obtaining a heavy catch.

Although the moderately rough seas prevailing in certain of the experiments now described do not seem to have markedly depreciated the condition of the catch, all familiar with the details of trawling operations will agree that the mortality of the small fish directly caused by the weight of the catch or (which is in some respects the same thing) by a long haul, is in all probability considerably increased by a very rough sea. The prolongation of the process of heaving in the net, the succession of violent and sudden pressures to which the catch is subjected as the rolling of the vessel alternately augments and relaxes the tension of the net, and finally the violent impact of the whole cod-end against the side or rail of the vessel cannot fail to be detrimental to the fish.

## VII.—SUMMARY AND CONCLUSION.

Reviewing the work done, it will be seen that the fish from 28 hauls have been subjected to a test designed to ascertain what proportion of them would survive if returned to the sea. Of these hauls, 16 were carried out with the commercial Beam trawl, 12 with the commercial Otter trawl, all being made from a steam trawler. The test applied consisted in placing a number of the fish, not selected in any way, into tanks of circulating sea-water, leaving them there for a time, then examining them individually, and recording them as healthy, moribund, or dead. The success of this method depended firstly on the time spent in the tanks being sufficient to revive exhausted fish and allow of hidden injuries becoming apparent in others, and secondly on the judgment of the observer. The observers have co-operated so long in work of a similar nature to the tests of vitality, that their estimates may be assumed to be closely comparable; and their classification of the fish throughout the experiments presents internal evidence of being substantially correct.

From the above considerations and from the consistency of the results attained, the method used seems capable of yielding trustworthy information as to the effective protection any given system of size-limits could be expected to afford to the small fish actually captured in trawls. It could, however, only do so when applied to a sufficient number of hauls, in circumstances representative of the fishing on the ground concerned, both as to gear and duration. For this reason, if for no other, it is desirable that further work by the present (or other suitable) method should be carried out. Should work on present lines be continued, experience suggests that the hauls would be most instructive if conducted under similar conditions in sets of two or three at least, that the number of hauls necessary to efficiently represent given circumstances might be ascertained; and that fish be put into the tanks at fixed intervals of time and left as long as possible. The adoption of fixed intervals of exposure would remove many of the difficulties in the examination of the results obtained.

Already, however, certain conclusions may be said to be established.

The Otter trawl has been shown to be far more destructive than the Beam, and long hauls to be more unfavourable to the fish than short ones. The proportion of fish below 25 cm. in length which would be returned to the sea in a vigorous condition from commercial trawlers would be very variable, but generally extremely small. In the hauls actually made with the Otter trawl it very rarely reached 25 per cent., and in most cases was below 10 per cent. of the whole.

The fish caught with the Beam trawl were in far better condition, and in short hauls under favourable conditions half or even three-quarters of the catch survived. The deleterious effect of prolonging the haul appears less marked than in the case of the Otter haul, but the point has not yet been sufficiently tested.

The conditions most unfavourable to the fish are thus the use of the Otter trawl, the prolongation of the haul, the presence of Medusæ, and the prevalence of hot sunshine and high temperature while the fish are on deck. Fish kept in baskets quickly perish. Great weight of catch and great depth seem likely to depreciate the vitality of the catch, but the present experiments cast no light on their effect.

Lastly, the method seems capable of assisting in the study of the comparative extent to which fish of different sexes and various sizes can resist rough usage, and of demonstrating that this power increases at different rates in the two sexes. As this power of resistance to the accidents of trawling is very probably an expression of general stamina, vitality experiments may yield biological results of value, especially if extended to the larger fish. The evidence so far gathered favours the conclusion that the vigour of male fish increases with size until about 21 cm. length is attained, and that a slackening of increase then occurs, which is not immediately shared by the female. The evidence fails, however, to show whether, or at what rate, the male fish resume this increase of strength, and also whether or at what size, slackening or arrest occurs in the female.

Settlement of these points and the refutation or establishment of the above indications must be the result of future work.

## ADDENDUM.

### Experiments 29–38.

Since this Report was written, ten additional experiments have been made on the s.s. "Huxley," in four of which the Otter trawl was used, the Beam trawl being employed in the remainder. The condition of 3,407 plaice was examined in the course of these experiments, 1,335 of the fish being below 20 cm. in length.

The chief object of these experiments was the testing of the previous classification of the fish. Since the time the plaice were left in sea-water had been seldom recorded, and was usually but a few hours, it was obviously impossible to decide whether the "healthy" fish included any considerable number really suffering from internal injuries whose effects had not developed, and whether any of the "moribund" would recover if given a longer time to revive. I am indebted to my colleague, Mr. Todd, for carrying out the work at sea. The procedure which he adopted was as follows :—The fish were placed in the tanks as in previous work, but instead of one examination, resulting in a classification into living, moribund and dead, they were examined repeatedly, at each examination the dead being removed and the living remaining in the water for a further test ; in the end all remaining fish were removed and classified, but these fish had been in the tanks for a very considerable length of time. Since the experiments were designed to examine the validity of previous classification, and not to test the effects of exposure, most of the batches entered the tanks as soon as they arrived on deck, and among these the longest test lasted $55\frac{3}{4}$ hours, the shortest 10 hours, while the average test took 30 hours. To ascertain the total number of plaice tested in one of these experiments it was only necessary to add to the number tested at the end, the number of those previously removed ; while the number living at the time of any given observation was found by subtracting from this total the total number which, up to and including the time in question, had been taken out dead. Thus, taking for example the 10–19 cm. fish of Exp. 31, 7 fish were removed dead 7 hours after capture, 5 more after 12 hours, while after 21 hours all were classified, when 18 were found to be alive and 13 dead. In this case, therefore, the total number tested was 43, of which 31 were alive 12 hours after capture.

The first noteworthy result obtained is the complete elimination of the "moribund" fish by the longer tests. Those which were obviously feeble at first either died, or possibly in a few cases recovered, and in consequence one is relieved of any doubt as to their condition. If, as I think is generally the case, the continual passage of sea-water obviates any ill effects arising from the presence of dead fish, this gives the longer tests a great advantage over the shorter. It is impossible to say how long elapsed in any case before the feeble fish were eliminated.

The next result has been to show very clearly that many fish succumb to their injuries many hours after hauling, though it is impossible of course to say whether these were apparently healthy or not on hauling. In Experiment 36, plaice caught with the Beam trawl died after 22 hours in the tanks, and in other experiments after 20 hours (Experiment 37), 3 hours (Experiment 33), 34 hours (Experiment 35) and after 9, 12, 7 and 4 in the case of those caught by the Otter trawl (Experiments 30, 31, 32 and 29). Nor does this mortality appear to be due to the confined quarters of the tanks : for although towards the end of the longer tests the number of fish in the tanks was very small, deaths still occurred.

Putting together the continued mortality and the final absence of moribund fish, it becomes obvious that in Experiments 1–28 the plaice classed as healthy more truly represent the survivors than do the living, and it is at least very likely that even estimates of survival based on the healthy are excessive.

Unfortunately the method followed furnishes no direct evidence as to whether some of the healthy class were in reality suffering from some internal injury which would ultimately prove fatal. The only evidence bearing on the point is indirect, consisting of the comparison of the estimates of healthy in Experiments 1–28 with those of living at the end of the tests in Experiments 29–38, in comparable experiments, and it is very meagre. The most nearly comparable experiments are Experiments 16 and 34 : and in Experiment 16 the percentages of the two size groups classed as healthy were respectively 23 per cent. and 10 per cent. greater than those classed as living after a longer test in Experiment 34. Again if the mean of the five and seven hour hauls, Experiments 4 and 10, be compared with the six hours haul Experiment 35, the healthy in the former form a greater proportion of the catch than do the living in the latter ; although the weight of the catch is greater in Experiment 35, it cannot be called very great, and probably does not account for the difference. Lastly such evidence as one can gather from the comparison

of Experiments 3, 22, 28 with 30, 31, 36, 37, points in the same direction: though from the fact that these catches included *Medusae*, whose quantity and time of entering the trawl would influence the result, no great weight can be attached to this comparison. Such as the evidence is, it evidently favours the conclusion that some of the so-called healthy fish would not ultimately survive.

As has been said it was not found that after a time no further deaths occurred. Thus no time was ascertained which could be stated to be of duration generally sufficient for a test. It is, however, evident that a test of 20 hours avoids a considerable amount of error, and in the case of the 20–24 cm. group was practically sufficient in the two Beam trawl Experiments 36 and 37.

The material does not warrant any conclusions as to differences in the numbers of fish injured internally in hauls of various gear or duration.

The chances of survival, had the fish been returned to the sea after capture in commercial trawling, are only indicated in the Otter trawl Experiment 32, in which none survived an hour's exposure, and the Beam trawl Experiments 33, 34, 36, in none of which more than 1 per cent. of the 10–19 cm. group survived the same period on deck.

Without going into a detailed examination of the other indications of Experiments 29–38, it may be said that examination of Tables 18–20 shows that the conclusions of Experiments 1–28 are in the main corroborated.

TABLE 18.—SHOWING the conditions of the experiments 29–38 the hauls being arranged in descending order of vitality.

| Experiment. | 36 | 35 | 37 | 34 | 38 | 31 | 30 | 29 | 33 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|
| Percentage alive after ca. 20 hrs., 10–19 cm. | (100) | (80) | 67 | 66 | 60* | **(45)** | **(39)** | **(17)** | **(14)** | **(0)** |
| Percentage alive after ca. 20 hrs., 20–24 cm. | 98 | (87) | 87 | 89 | 92* | (58) | — | **(33)** | (52) | **(5)** |
| Soil ... ... ... ... ... ... | **s.** | **s.** | **s.** | fs. | **s.** | **c.s.,fs.** | **ds.,sh.** | **s., sh.** | fs., s. | fs. |
| Depth ... ... ... ... ... ... | 10 | 10 | 10 | 10 | 10 | 8–10½ | 7–8 | **16–14½** | 9½–9 | 10½–9½ |
| Sea ... ... ... ... ... ... | m. | — | m. | m. | r. | — | some rolling. | some rolling. | — | — |
| Sun—Black bulb on hauling ... ... ... | **49·5** | C. | **39·9** | N. | C. | C. | — | C. | **55·8** | 25·3 |
| Air temperature °C. (on hauling) ... ... | **16·8** | 13·2 | **16·8** | **15·1** | **15·8** | — | — | — | **17·9** | 14·3 |
| Medusæ ... ... ... ... ... ... | M. | — | M. | — | M. | **Ch.** | Ch. | — | **M.** | **Ch.** |
| Weight (kg.) ... ... ... ... ... | 61+ | 219+ | 79+ | 178+ | 169+ | 80+ | — | — | 222++ | 171+ |
| Duration of haul (hours) ... ... ... | 2 | **6** | 2 | **4** | **4** | **4** | **4** | **6** | **6** | **6** |
| Gear ... ... ... ... ... ... | B. | B. | B. | B. | B. | **O.** | O. | **O.** | B. | **O.** |

* At 15 hours.
The symbols are those of Table 5.

In Table 18 the hauls are placed in descending order of percentage of survivors among those placed in the tanks on hauling, as nearly as I can judge that percentage to have been 20 hours afterwards; and it will be seen that there is the same gravitation of the long Otter hauls, of the Otter hauls as a whole, and the hauls containing the *Medusae* towards the lower grades of survival, that has been already noted. There is also the same lack of convincing evidence of deleterious effects resulting from prolonging a Beam trawl haul, from a rough sea, or from a moderate increase in the weight of the catch.

The estimates of relative vitality of different sexes and sizes already arrived at from the study of Experiments 1-28 are supported by the results of the later work, as closely as the smaller number of fish dealt with in the latter would lead one to expect.

TABLE 19.—SHOWING the vitality of male plaice relative to that of female fish of same size.

| Size of Fish (cm.). | 12–13 | 14–15 | 16–17 | 18–19 | 20–21 | 22–23 | 24–25 | 26–27 |
|---|---|---|---|---|---|---|---|---|
| Average, experiments 1–28 ... ... ... | 0·85 | 1·29 | 1·08 | 1·15 | 1·29 | 1·15 | 1·18 | 0·96 |
| „ „ 29–38 ... ... ... | 0·66 | 1·33 | 0·93 | 1·17 | 1·27 | 1·41 | 1·12 | — |
| Number of comparisons, experiments 1–28 | 15 | 21 | 31 | 35 | 31 | 27 | 16 | 4 |
| „ „ „ 29–38 | 1 | 5 | 11 | 13 | 13 | 10 | 4 | — |

Thus in Table 19 the vitality of the males was, according to each series of experiments, at first lower than that of the females, then with increase of size was greater, and among larger fish approached equality with it ; and the maximum excess of the male vitality over that of the females occurs at 20-21 cm. in one table and 22-23 c.m. in the other. Some of the corresponding entries in the two tables are remarkably close.

TABLE 20.—SHOWING the vitality of plaice of various sizes relative to that at 20-21 cm.

MALES.

| Size Group (cm.). | 12–13 | 14–15 | 16–17 | 18–19 | 20–21 | 22–23 | 24–25 | 26–27 |
|---|---|---|---|---|---|---|---|---|
| Average, experiments 1–28 ... ... ... | 0·56 | 0·71 | 0·79 | 0·97 | 1·00 | 1·09 | 1·05 | 1·07 |
| „ „ 29–38 ... ... ... | — | 0·69 | 0·78 | 1·04 | 1·00 | 1·85 | 1·38 | — |
| Number of comparisons, experiments 1–28 | 12 | 17 | 24 | 27 | — | 24 | 12 | 4 |
| „ „ „ 29–38 | — | 6 | 10 | 10 | — | 11 | 5 | — |

FEMALES.

| Size Group. | 12–13 | 14–15 | 16–17 | 18–19 | 20–21 | 22–23 | 24–25 | 26–27 |
|---|---|---|---|---|---|---|---|---|
| Average, experiments 1–28 ... ... ... | 0·92 | 0·70 | 0·87 | 1·11 | 1·00 | 1·32 | 1·71 | 1·71 |
| „ „ 29–38 ... ... ... | — | 0·68 | 0·91 | 0·89 | 1·00 | 1·30 | 1·61 | 1·73 |
| Number of comparisons, experiments 1–28 | 14 | 22 | 26 | 28 | — | 31 | 23 | 16 |
| „ „ „ 29–38 | — | 11 | 14 | 16 | — | 13 | 7 | 2 |

Similarly in Table 20 it will be seen that in each set of experiments the vitality of female plaice from 14–15 cm. upwards increases constantly in size until 24–25 cm. is reached, the entries for 26–27 closely approximating, while among the male fish the increase of vigor reaches a maximum at 22–23 cm., subsequently declining. Both these tables have been constructed in precisely the same way as Tables 2 and 3 : no comparison has been made in which any group of less than five fish was involved, and no fish is used for more than one comparison.

## PREVIOUS RESEARCHES ON VITALITY.

The following mention of other enquiries into the vitality of plaice may be of service.

Fulton* in a first account of his vitality observations epitomised the previous observations of M'Intosh, made in 1884. In hauls of from five to seven hours the plaice were usually all alive : in shorter hauls all were alive. He also found that hauls on muddy bottoms, and long hauls, were more destructive than shorter hauls or hauls on clean sand. Fulton then gives particulars of a four hour haul from the "Garland," in which only four plaice were dead out of a total of 173. He however expresses the opinion that in commercial fishing, which was then carried out with the Beam trawl, most of the small fish would perish. Finally, he mentions the opinions of M. M. Giard and Roussin that even the shrimp trawl is responsible for the destruction of great quantities of small fish.

In a longer paper† dealing with most of the edible species, observations on many more fish were recorded. The determinations were carried out on the "Garland" by Mr. T. Scott. The fish were in most cases classed as living or dead when they reached the deck, without a test in sea-water ; some however were a few minutes after arrival put in tubs through which a constant circulation of sea water was kept up, and kept there for thirty or forty minutes. No plaice died in the tubs; some fish classed as dead when they were put in failed to revive. Although the conditions of the hauls as to depth, duration and sea bottom was purposely varied, only an inconsiderable proportion of the plaice were dead on hauling, namely 0·12 per cent. of all sizes and 0·18 per cent. of the immature. This result at first sight appears contradictory to those I have obtained. I do not think however that it is so. The "Garland" was a small ship, working a Beam trawl only 25 feet in beam. The conditions were thus more favourable to the fish than in the "Huxley" hauls and even

* The capture of Immature fish. Eighth Report of Scottish Fishery Board, 1890, Part III., pp. 183–187.

† The Capture and Destruction of Immature Sea-fish. Ninth Annual Report of the Scottish Fishery Board, 1891, Part III., pp. 203–206.

in these the whole catch of a Beam trawl sometimes survived. To this, more than to the fact that later experiments have shown the half-hour test insufficient, I am inclined to ascribe the difference: it must however, be remembered that on the "Garland" no attempt was made to put all the fish in sea water, even for a short time. Duration of haul affected the vitality of most species caught very markedly, but the difference recorded for plaice from long and short hauls is very slight (Cf. pp. 15–17). Fulton also examined fish caught by shrimp trawl, with similar results, all fish being alive after a short haul, even on the muddy bottoms he considers so injurious, and all from even longer hauls on clean sand.

Herdman* in 1893 conducted experiments on plaice caught by the "John Fell," and gives the numbers surviving in 25 cases, a Shrimp trawl being used in 13 cases and a Beam trawl in 12. The test was similar to that already described, the fish remaining in the tanks from half an hour to (in one case) seven hours, but usually for less than two hours. Out of 393 plaice 81 per cent. were considered to have recovered. Only one of the hauls dealt with lasted more than two hours, and Professor Herdman considers, probably with justice, that the longer hauls usual in commercial fishing would have killed more fish. He ascribes the lowest rates of survival occurring to the presence of exceptional quantities of "rubbish" in the net.

Since the present paper was written, von Reitzenstein has also reported on the same subject.† The experiments described were carried out, some on the s.s. "Poseidon," which uses an Otter trawl, some on sailing cutters. The method of testing the fish was similar to that followed on the "Garland," but only two classes of fish were recognised; as the "living" fish consisted of those which at the conclusion of the experiment exhibited vigorous body movements and respiratory movements, and as they were thought suitable for marking experiments, it is evident that they corresponded with the "healthy" fish of the present report. The fish were first sorted into the dead and those showing signs of life, the latter only being placed in the tanks (or in the case of the cutters into the well) and remaining for four hours. They do not seem, in any of the experiments, to have remained on the deck for a longer time than this sorting rendered necessary.

A great difference was found between the condition of the fish in the two series of experiments. Combining all those carried out on the s.s. "Poseidon" von Reitzenstein finds that only 2·4 per cent. of what he terms "untermassigen Schollen," namely those below 18 cm. in length, were alive at the conclusion of the tests; of the same class of fish captured by sailing boats 35·4 per cent. survived. The corresponding percentages for the 10–19 cm. group are 3·3 per cent. and 40 per cent. This difference he ascribes in part to the length of haul being far greater in the case of the "Poseidon," in part to the gear she employs being heavier than that of the cutters. About half the "Poseidon" hauls exceeded seven hours in duration, whilst five of the seven hauls from cutters did not exceed two hours. The difference between the length of haul in the Otter trawl experiments of the "Huxley" and "Poseidon" probably largely accounts also for the difference in the estimates of vitality in the two series of experiments. Von Reitzenstein's conclusions as to the greater vigour of large plaice and as to the effect of prolonging the haul agree with those arrived at in this report. He ascribes the fatal nature of a long haul in part to the prevalence of sharp shell fragments in the stomach contents of plaice.

Lastly, Masterman,‡ in a memorandum on the vitality of trawled plaice, expresses the opinion that the fish sustain comparatively little injury while the net is being dragged along the bottom, the fatal operation being the hauling up and inboard of the trawl. He made some observations bearing on the point, which he rightly considers inconclusive. While agreeing that the hauling in is responsible for many injuries, it will be seen (pp. 14–17) that I do not think the dragging of the net along the bottom unattended by serious consequences to the plaice, the Otter being in this respect far more destructive than the Beam trawl.

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* Lancashire Sea Fisheries, Superintendent's Report, 31st July, 1893.

† Untersuchungen uber die Lebensfahigkeit der mit Grundschleppnetz gefangen Schollen, Die Beteiligung Deutschlands an der Internationalen Meeresforschung, Jahresbericht iv/v, 1908.

‡ Memorandum on the vitality of trawl-caught fish. Cons. perm. internat. Publication de circonstance, No. 42, 1908.

# APPENDIX A.

## Forms used for recording the results of the vitality Experiments.

### FORM USED IN EXPERIMENTS 1–4.

EXPERIMENTS ON THE VITALITY OF TRAWL-CAUGHT FISH.

Name of Species.....

Vessel.....

Kind of Trawl... .....

.....

Locality .....

..... .....

Depth .....

Date..... .....

Duration of Haul.....hrs.....mins. (Should be between 3 and 5 hrs.)

| Length of Fishes | Total Caught. | I. Immediately after Hauling. | | | | II. After exposure of hrs. min. | | | | III. After exposure of hrs. min. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | Moribund. | Dead. | Total. | Healthy. | Moribund. | Dead. | Total. | Healthy. | Moribund. | Dead. | Total. |
| 10–19 | | | | | | | | | | | | | |
| 20–24 | | | | | | | | | | | | | |
| 25–29 | | | | | | | | | | | | | |
| 30+ | | | | | | | | | | | | | |
| Totals | | | | | | | | | | | | | |

REMARKS :—

Was the deck dry or wet with spray, &c. ?

Were the small fish in a heap or scattered ?

Nature of Ground.....

..... .....

Sea..... .....

Sunshine.....

Rain or snow. .....

Air Temp.....

Chief kinds of Fish Caught.....

..... ....

.....

..... .....

Weight of Total Catch (all species).....kilo.

I.—The object of this experiment is to determine what proportion of the fishes are injured *during the actual process of trawling*. A sufficient number of fishes of different sizes should, therefore, be placed in tanks of circulating water *immediately* after opening the cod end.

II.—The object of this experiment is to determine the *minimum mortality* of the small fishes, after they have been exposed on deck to conditions similar to those prevailing on a commercial trawler. The marketable fishes should therefore be removed from the heap and sorted before any experimental work is done. In these experiments, however, plaice and soles below 25 cm. in length should be treated as unmarketable.

III.—The object of this experiment is to determine the *maximum vitality* of the fishes after prolonged exposure on deck (*e.g.*, 3 to 6 hours). The duration of the exposure must be left to the discretion of the observer.

## FORM USED IN EXPERIMENTS 5–28.

Since the healthy fish were those considered likely to survive if returned to the sea, they were frequently spoken of as the living, which word is used instead of healthy in this form. No change of classification was intended, and none occurred.

### EXPERIMENTS ON THE VITALITY OF TRAWL-CAUGHT FISH.

Species..... .....  Experiment No.....

| Vessel. | Voyage. | Station. | Date. | Locality. | Kind of Trawl. |
|---|---|---|---|---|---|
| | | | | | |

| Duration of Haul. | Total Weight of Catch (all Species). | Depth | | Sea. | Nature of Ground. | Air Temperature. | Sunshine and Black-bulb Temperature. | Rain or Snow. |
|---|---|---|---|---|---|---|---|---|
| | | Shot. | Hauled. | | | | | |
| | | | Fms. | | | | | |
| hrs. mins. | kgr. lbs. | | Mrs. | | | | | |

CHIEF SPECIES CAUGHT (FISH AND INVERTEBRATES).

| Length of fish (cm.). | Total caught. | 1. | | | | 2. | | | | 3. | | | | 4. | | | | 5. | | | | 6. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | Moribund. | Dead. | Total. | Healthy. | Moribund. | Dead. | Total. | Healthy. | Moribund. | Dead. | Total. | Healthy. | Moribund. | Dead. | Total. | Healthy. | Moribund. | Dead. | Total. | Healthy. | Moribund. | Dead. | Total. |
| 10–19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20–24 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25–29 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30+ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grand Total | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percentages ... | | | | | | | | | | | | | | | | | | | | | | | | | |

REMARKS :—

# APPENDIX B.

## Particulars of the Experiments.

### EXPERIMENT 1.

Date, 15/iv/04. Locality, Off Haaks Light-vessel. Beam trawl. Duration of haul, 3 hours. Total weight of catch, 83½ kilogrammes or 183½ lbs. Depth, 14-15 fathoms or 26-27 metres. Soil, fine light sand. Time of hauling, 10 a.m. Sea, smooth. Air temperature, 13·6°. Sunshine, continuous, but not hot. Rate of towing, 2⅝ miles per hour. Chief species caught, plaice, grey gurnard (112), dabs. *Asterias rubens* and *Astropecten irregularis*, very common.

Remarks :—The plaice were sorted into baskets in groups of less than 10 inches and over 10 inches, on a wet deck. The baskets were then upset, the plaice forming a low heap on a dry part of the deck.

In sections 1 and 2 the fish remained half an hour in the tanks. In section 3 they were left in the tanks 2 hours.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Immediately after hauling. | | | | | | | After exposure of 14 minutes. | | | | | | | After exposure of 3 hours. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 9 | 100 | — | — | — | — | 9 | 31 | 100 | — | — | — | — | 31 | — | — | — | — | 51 | 100 | 51 |
| | F. | 7 | | — | | — | | 7 | 10 | | — | | — | | 10 | — | | — | | 23 | | 23 |
| 20–24 | M. | 33 | 100 | — | — | — | — | 33 | 46 | 96·3 | 3 | 3·7 | — | — | 49 | — | — | 2 | 5·4 | 50 | 94·6 | 52 |
| | F. | 22 | | — | | — | | 22 | 33 | | — | | — | | 33 | — | | 3 | | 37 | | 40 |
| 25–29 | M. | 23 | 100 | — | — | — | — | 23 | 22 | 97·3 | — | 2·8 | — | — | 22 | — | — | 4 | 11·4 | 15 | 88·7 | 19 |
| | F. | 19 | | — | | — | | 19 | 13 | | 1 | | — | | 14 | — | | 1 | | 24 | | 25 |
| 30+ | M. | 5 | 100 | — | — | — | — | 5 | — | 100 | — | — | — | — | — | — | — | — | 20·0 | — | 80·0 | — |
| | F. | 2 | | — | | — | | 2 | 2 | | — | | — | | 2 | — | | 1 | | 4 | | 5 |
| Grand Total. | M. | 70 | 100 | — | — | — | — | 70 | 99 | 98·9 | 3 | 1·1 | — | — | 102 | — | — | 6 | 5·1 | 116 | 94·9 | 122 |
| | F. | 50 | | — | | — | | 50 | 58 | | 1 | | — | | 59 | — | | 5 | | 88 | | 93 |

### EXPERIMENT 2.

Date, 21–22/v/04. Locality, Sylt Inner. Beam trawl. Duration of haul, 3 hours. Total weight of catch, 152 kilogrammes or 334 lbs. Depth, 7½ fathoms or 14 metres. Soil, fine sand. Time of hauling, 1.30 a.m. Sea, slightly broken, no heavy swell but some rolling. Air temperature, 9·4°. Sunshine, none. Rate of towing, 2 miles per hour. Chief species caught, plaice and dabs almost entirely ; thornback rays (2).

Remarks :—The fish were in a low heap where they received some shaking, but were frequently wetted by showers of rain and some spray.

The plaice in section 4 were taken from the top of a basketful. The remainder were apparently in worse condition.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.) | | After selecting 198 marketable Fish. | | | | | | | After exposure of 1 hour 20 minutes. | | | | | | | After exposure of 7 hours 50 minutes. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 7 | 100 | — | — | — | — | 7 | 21 | 66·7 | 2 | 4·8 | 6 | 28·6 | 29 | 1 | 1·5 | — | — | 62 | 98·5 | 63 |
| | F. | 6 | | — | | — | | 6 | 7 | | — | | 6 | | 13 | — | | — | | 32 | | 32 |
| 20–24 | M. | 14 | 100 | — | — | — | — | 14 | 25 | 94·9 | — | — | 1 | 5·1 | 26 | 3 | 4·7 | — | — | 41 | 95·3 | 44 |
| | F. | 8 | | — | | — | | 8 | 12 | | — | | 1 | | 13 | — | | — | | 20 | | 20 |
| 25–29 | M. | 11 | 100 | — | — | — | — | 11 | — | 100 | — | — | — | — | — | — | — | — | — | 2 | 100 | 2 |
| | F. | 6 | | — | | — | | 6 | 1 | | — | | — | | 1 | — | | — | | 4 | | 4 |
| 30+ | M. | 5 | 100 | — | — | — | — | 5 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | 6 | | — | | — | | 6 | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 37 | 100 | — | — | — | — | 37 | 46 | 80·5 | 2 | 2·4 | 7 | 17·1 | 55 | 4 | 2·5 | — | — | 105 | 97·5 | 109 |
| | F. | 26 | | — | | — | | 26 | 20 | | — | | 7 | | 27 | — | | — | | 56 | | 56 |

EXPERIMENT 2—*continued.*

| Section | | 4. | | | | | | | 5. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.) | | After exposure of 7 hours 50 minutes in basket. | | | | | | | After exposure all night scattered on deck. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No | Per cent. | No |
| 10-19 | M. | — | — | — | — | — | — | — | — | — | — | — | 13 | 100 | 13 |
| | F. | — | | — | | — | | — | — | | — | | 6 | | 6 |
| 20-24 | M. | — | — | — | — | — | — | — | — | — | — | — | 23 | 100 | 23 |
| | F. | — | | — | | — | | — | — | | — | | 6 | | 6 |
| 25-29 | M. | 2 | 33·3 | 2 | 33·3 | 1 | 33·3 | 5 | — | — | — | — | 3 | 100 | 3 |
| | F. | -- | | — | | 1 | | 1 | — | | — | | 1 | | 1 |
| 30+ | M. | — | — | — | — | 2 | 100 | 2 | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 2 | 25·0 | 2 | 25·0 | 3 | 50·0 | 7 | — | — | — | — | 39 | 100 | 39 |
| | F. | — | | — | | 1 | | 1 | — | | — | | 13 | | 13 |

EXPERIMENT 3.

Date, 3/viii/04. Locality, Off Ymuiden. Otter trawl. Duration of haul, 4 hours. Total weight of fish, ca. 35 kilogrammes or 77 lbs. Depth, 9 fathoms or 16 metres. Soil, fine grey sand. Time of hauling, 10.30 a.m. Sea, smooth. Air temperature, 22·1°. Sunshine, 58·9° of black bulb thermometer. Rate of towing, 2½ miles per hour. Chief species caught, plaice, greater weevers, 43 ; grey gurnard, 4 ; latchet, 4 ; and great mass of jelly-fish (*Chrysaora* and *Cyanea*).

Remarks :—The medusæ may have injured the fish by their stings and their weight, and also by clogging the meshes of the net, thus increasing the pressure on the fish during the towing and hauling.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Immediately after hauling. | | | | | | | After exposure of 10 minutes. | | | | | | | After exposure of 20 minutes. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 | M. | 23 | 52·5 | 3 | 5·2 | 18 | 42·3 | 44 | 7 | 17·9 | 2 | 6·0 | 29 | 76 1 | 38 | — | — | 1 | 1·4 | 74 | 98·6 | 75 |
| | F. | 18 | | 1 | | 15 | | 34 | 5 | | 2 | | 22 | | 29 | — | | 1 | | 65 | | 66 |
| 20-24 | M. | 3 | 57·1 | — | 28·6 | — | 14·3 | 3 | — | — | — | — | 1 | 100 | 1 | — | — | — | — | 4 | 100 | 4 |
| | F. | 1 | | 2 | | 1 | | 4 | — | | — | | — | | — | — | | — | | 7 | | 7 |
| 25-29 | M. | — | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 100 | — |
| | F. | 1 | | — | | — | | 1 | — | | — | | — | | — | — | | — | | 1 | | 1 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 26 | 53·5 | 3 | 7·0 | 18 | 39·5 | 47 | 7 | 17·7 | 2 | 5·8 | 30 | 76·5 | 39 | — | — | 1 | 1·3 | 78 | 98·7 | 79 |
| | F. | 20 | | 3 | | 16 | | 39 | 5 | | 2 | | 22 | | 29 | — | | 1 | | 73 | | 74 |

## EXPERIMENT 4.

Date, 22/viii/04. Locality, Broad Fourteens. Beam trawl. Duration of haul, 7 hours. Total weight of catch, ca. 84 kilogrammes or 186 lbs. Depth, 13½-14 fathoms or 24-26 metres. Soil, fine grey sand. Time of hauling, 10.30 a.m. Sea, calm with slight swell. Air temperature, 25·5°. Sunshine, gentle, but continuous. Rate of towing, 2½ miles per hour. Chief species caught, plaice, greater weevers (half a basket), thornback ray (3).

Remarks :—The deck was dry on hauling. The plaice lay about on deck within the area bounded by the pound-boards, and as they had been stirred about in packing up other fish.

Section 1 consists of fish put in the tank after selecting 48 marketable fish.

| Length of Fish (cm.). | Section | 1. Immediately after hauling. | | | | | | | 2. After exposure of 1 hour. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | — | 25·0 | — | — | 1 | 75·0 | 1 | 1 | 5·3 | — | — | 14 | 94·7 | 15 |
| | F. | 1 | | — | | 2 | | 3 | — | | — | | 4 | | 4 |
| 20–24 | M. | 19 | 52·4 | 10 | 20·6 | 7 | 27·0 | 36 | 3 | 3·4 | 5 | 3·4 | 111 | 93·2 | 119 |
| | F. | 14 | | 3 | | 10 | | 27 | 4 | | 2 | | 83 | | 89 |
| 25–29 | M. | — | 16·7 | 4 | 66·7 | 1 | 16·7 | 5 | 2 | 18·8 | — | 6·3 | 6 | 75·0 | 8 |
| | F. | 1 | | — | | — | | 1 | 1 | | 1 | | 6 | | 8 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total | M. | 19 | 48·0 | 14 | 23·2 | 9 | 28·8 | 42 | 6 | 4·5 | 5 | 3·2 | 131 | 92·2 | 142 |
| | F. | 16 | | 3 | | 12 | | 31 | 5 | | 3 | | 93 | | 101 |

## EXPERIMENT 5.

Date, 10/iv/06. Locality, Off Graa Deep Fairway. Beam trawl. Duration of haul, 2·5 hours. Total weight of catch, 213 kilogrammes or 468 lbs. Depth, 7½–7 fathoms or 14–13 metres. Soil, fine sand, mud, and fine sand and ooze. Time of hauling, 6.5 p.m. Sea, smooth. Air temperature on hauling. 6·6°. Sunshine, sunset. Rate of towing, 2½ miles per hour. Chief species caught, almost entirely plaice ; few small dabs ; two baskets of invertebrates, weighing 52 kilogrammes, and mainly consisting of *Asterias rubens*.

Remarks :—Attempts were made in this experiment to ascertain the effect of keeping the fish in a basket. The fish were sorted into plaice and other species, the plaice of over and under 10 inches were thrown into baskets, and those which were to be simply exposed on deck were then tipped out on a dry part of the deck. The sorting took place in the pound, through which the sea water from the tanks was flowing, and lasted 35 minutes.

Section 3 consists of the top half of a basket. Since the remainder in the basket seemed in even worse condition, the injurious effects of the storage of plaice in a basket is very clearly shown.

Most of the batches remained in the tanks half an hour, but Sections 6 and 7 remained 12 hours.

The sun, though on hauling too feeble to affect the black bulb thermometer, shone vigorously next morning, and Sections 8 and 9 were put into the tanks when the black bulb showed 37·7° and 39·4° respectively, while the air temperature, which in Sections 4 and 5 had sunk to 5·0° and was even lower in the night, rose 6·6° in Section 8, and 10° in Section 9.

| Length of Fish (cm.). | Section | 1. Immediately on hauling. | | | | | | | 2. After 1 hour in low heap on deck. | | | | | | | 3. After 1 hour in basket. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M | 2 | 100 | — | — | — | — | 2 | 22 | 67·1 | 2 | 4·9 | 11 | 28·1 | 35 | 27 | 33·2 | 7 | 5·2 | 55 | 61·6 | 89 |
| | F. | — | | — | | — | | — | 33 | | 2 | | 12 | | 47 | 30 | | 2 | | 51 | | 83 |
| 20–24 | M. | 11 | 100 | — | — | — | — | 11 | 9 | 72·2 | 2 | 11·1 | 2 | 16·7 | 13 | 6 | 42·8 | 3 | 20·0 | 1 | 37·1 | 10 |
| | F. | 14 | | — | | — | | 14 | 17 | | 2 | | 4 | | 23 | 9 | | 4 | | 12 | | 25 |
| 25–29 | M. | 6 | 100 | — | — | — | — | 6 | 1 | 100 | — | — | — | — | 1 | 5 | 64·0 | 1 | 16·0 | — | 20·0 | 6 |
| | F. | 8 | | — | | — | | 8 | 2 | | — | | — | | 2 | 11 | | 3 | | 5 | | 19 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 100 | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — | 1 | | — | | — | | 1 |
| Grand Total. | M. | 19 | 100·0 | — | — | — | — | 19 | 32 | 69·4 | 4 | 6·6 | 13 | 23·9 | 49 | 38 | 38·0 | 11 | 8·6 | 56 | 53·2 | 105 |
| | F. | 22 | | — | | — | | 22 | 52 | | 4 | | 16 | | 72 | 51 | | 9 | | 68 | | 128 |

EXPERIMENT 5—*continued.*

| Section | | 4. After 2 hours 20 minutes in basket. | | | | | | | 5. After 2 hours 20 minutes in low heap on deck. | | | | | | | 6. After 3 hours in basket. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 2 | 10·6 | — | 5·3 | 36 | 84·1 | 38 | 19 | 58·3 | 4 | 13·0 | 9 | 28·7 | 32 | 2 | 0·9 | 1 | 0·5 | 71 | 98·6 | 74 |
| | F. | 8 | | 5 | | 43 | | 56 | 44 | | 10 | | 22 | | 76 | — | | — | | 150 | | 150 |
| 20–24 | M. | 4 | 26·5 | — | 8·8 | 6 | 64·6 | 10 | 7 | 77·1 | — | 12·5 | — | 10·4 | 7 | — | -- | — | — | 14 | 100 | 14 |
| | F. | 5 | | 3 | | 16 | | 24 | 30 | | 6 | | 5 | | 41 | — | | — | | 31 | | 31 |
| 25–29 | M. | — | 28·6 | — | 57·1 | — | 14·3 | — | 3 | 85·8 | — | — | — | 14·2 | 3 | — | — | — | — | — | 100 | — |
| | F. | 2 | | 4 | | 1 | | 7 | 3 | | — | | 1 | | 4 | — | | — | | 2 | | 2 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 6 | 15·6 | — | 8·9 | 42 | 75·5 | 48 | 29 | 65·0 | 4 | 12·3 | 9 | 22·7 | 42 | 2 | 0·7 | 1 | 0·4 | 85 | 98·7 | 88 |
| | F. | 15 | | 12 | | 60 | | 87 | 77 | | 16 | | 28 | | 121 | — | | — | | 183 | | 183 |

| Section | | 7. After 3 hours on deck. | | | | | | | 8. After 12 hours on deck. (6 p.m.–6 a.m.). | | | | | | | 9. After 14 hours 40 minutes on deck. (6 p.m.–8.40 a.m.). | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent, | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 17 | 25·2 | 7 | 14·3 | 42 | 60·5 | 66 | 2 | 4·5 | 1 | 0·9 | 66 | 94·6 | 69 | — | — | — | 1·0 | 59 | 99·0 | 59 |
| | F. | 13 | | 10 | | 30 | | 53 | 3 | | — | | 38 | | 41 | — | | 1 | | 48 | | 49 |
| 20–24 | M. | 15 | 63·5 | 2 | 11·4 | 4 | 25·0 | 21 | 1 | 8·1 | — | 10·8 | 18 | 81·1 | 19 | — | — | 4 | 14·9 | 12 | 85·1 | 16 |
| | F. | 13 | | 3 | | 7 | | 23 | 2 | | 4 | | 12 | | 18 | — | | 3 | | 28 | | 31 |
| 25–29 | M. | 2 | 66·7 | — | 33·3 | — | — | 2 | — | 20·0 | — | — | 1 | 80·0 | 1 | — | — | — | — | 2 | 100 | 2 |
| | F. | — | | 1 | | — | | 1 | 1 | | — | | 3 | | 4 | — | | — | | 1 | | 1 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 34 | 36·1 | 9 | 13·8 | 46 | 50·0 | 89 | 3 | 5·9 | 1 | 3·3 | 85 | 90·8 | 89 | — | — | 4 | 5·1 | 73 | 95·0 | 77 |
| | F. | 26 | | 14 | | 37 | | 77 | 6 | | 4 | | 53 | | 63 | — | | 4 | | 77 | | 81 |

## EXPERIMENT 6.

Date, 11/iv/06. Locality, Off Graa Deep Fairway. Beam trawl. Duration of haul, 2·5 hours. Total weight of catch, 215 kilogrammes or 473 lbs. Depth, 6–7½ fathoms or 11–14 metres. Soil, fine sand ; sand and ooze. Time of hauling, 7·38 a.m. Sea, smooth. Air temperature on hauling, 8·3°. Sunshine on hauling, 39·4°, black-bulb thermometer. Rate of towing, 2½ miles per hour. Chief species caught, all plaice but few dabs and a thornback ray. Practically no invertebrates.

Remarks :—Attempts were made in this experiment to test the effect of sun on the fish. Although in the main successful, the motion of sun and vessel made complete separation of shaded fish from those placed in the sun impossible.

The following temperatures prevailed when the fish were placed in the tanks :—

| Sections. | Air Temperatures. | Black-bulb Thermometer. |
|---|---|---|
| 1 | 9·4° | 40·5° |
| 2 & 3 | 11·1° | 41·9° |
| 4 & 5 | 17·8° | 51·8° |
| 6 | 19·4° | 56·6° |

| Section | | 1. After 1 hour on deck partly in sun. | | | | | | | 2. After 2 hours on deck mainly in sun. | | | | | | | 3. After 2 hours on deck mainly in shade. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish cm.). | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 35 | 58·9 | 23 | 34·6 | 4 | 7·5 | 62 | 46 | 70·0 | 10 | 9·8 | 15 | 20·3 | 71 | 70 | 85·0 | 5 | 7·3 | 6 | 8·0 | 81 |
| | F. | 27 | | 14 | | 4 | | 45 | 46 | | 3 | | 12 | | 61 | 57 | | 6 | | 6 | | 69 |
| 20–24 | M. | 19 | 89·1 | 1 | 10·9 | — | — | 20 | 16 | 82·0 | 2 | 11·1 | — | 6·9 | 18 | 29 | 98·0 | — | 2·0 | — | — | 29 |
| | F. | 30 | | 5 | | — | | 35 | 21 | | 3 | | 3 | | 27 | 24 | | 1 | | — | | 25 |
| 25–29 | M. | 2 | 80·0 | — | — | — | 20·0 | 2 | 1 | 100·0 | — | — | — | — | 1 | 1 | 100·0 | — | — | — | — | 1 |
| | F. | 2 | | — | | 1 | | 3 | 10 | | — | | — | | 10 | 11 | | — | | — | | 11 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 60 | 68·9 | 24 | 25·8 | 4 | 5·4 | 84 | 63 | 74·4 | 12 | 9·6 | 15 | 15·8 | 90 | 100 | 88·9 | 5 | 5·6 | 6 | 5·6 | 111 |
| | F. | 59 | | 19 | | 5 | | 83 | 77 | | 6 | | 15 | | 98 | 92 | | 7 | | 6 | | 105 |

EXPERIMENT 6—*continued.*

| Length of Fish (cm.). | Section | 4. After 3 hours on deck mainly in shade. | | | | | | | 5. After 3 hours on deck mainly in sun. | | | | | | | 6. After 5 hours on deck mostly in sun but many shaded. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 9 | 11·0 | 5 | 8·6 | 72 | 80·4 | 86 | 8 | 32·0 | — | 5·9 | 20 | 61·8 | 28 | — | 1·6 | — | — | 62 | 98·4 | 62 |
| | F. | 10 | | 10 | | 68 | | 88 | 14 | | 4 | | 22 | | 40 | 2 | | — | | 59 | | 61 |
| 20–24 | M. | 4 | 24·0 | 3 | 18·0 | 11 | 58·0 | 18 | 6 | 23·0 | 1 | 14·0 | 7 | 62·9 | 14 | — | — | — | — | 20 | 100·0 | 20 |
| | F. | 8 | | 6 | | 18 | | 32 | 4 | | 5 | | 20 | | 29 | — | | — | | 37 | | 37 |
| 25–29 | M. | — | 100·0 | — | — | — | — | — | — | 9·0 | — | — | 4 | 91·0 | 4 | — | — | — | — | 7 | 100·0 | 7 |
| | F. | 1 | | — | | — | | 1 | 2 | | — | | 16 | | 18 | — | | — | | 10 | | 10 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | 100·0 | 1 |
| | F. | — | | — | | — | | — | — | | — | | — | | — | — | | — | | 2 | | 2 |
| Grand Total. | M. | 13 | 14·2 | 8 | 10·7 | 83 | 75·2 | 104 | 14 | 25·6 | 1 | 7·5 | 31 | 66·2 | 46 | — | 1·0 | — | — | 90 | 99·0 | 90 |
| | F. | 19 | | 16 | | 86 | | 121 | 20 | | 9 | | 58 | | 87 | 2 | | — | | 108 | | 110 |

## EXPERIMENT 7.

Date, 11/iv/06. Locality, Off Graa Deep Fairway. Otter trawl. Duration of haul, 2·5 hours. Total weight of catch, 264½ kilogrammes or 581½ lbs. Depth, 7½-9 fathoms or 14-16 metres. Soil, sand, ooze and sand, and black mud. Time of hauling 11 a.m. Sea, smooth. Air temperature on hauling, 20·6°. Sunshine on hauling, 56·6°, black bulb thermometer. Rate of towing, 3½ miles per hour. Chief species caught, plaice almost entirely, 41 kilogrammes of invertebrates, mainly *Asterias rubens.*

Remarks :—The fish remained where they fell from the cod end, covering an area about half as large again as the pound. The deck was dry on hauling.

In the two hours during which section 2 were on deck the air temperature fell to 19·5°.

| Length of Fish (cm.). | Section | 1. After 1 hour on deck in low heap. | | | | | | | 2. After 2 hours on deck in low heap. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Living. | | Moribund. | | Dead. | | Total. | Living. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 15 | 32·7 | 1 | 3·5 | 19 | 63·8 | 35 | 1 | 1·0 | — | — | 54 | 99·0 | 55 |
| | F. | 4 | | 1 | | 18 | | 23 | — | | — | | 42 | | 42 |
| 20–24 | M. | 2 | 17·1 | 2 | 14·6 | 11 | 68·3 | 15 | — | — | — | 1·2 | 36 | 98·8 | 36 |
| | F. | 5 | | 4 | | 17 | | 26 | — | | 1 | | 38 | | 39 |
| 25–29 | M. | 1 | 14·3 | 2 | 21·4 | 8 | 64·3 | 11 | — | — | — | — | 1 | 100 | 1 |
| | F. | 3 | | 4 | | 10 | | 17 | — | | — | | 9 | | 9 |
| 30+ | M. | — | — | — | 25·0 | 1 | 75·0 | 1 | — | — | — | — | — | — | — |
| | F. | — | | 1 | | 2 | | 3 | — | | — | | — | | — |
| Grand Total | M. | 18 | 22·9 | 5 | 11·4 | 39 | 65·6 | 62 | 1 | 0·5 | — | 0·5 | 91 | 98–9 | 92 |
| | F. | 12 | | 10 | | 47 | | 69 | — | | 1 | | 89 | | 90 |

## EXPERIMENT 8.

Date, 17/iv/06. Locality, Off Graa Deep Fairway. Otter trawl. Duration of haul, 2·5 hours. Total weight of catch, 147 kilogrammes or 325½ lbs. Depth, 7–9 fathoms or 13–16 metres. Soil, sand and mud. Time of hauling, 9 p.m. Sea, moderately smooth. Air temperature, 4·8° Sunshine, none. Rate of towing, 2½ miles per hour. Chief species caught, plaice, few dabs, 5 thornback rays, and 1 skate, 50 kilogrammes of invertebrates, mainly *Asterias rubens*.

| Length of Fish (cm.). | Section | 1. Put in tanks at once on hauling. | | | | | | | 2. Put in tanks after 1 hour's exposure on deck in a heap. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 20 | 84·6 | 2 | 7·7 | — | 7·7 | 22 | 8 | 27·8 | 3 | 25·0 | 6 | 47·2 | 17 |
| | F. | 13 | | 1 | | 3 | | 17 | 2 | | 6 | | 11 | | 19 |
| 20–24 | M. | 24 | 80·9 | 6 | 17·5 | — | 1·6 | 30 | — | 9·7 | 7 | 51·6 | 4 | 38·7 | 11 |
| | F. | 27 | | 5 | | 1 | | 33 | 3 | | 9 | | 8 | | 20 |
| 25–29 | M. | 9 | 78·8 | 3 | 15·1 | — | 6·1 | 12 | 1 | 20·0 | 3 | 66·7 | — | 13·3 | 4 |
| | F. | 17 | | 2 | | 2 | | 21 | 2 | | 7 | | 2 | | 11 |
| 30+ | M. | 1 | 50·0 | — | 50·0 | — | — | 1 | — | — | — | — | — | — | — |
| | F. | — | | 1 | | — | | 1 | — | | — | | — | | — |
| Grand Total | M. | 54 | 81·1 | 11 | 14·6 | — | 4·4 | 65 | 9 | 19·5 | 13 | 42·7 | 10 | 37·8 | 32 |
| | F. | 57 | | 9 | | 6 | | 72 | 7 | | 22 | | 21 | | 50 |

| Length of Fish (cm.). | Section | 3. Put in tanks after 2 hours in heap on deck. | | | | | | | 4. Put in tanks next morning after 9 hours 25 minutes in heap on deck. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | — | — | 1 | 6·9 | 26 | 93·1 | 27 | — | — | — | — | 26 | 100 | 26 |
| | F. | — | | 3 | | 28 | | 31 | — | | — | | 18 | | 18 |
| 20–24 | M. | 1 | 3·5 | 4 | 12·3 | 23 | 84·2 | 28 | — | — | — | — | 19 | 100 | 19 |
| | F. | 1 | | 3 | | 25 | | 29 | — | | — | | 24 | | 24 |
| 25–29 | M. | 2 | 10·5 | 2 | 15·8 | 8 | 73·6 | 12 | — | — | — | — | 15 | 100 | 15 |
| | F. | — | | 1 | | 6 | | 7 | — | | — | | 10 | | 10 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | 2 | 100 | 2 |
| | F. | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total | M. | 3 | 2·9 | 7 | 10·4 | 57 | 86·6 | 67 | — | — | — | — | 62 | 100 | 62 |
| | F. | 1 | | 7 | | 59 | | 67 | — | | — | | 52 | | 52 |

## EXPERIMENT 9

Date, 24/v/06. Locality, Between Egmond and Texel. Otter trawl. Duration of haul, hours. Total weight of catch, 140½ kilogrammes or 309 lbs. Depth, 13–15 fathoms or 24–27 metres. Soil, fine sand. Time of hauling, 9·45 a.m. Sea, moderately smooth. Air temperature, 11·6°. Sunshine, cloudy. Rate of towing, 2¼ miles per hour. Chief species caught, plaice, dabs, grey gurnard (253), greater weever (89), whiting, latchet (36), haddock, thornback ray (1). *Asterias rubens*, very plentiful.

Remarks :—Rain fell heavily for a quarter of an hour, commencing at 10.50.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Immediately after hauling. | | | | | | | After 1 hour in heap on deck. | | | | | | | After 1 hour in basket on deck. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 | M. | 5 | 40·0 | 4 | 16·0 | 4 | 44·0 | 13 | — | 0·7 | 1 | 0·7 | 85 | 98·6 | 86 | — | — | — | — | 37 | 100 | 37 |
| | F. | 5 | | — | | 7 | | 12 | 2 | | 1 | | 61 | | 64 | — | | — | | 14 | | 14 |
| 20-24 | M. | 8 | 40·0 | 5 | 37·1 | 3 | 22·9 | 16 | — | — | 3 | 1·8 | 74 | 98·2 | 77 | — | — | — | — | 43 | 100 | 43 |
| | F. | 6 | | 8 | | 5 | | 19 | — | | — | | 92 | | 92 | — | | — | | 29 | | 29 |
| 25-29 | M. | 5 | 57·1 | 2 | 38·4 | — | 4·8 | 7 | — | — | 2 | 9·4 | 12 | 90·6 | 14 | 2 | 3·7 | — | — | 18 | 96·3 | 20 |
| | F. | 7 | | 6 | | 1 | | 14 | — | | 1 | | 17 | | 18 | — | | — | | 34 | | 34 |
| 30+ | M. | 2 | 57·1 | — | 14·3 | 1 | 28·6 | 3 | — | 33·3 | — | — | — | 66·7 | — | — | 28·6 | — | 14·3 | 1 | 57·1 | 1 |
| | F. | 2 | | 1 | | 1 | | 4 | 1 | | — | | 2 | | 3 | 2 | | 1 | | 3 | | 6 |
| Grand Total. | M. | 20 | 45·4 | 11 | 29·5 | 8 | 25·0 | 39 | — | 0·8 | 6 | 2·3 | 171 | 96·9 | 177 | 2 | 2·2 | — | 0·5 | 99 | 97·3 | 101 |
| | F. | 20 | | 15 | | 14 | | 49 | 3 | | 2 | | 172 | | 177 | 2 | | 1 | | 80 | | 83 |

| Section | | 4. | | | | | | | 5. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | After lying on deck 2 hours, no sunlight. | | | | | | | After 4 hours in basket on deck. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 | M. | — | — | — | — | 234 | 100 | 234 | — | — | — | — | — | — | — |
| | F. | | | | | | | | | | | | | | |
| 20 24 | M. | — | — | — | — | 85 | 100 | 85 | — | — | — | — | 34 | 100 | 34 |
| | F. | | | | | | | | | | | | | | |
| 25-29 | M. | — | — | — | — | 4 | 100 | 4 | — | — | — | — | 29 | 100 | 29 |
| | F. | | | | | | | | | | | | | | |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | 2 | 100 | 2 |
| | F. | | | | | | | | | | | | | | |
| Grand Total. | M. | — | — | — | — | 323 | 100 | 323 | — | — | — | — | 65 | 100 | 65 |
| | F. | | | | | | | | | | | | | | |

## EXPERIMENT 10.

Date, 24/v/06. Locality, Between Egmond and Texel. Beam trawl. Duration of trawl, 5 hours. Total weight of catch, 65 kilogrammes or 145 lbs. Depth, 15 fathoms or 27 metres. Soil, fine sand. Time of hauling, 4 a.m. Sea, smooth. Air temperature, 12·8°. Sunshine, none. Rate of towing, 2¼ miles per hour. Chief species caught, plaice, grey gurnard (320), greater weever (87), haddock, tope (2), latchet (2).

Remarks:—Fish while being picked up for Section 1 were bathed in sea water flowing from the tanks.

Rain fell heavily for 25 minutes, commencing at 5.20; at 6.30 it was still falling, but less heavily.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Immediately after hauling. | | | | | | | After 1½ hours on deck exposed to heavy rain for 25 minutes. | | | | | | | After 2½ hours in heap on deck. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 | M. | 5 | 100 | — | — | — | — | 5 | 2 | 7·5 | 2 | 3·0 | 39 | 89·5 | 43 | 2 | 3·5 | 2 | 2·6 | 71 | 92·9 | 75 |
| | F. | | | | | | | | 3 | | — | | 21 | | 24 | 2 | | 1 | | 36 | | 39 |
| 20-24 | M. | 24 | 100 | — | — | — | — | 24 | 10 | 34·4 | 3 | 12·5 | 8 | 53·1 | 21 | 4 | 20·4 | 1 | 4·1 | 16 | 75·5 | 21 |
| | F. | | | | | | | | 1 | | 1 | | 9 | | 11 | 6 | | 1 | | 21 | | 28 |
| 25-29 | M. | 1 | 100 | — | — | — | — | 1 | 2 | 28·6 | 1 | 14·3 | 2 | 57·1 | 5 | 3 | 33·3 | — | — | 3 | 66·7 | 6 |
| | F. | | | | | | | | 2 | | 1 | | 6 | | 9 | — | | — | | 3 | | 3 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | 100 | — | — | — | — | — | — | — | — |
| | F. | | | | | | | | | | | | 1 | | 1 | — | | — | | — | | — |
| Grand Total. | M. | 30 | 100 | — | — | — | — | 30 | 14 | 17·5 | 6 | 7·0 | 49 | 75·4 | 69 | 9 | 9·9 | 3 | 2·9 | 90 | 87·2 | 102 |
| | F. | | | | | | | | 6 | | 2 | | 37 | | 45 | 8 | | 2 | | 60 | | 70 |

## EXPERIMENT 11.

Date 25/v/06. Locality, West part of Texel Ground. Otter trawl. Duration of haul, 3 hours. Total weight of catch, 104 kilogrammes or 228 lbs. Depth, 13-17 fathoms or 24-31 metres. Soil, fine sand. Time of hauling, 8 a.m. Sea, moderate. Air temperature, 10°. Sunshine, 54·4° of black bulb thermometer. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, grey gurnard (48), greater weever (44), tope (1), spur-dog (1), latchet (1).

Remarks:—The plaice of over 10′ were sorted in baskets from those of less than 10′ length. The latter were then (about 20 minutes after hauling) put in the shade (in baskets) for section 3, or tipped on to the deck for sections 2 and 4.

| Section | | 1. | | | | | | | 2. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.) | | Immediately after hauling. | | | | | | | After ½ hour's exposure to sun on deck (moist). | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 ... ... | M. | 10 | 52·0 | 4 | 40·0 | — | 8·0 | 14 | 2 | 8·7 | 9 | 22·0 | 27 | 69·4 | 38 |
| | F. | 3 | | 6 | | 2 | | 11 | 3 | | 4 | | 14 | | 21 |
| 20–24 ... ... | M. | 9 | 40·5 | 8 | 42·6 | 5 | 17·0 | 22 | 2 | 10·5 | 1 | 7·9 | 12 | 81·6 | 15 |
| | F. | 10 | | 12 | | 3 | | 25 | 2 | | 2 | | 19 | | 23 |
| 25–29 ... ... | M. | 3 | 26·3 | 10 | 73·7 | — | — | 13 | — | — | — | — | — | — | — |
| | F. | 2 | | 4 | | — | | 6 | — | | — | | — | | — |
| 30+ ... ... ... | M. | 2 | 60·0 | 1 | 40·0 | — | — | 3 | — | — | — | — | — | — | — |
| | F. | 1 | | 1 | | — | | 2 | — | | — | | — | | — |
| Grand Total ... | M, | 24 | 41·7 | 23 | 47·9 | 5 | 10·4 | 52 | 4 | 9·3 | 10 | 16·5 | 39 | 74·2 | 53 |
| | F. | 16 | | 23 | | 5 | | 44 | 5 | | 6 | | 33 | | 44 |

EXPERIMENT 11—*continued.*

| Length of Fish (cm.). | Section | 3. After 1¼ hours in basket, in shade. | | | | | | | 4. After 2 hours on deck in sun. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 ... ... | M. | 3 | 4·3 | 2 | 4·3 | 39 | 91·4 | 44 | — | — | — | — | 73 | 100 | 73 |
| | F. | — | | 1 | | 25 | | 26 | — | | — | | 40 | | 40 |
| 20–24 ... ... | M. | 1 | 5·0 | 1 | 5·0 | 36 | 90·0 | 38 | — | — | — | 1·1 | 50 | 98·9 | 50 |
| | F. | 2 | | 2 | | 18 | | 22 | — | | 1 | | 45 | | 46 |
| 25–29 ... ... | M. | — | — | — | — | 1 | 100 | 1 | — | — | — | — | — | 100 | — |
| | F. | — | | — | | — | | — | — | | — | | 5 | | 5 |
| 30+ ... ... ... | M. | — | — | — | — | — | — | — | — | — | — | — | — | 100 | — |
| | F. | — | | — | | — | | — | — | | — | | 1 | | 1 |
| Grand Total ... | M. | 4 | 4·6 | 3 | 4·6 | 76 | 90·8 | 83 | — | — | — | 0·5 | 123 | 99·5 | 123 |
| | F. | 2 | | 3 | | 43 | | 48 | — | | 1 | | 91 | | 92 |

## EXPERIMENT 12.

Date, 20/vi/07. Locality, Broad Fourteens. Otter trawl. Duration of haul, 5 hours. Total weight of catch, 48 kilogrammes or 106 lbs. Depth, 14-17 fathoms or 26-31 metres. Soil, sand. Time of hauling, 9.30 a.m. Sea, rough. Air temperature, 13·9°. Sunshine, 32.8° of black bulb thermometer. Rate of towing, 2½ miles per hour. Chief species caught, plaice, grey gurnard (19), dabs, greater weever (39), latchet (2), half a basket of jellyfish (*Cyanea*) invertebrates weighing 40 lbs. in all.

Remarks:—In Experiments 12-28 the fish to be placed in tanks were usually shovelled in; they remained, except where otherwise stated, for from ½ hour to 4 hours. The fish were termed healthy (*a*) if swimming about vigorously and apparently uninjured; (*b*) if when placed white side upwards at the bottom of the tank they made decided movements to regain their proper position. Fish which were not healthy were laid on the deck and termed "moribund," if slight movements, *e.g.* of the gill cover were observed. The rest were classed as dead.

| Length of Fish (cm.). | Section | 1. After 40 minutes' exposure on deck. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 ... ... | M. | — | — | 1 | 20·0 | 3 | 80·0 | 4 |
| | F. | — | | — | | 1 | | 1 |
| 20–24 ... ... | M. | — | — | 6 | 35·0 | 12 | 65·0 | 18 |
| | F. | — | | 5 | | 5 | | 10 |
| 25–29 ... ... | M. | — | — | 1 | 19·0 | 7 | 81·0 | 8 |
| | F. | — | | 2 | | 6 | | 8 |
| 30+ ... ... | M. | — | — | — | — | — | 100 | — |
| | F. | — | | — | | 3 | | 3 |
| Grand Total ... | M. | — | — | 8 | 29·0 | 22 | 71·0 | 30 |
| | F. | — | | 7 | | 15 | | 22 |

## EXPERIMENT 13.

Date, 27/vi/07. Locality, E. of Borkum Flat. Otter trawl. Duration of haul, 4 hours. Total weight of catch, 142½ kilogrammes or 313 lbs. Depth, 16–17 fathoms or 29–31 metres. Soil, sand. Time of hauling, 9.5 p.m. Sea, moderate. Air temperature, 13·9°. Sunshine, 23·0°, black bulb thermometer. Rate of towing, 3 miles per hour. Chief species caught, plaice, dabs, grey gurnard (116), latchet (20), greater weever (18), thornback ray (1), *Astropecten irregularis* common, *Corystes cassivelaunus* common.

Remarks :—All fish in Section 2 appeared much chafed.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Five minutes after hauling. | | | | | | | Fifty minutes after hauling. | | | | | | | One hour 50 minutes after hauling. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead, | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 5 | 24 | 7 | 27 | 12 | 49 | 24 | 3 | 11 | 1 | 4 | 33 | 85 | 37 | 1 | 1 | — | 1 | 53 | 98 | 54 |
| | F. | 4 | | 3 | | 7 | | 14 | 5 | | 2 | | 31 | | 38 | — | | 1 | | 37 | | 38 |
| 20–24 | M. | 2 | 12 | 2 | 28 | 8 | 60 | 12 | 3 | 11 | — | — | 13 | 89 | 16 | — | — | 1 | 2 | 22 | 98 | 23 |
| | F. | 1 | | 5 | | 7 | | 13 | 1 | | — | | 20 | | 21 | — | | — | | 17 | | 17 |
| 25–29 | M. | — | — | — | — | — | — | — | — | — | — | — | 2 | 100 | 2 | — | — | 1 | 20 | — | 80 | 1 |
| | F. | — | | — | | — | | — | — | | — | | 4 | | 4 | — | | — | | 4 | | 4 |
| 30+ | M. | — | — | — | — | 1 | 100 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | 100 | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — | — | | — | | 2 | | 2 |
| Grand Total. | M. | 7 | 19 | 9 | 27 | 21 | 59 | 37 | 6 | 10 | 1 | 3 | 48 | 87 | 55 | 1 | — | 2 | 2 | 75 | 97 | 78 |
| | F. | 5 | | 8 | | 14 | | 27 | 6 | | 2 | | 55 | | 63 | — | | 1 | | 60 | | 61 |

## EXPERIMENT 14.

Date, 28/vi/07. Locality, Sylt Outer. Otter trawl. Duration of haul, 2 hours. Total weight of catch, 95½ kilogrammes or 210 lbs. Depth, 10–12 fathoms or 18–22 metres. Soil, sand, and coarse sand. Time of hauling, 9.15 a.m. Sea, some heavy rolling at first; fishes rolled violently in pound. Air temperature, 12·6° Sunshine, 21.6°, black bulb thermometer. Rate of towing, 2½ miles per hour. Chief species caught, plaice, dabs, grey gurnard (49), whiting, latchet (6), thornback (1), Medusæ present.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Put in tanks immediately after hauling and left 1 hour. | | | | | | | Exposed ½ hour on deck; in tanks 1¼ hours. | | | | | | | Exposed on deck 2 hours 10 minutes. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 17 | 49 | 16 | 51 | — | — | 33 | — | 3 | 29 | 64 | 14 | 33 | 43 | 1 | 1 | 2 | 1 | 163 | 98 | 166 |
| | F. | 10 | | 12 | | — | | 22 | 2 | | 19 | | 11 | | 32 | 1 | | — | | 120 | | 121 |
| 20–24 | M. | 6 | 48 | 9 | 52 | — | — | 15 | 3 | 13 | 17 | 73 | 7 | 15 | 27 | — | — | — | — | 77 | 100 | 77 |
| | F. | 7 | | 5 | | — | | 12 | 4 | | 23 | | 1 | | 28 | — | | — | | 86 | | 86 |
| 25–29 | M. | 1 | 100 | — | — | — | — | 1 | 3 | 43 | 3 | 57 | — | — | 6 | — | 4 | 1 | 4 | 11 | 92 | 12 |
| | F. | 5 | | — | | — | | 5 | 3 | | 5 | | — | | 8 | 1 | | — | | 12 | | 13 |
| 30+ | M. | — | 100 | — | — | — | — | — | 1 | 100 | — | — | — | — | 1 | — | — | — | — | — | 100 | — |
| | F. | 1 | | — | | — | | 1 | 1 | | — | | — | | 1 | — | | — | | 4 | | 4 |
| Grand Total. | M. | 24 | 53 | 25 | 47 | — | — | 49 | 7 | 12 | 49 | 66 | 21 | 22 | 77 | 1 | 1 | 3 | 1 | 251 | 98 | 255 |
| | F. | 23 | | 17 | | — | | 40 | 10 | | 47 | | 12 | | 69 | 2 | | — | | 222 | | 224 |

## EXPERIMENT 15.

Date, 28/vi/07. Locality, Sylt Outer. Otter trawl. Duration of haul, 4 hours. Total weight of catch, 318½ kilogrammes or 700 lbs. Depth, 12-17 fathoms or 22–31 metres. Soil, sand. Time of hauling, 1.40 p.m. Sea, moderate. Air temperature, 13·3°. Sunshine, 23·5°, black bulb thermometer. Rate of towing, 2⅓ miles per hour. Chief species caught, plaice, dabs, whiting, latchet (5), grey gurnard (174).

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Placed in tanks on hauling and left ¾ hour. | | | | | | | 1 hour's exposure on deck. | | | | | | | 2 hours' exposure on deck. In tank ¼ hour. | | | | | | | |
| Length (cm.) | | Healthy. | | Moribund. | | Dead | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | |
| 10–19 | M | — | — | 2 | 57 | — | 43 | 2 | — | — | — | — | 8 | 100 | 8 | — | — | — | — | 20 | 100 | 20 | |
| | F. | — | | 2 | | 3 | | 5 | — | | — | | 2 | | 2 | — | | — | | 11 | | 11 | |
| 20–24 | M. | 8 | 20 | 29 | 71 | 3 | 9 | 40 | — | — | — | — | 31 | 100 | 31 | — | — | — | — | 74 | 100 | 74 | |
| | F. | 5 | | 18 | | 3 | | 26 | — | | — | | 31 | | 31 | — | | — | | 52 | | 52 | |
| 25–29 | M. | 5 | 41 | 7 | 55 | 1 | 4 | 13 | 1 | 5 | 1 | 7 | 14 | 88 | 16 | — | — | — | — | 21 | 100 | 21 | |
| | F. | 6 | | 8 | | — | | 14 | 1 | | 2 | | 22 | | 25 | — | | — | | 28 | | 28 | |
| 30+ | M. | 2 | 100 | — | — | — | — | 2 | — | — | — | — | — | 100 | — | — | — | — | — | 3 | 100 | 3 | |
| | F. | 1 | | — | | — | | 1 | — | | — | | 1 | | 1 | — | | — | | 4 | | 4 | |
| Grand Total. | M. | 15 | 26 | 38 | 64 | 4 | 10 | 57 | 1 | 2 | 1 | 3 | 53 | 95 | 55 | — | — | — | — | 118 | 100 | 118 | |
| | F. | 12 | | 28 | | 6 | | 46 | 1 | | 2 | | 56 | | 59 | — | | — | | 95 | | 95 | |

## EXPERIMENT 16.

Date, 28/vi/07. Locality, Sylt Outer. Beam trawl. Duration of haul, 4 hours. Total weight of catch, 210¾ kilogrammes or 463 lbs. Depth, 12–17 fathoms or 22–31 metres. Soil, sand. Time of hauling, 6.45 p.m. Sea, moderate. Air temperature, 12·4°. Sunshine, 23·6°, black bulb thermometer, Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, latchet (2), grey gurnard (124), thornback (1).

| Section | | 1. | | | | | | | 2. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Placed in tanks on hauling. | | | | | | | ¼ hour's exposure on deck, 1¾ hours in tank. | | | | | | |
| Length of Fish (cm.). | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 ... ... | M. | 8 | 89 | — | 11 | — | — | 8 | 7 | 73 | — | — | 1 | 27 | 8 |
| | F. | 8 | | 2 | | — | | 10 | 1 | | — | | 2 | | 3 |
| 20–24 ... ... | M. | 80 | 99 | 1 | 1 | — | — | 81 | 30 | 77 | 3 | 7 | 8 | 16 | 41 |
| | F. | 56 | | — | | — | | 56 | 23 | | 2 | | 3 | | 28 |
| 25–29 ... ... | M. | 24 | 100 | — | — | — | — | 24 | 10 | 84 | — | 8 | — | 8 | 10 |
| | F. | 28 | | — | | — | | 28 | 9 | | 2 | | 2 | | 13 |
| 30+ ... ... ... | M. | 2 | 100 | — | — | — | — | 2 | 2 | 67 | — | — | — | 33 | 2 |
| | F. | 2 | | — | | — | | 2 | — | | — | | 1 | | 1 |
| Grand Total ... | M. | 114 | 99 | 1 | 1 | — | — | 115 | 49 | 77 | 3 | 7 | 9 | 16 | 61 |
| | F. | 94 | | 2 | | — | | 96 | 33 | | 4 | | 8 | | 45 |

EXPERIMENT 16—*continued.*

| Length of Fish (cm.). | Section | 3. 1 hour's exposure on deck. | | | | | | | 4. After 2 hours' exposure on deck. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent | No. | Per cent. | No. |
| 10–19 ... ... | M. | — | — | 1 | 5 | 29 | 95 | 30 | — | — | 1 | 2 | 22 | 98 | 23 |
| | F. | — | | 1 | | 10 | | 11 | — | | — | | 17 | | 17 |
| 20–24 ... ... | M. | 4 | 8 | 5 | 10 | 41 | 82 | 50 | — | 1 | 4 | 7 | 63 | 92 | 67 |
| | F. | 5 | | 6 | | 49 | | 60 | 2 | | 5 | | 63 | | 70 |
| 25–29 ... ... | M. | 2 | 22 | 4 | 25 | 7 | 53 | 13 | — | 2 | — | 2 | 13 | 91 | 13 |
| | F. | 5 | | 4 | | 10 | | 19 | 1 | | 1 | | 29 | | 31 |
| 30+ ... ... ... | M. | — | — | — | — | — | 100 | — | — | — | — | — | 4 | 100 | 4 |
| | F. | — | | — | | 1 | | 1 | — | | — | | 3 | | 3 |
| Grand Total ... | M. | 6 | 9 | 10 | 11 | 77 | 80 | 93 | 0 | 1 | 5 | 5 | 102 | 94 | 107 |
| | F. | 10 | | 11 | | 70 | | 91 | 3 | | 6 | | 112 | | 121 |

## EXPERIMENT 17.

Date, 2/vii/07. Locality, Graa Deep. Beam trawl. Duration of haul, 1 hour. Total weight of catch, 68¼ kilogrammes or 150 lbs. Depth, 8–9 fathoms or 15–16 metres. Soil, mud and sand. Time of hauling, 9·20 a.m. Sea, smooth. Air temperature, 13·5°. Sunshine, 35·8°–41·6°, black bulb thermometer. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, thornback (12), grey gurnard (1), spur-dog (7), tope (2). Various medusæ present. *Portunus holsatus*, very common.

Remarks :—The plaice were gathered up in a basket, then tipped out on a dry deck. The sunshine was at first weak, but increased in strength.

| Length of Fish (cm.). | Section | 1. Exposed on deck 1 hour 10 minutes, in tank ½ hour. | | | | | | | 2. Exposed on deck 1 hour 50 minutes and ½ hour in tank. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 0–19 ... ... | M. | — | — | 8 | 20 | 8 | 80 | 16 | — | — | — | 2 | 41 | 98 | 41 |
| | F. | — | | 3 | | 35 | | 38 | — | | 2 | | 86 | | 88 |
| 20–24 ... ... | M. | — | 13 | 4 | 50 | 1 | 37 | 5 | — | — | 1 | 26 | 5 | 74 | 6 |
| | F. | 1 | | — | | 2 | | 3 | — | | 5 | | 12 | | 17 |
| 25–29 ... ... | M. | — | — | — | — | — | 100 | — | — | — | 1 | 50 | — | 50 | 1 |
| | F. | — | | — | | 1 | | 1 | — | | — | | 1 | | 1 |
| 30+ ... ... ... | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total ... | M. | — | 1 | 12 | 24 | 9 | 75 | 21 | — | — | 2 | 6 | 46 | 94 | 48 |
| | F. | 1 | | 3 | | 38 | | 42 | — | | 7 | | 99 | | 106 |

## EXPERIMENT 18.

Date, 2/vii/07. Locality, Graa Deep. Beam trawl. Duration of haul, 2 hours. Depth, 9 fathoms or 16 metres. Soil, sand. Time of hauling, 0·15 p.m. Sea, slight roll. Air temperature, 13·9°. Sunshine, 41·7°, black bulb thermometer. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, latchet (2), grey gurnard (17), great quantity of jellyfish, principally *Aurelia*.

Remarks:—The quantity of jellyfish made weighing of the total catch impossible. The second batch was spread out on a part of the deck, free from these jellyfish, and from the water from the testing tanks.

| Section | | 1. | | | | | | | 2. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Placed in tanks on hauling. | | | | | | | Placed in tanks after 1 hour's exposure. | | | | | | |
| Length of Fish (cm.). | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 6 | 32 | 5 | 47 | 4 | 21 | 15 | 2 | 2 | 1 | 1 | 79 | 97 | 82 |
| | F. | 6 | | 13 | | 4 | | 23 | 4 | | 1 | | 164 | | 169 |
| 20–24 | M. | 1 | 55 | 1 | 40 | 1 | 5 | 3 | — | 2 | — | 2 | 14 | 96 | 14 |
| | F. | 10 | | 7 | | — | | 17 | 1 | | 1 | | 31 | | 33 |
| 25–29 | M. | — | 50 | — | — | — | 50 | — | — | — | — | — | — | — | — |
| | F. | 1 | | — | | 1 | | 2 | — | | — | | — | | — |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total | M. | 7 | 40 | 6 | 43 | 5 | 17 | 18 | 2 | 2 | 1 | 1 | 93 | 97 | 96 |
| | F. | 17 | | 20 | | 5 | | 42 | 5 | | 2 | | 195 | | 202 |

## EXPERIMENT 19.

Date, 2/vii/07. Locality, Horn Reef South. Beam trawl. Duration of haul, 2 hours. Total weight of catch, 75½ kilogrammes or 166 lbs. Depth, 12 fathoms or 22 metres. Soil, sand. Time of hauling, 4.50 p.m. Sea, moderate. Air temperature, cold wind. Sunshine, sun clouded, but not obscured. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, grey gurnard (15), *Aurelia* fairly abundant.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Placed in tanks on hauling. | | | | | | | After 1 hour's exposure. | | | | | | | After 1½ hours' exposure. | | | | | | |
| Length of Fish (cm.). | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 83 | 76·0 | 21 | 23·0 | 1 | 1·0 | 105 | 12 | 11·0 | 16 | 12·0 | 105 | 77·0 | 133 | 1 | 1·0 | 2 | 2·0 | 119 | 97·0 | 122 |
| | F. | 70 | | 24 | | 1 | | 95 | 13 | | 13 | | 76 | | 102 | 3 | | 3 | | 109 | | 115 |
| 20–24 | M. | 12 | 97·0 | — | 3·0 | — | — | 12 | 3 | 50·0 | 1 | 25·0 | 1 | 25·0 | 5 | — | 22·0 | 1 | 11·0 | 5 | 67·0 | 6 |
| | F. | 26 | | 1 | | — | | 27 | 3 | | 2 | | 2 | | 7 | 4 | | 1 | | 7 | | 12 |
| 25–29 | M. | 2 | 100 | — | — | — | — | 2 | — | 100 | — | — | — | — | — | — | — | — | — | — | 100 | — |
| | F. | 3 | | — | | — | | 3 | 1 | | — | | — | | 1 | — | | — | | 1 | | 1 |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 97 | 80 0 | 21 | 19·0 | 1 | 1·0 | 119 | 15 | 13·0 | 17 | 13·0 | 106 | 74·0 | 138 | 1 | 3·0 | 3 | 3·0 | 124 | 94·0 | 128 |
| | F. | 99 | | 25 | | 1 | | 125 | 17 | | 15 | | 78 | | 110 | 7 | | 4 | | 117 | | 128 |

## EXPERIMENT 20.

Date, 2/vii/07. Locality, Horn Reef South. Otter trawl. Duration of haul, 2 hours. Total weight of catch, 74¼ kilogrammes or 163 lbs. Depth, 12 fathoms or 22 metres. Soil, sand. Time of hauling, 7.30 p.m. Sea, moderate. Air temperature, 11·7°. Sunshine, 15·8°, black bulb thermometer. Rate of towing, 2½ miles per hour. Chief species caught, plaice, dabs, grey gurnard (32), latchet (23), tope (1), few *Aurelia*.

| Section. | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Tested on hauling. | | | | | | | After 1 hour's exposure. | | | | | | | Put in tank with section 1 and tested 12 hours later. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 | M. | 39 | 46 | 16 | 24 | 28 | 30 | 83 | 7 | 7 | 30 | 20 | 92 | 73 | 129 | 8 | 37 | 3 | 17 | 8 | 46 | 19 |
| | F. | 34 | | 22 | | 19 | | 75 | 12 | | 27 | | 112 | | 151 | 3 | | 2 | | 6 | | 11 |
| 20-24 | M. | 16 | 74 | 2 | 9 | 3 | 17 | 21 | 8 | 19 | 11 | 23 | 32 | 58 | 51 | — | — | — | — | 2 | 100 | 2 |
| | F. | 24 | | 3 | | 6 | | 33 | 13 | | 14 | | 33 | | 60 | — | | — | | 1 | | 1 |
| 25-29 | M. | — | 100 | — | — | — | — | — | 2 | 45 | — | 28 | — | 28 | 2 | — | — | — | — | — | — | — |
| | F. | 2 | | — | | — | | 2 | 3 | | 3 | | 3 | | 9 | — | | — | | — | | — |
| 30+ | M. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | - | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 55 | 54 | 18 | 20 | 31 | 26 | 104 | 17 | 11 | 41 | 21 | 124 | 68 | 182 | 8 | 33 | 3 | 15 | 10 | 51 | 21 |
| | F. | 60 | | 25 | | 25 | | 110 | 28 | | 44 | | 148 | | 220 | 3 | | 2 | | 7 | | 12 |

## EXPERIMENT 21.

Date, 4/vii/07. Locality, Norderney. Beam trawl. Duration of haul, 3 hours. Total weight of catch, 84½ kilogrammes or 186 lbs. Depth, 14–17 fathoms or 26–31 metres. Soil, sand. Time of hauling, 6.3 p.m. Sea, moderate. Air temperature, 14·4°. Sunshine, 18·3°, black bulb thermometer. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, grey gurnard (31), latchet (11), greater weever (11), *Aurelia* and *Cyanea* fairly abundant.

| Length of Fish (cm.). | Section | 1. | | | | | | | 2. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Placed in tanks on hauling. | | | | | | | Placed in tanks after 1 hour's exposure. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 ... ... | M. | 4 | 89·0 | 1 | 11·0 | — | — | 5 | 7 | 11·0 | 10 | 9·0 | 78 | 80·0 | 95 |
| | F. | 13 | | 1 | | — | | 14 | 13 | | 7 | | 73 | | 93 |
| 20-24 ... ... | M. | — | 71·0 | 1 | 29·0 | — | — | 1 | 1 | 32·0 | 1 | 9·0 | 5 | 59·0 | 7 |
| | F. | 10 | | 3 | | — | | 13 | 10 | | 2 | | 15 | | 27 |
| 25–29 ... ... | M. | 1 | 78·0 | — | 22·0 | — | — | 1 | — | — | — | — | — | — | — |
| | F. | 6 | | 2 | | — | | 8 | — | | — | | — | | — |
| 30+ ... ... ... | M. | — | 100 | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | 1 | | — | | — | | 1 | — | | — | | — | | — |
| Grand Total ... | M. | 5 | 81·0 | 2 | 19·0 | — | — | 7 | 8 | 14·0 | 11 | 9·0 | 83 | 77·0 | 102 |
| | F. | 30 | | 6 | | — | | 36 | 23 | | 9 | | 88 | | 120 |

## EXPERIMENT 22.

Date, 4/vii/07. Locality, Norderney. Beam trawl. Duration of haul, 2 hours. Total weight of catch, ca. 35 kilogrammes or ca. 77 lbs. Depth, 13–14 fathoms or 24–26 metres. Soil, sand. Time of hauling, 9 p.m. Sea, moderate. Air temperature, 14·2°. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, grey gurnard (62), latchet (3), thornback (1), few *Aurelia* and *Cyanea*.

| Length of Fish (cm.). | Section | 1. Placed in tanks on hauling. | | | | | | | 2. Placed in tanks after 1 hour's exposure. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 41 | 35 | 19 | 18 | 45 | 47 | 105 | 3 | 2 | 10 | 3 | 247 | 95 | 260 |
| | F. | 29 | | 18 | | 50 | | 97 | 8 | | 6 | | 250 | | 264 |
| 20–24 | M. | 5 | 79 | — | — | 1 | 21 | 6 | 1 | 9 | — | 6 | 12 | 85 | 13 |
| | F. | 21 | | — | | 6 | | 27 | 2 | | 2 | | 15 | | 19 |
| 25–29 | M. | — | 100 | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | 1 | | — | | — | | 1 | — | | — | | — | | — |
| 30+ | M. | — | 100 | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | 1 | | — | | — | | 1 | — | | — | | — | | — |
| Grand Total | M. | 46 | 41 | 19 | 16 | 46 | 43 | 111 | 4 | 3 | 10 | 3 | 259 | 94 | 273 |
| | F. | 52 | | 18 | | 56 | | 126 | 10 | | 8 | | 265 | | 283 |

## EXPERIMENT 23.

Date, 5/vii/07. Locality, Norderney. Beam trawl. Duration of haul, 2 hours. Total weight of catch, 77 kilogrammes or 169½ lbs. Depth, 9–11 fathoms or 16–20 metres. Soil, sand. Time of hauling, 9 a.m. Sea, heavy roll at times. Air temperature, 15·3°. Sunshine, 41·9°, black bulb thermometer. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, grey gurnard (52), latchet (11), greater weever (2), tope (1). *Aurelia* very common. Some *Cyanea*, *Chrysaora*.

Remarks :—Fish kept wet by water retained by the jellyfish, &c.

| Length of Fish (cm.). | Section | 1. Placed in tanks on hauling. | | | | | | | 2. Placed in tanks after 2 hours' exposure. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | 21 | 67 | 4 | 10 | 9 | 23 | 34 | — | — | — | — | 142 | 100 | 142 |
| | F. | 35 | | 4 | | 10 | | 49 | — | | — | | 176 | | 176 |
| 20–24 | M. | 12 | 91 | — | 2 | — | 7 | 12 | — | — | — | — | 3 | 100 | 3 |
| | F. | 29 | | 1 | | 3 | | 33 | — | | — | | 18 | | 18 |
| 25–29 | M. | 2 | 100 | — | — | — | — | 2 | — | — | — | — | 2 | 100 | 2 |
| | F. | 16 | | — | | — | | 16 | — | | — | | 2 | | 2 |
| 30+ | M. | — | 100 | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | 5 | | — | | — | | 5 | — | | — | | — | | — |
| Grand Total | M. | 35 | 80 | 4 | 5 | 9 | 15 | 48 | — | — | — | — | 147 | 100 | 147 |
| | F. | 85 | | 5 | | 13 | | 103 | — | | — | | 196 | | 196 |

## EXPERIMENT 24.

Date, 6/vii/07. Locality, Eider. Otter trawl. Duration of haul, 4 hours. Total weight of catch, 464 kilogrammes or 1,021 lbs. Depth, 12-13 fathoms or 22-24 metres. Soil, sand. Time of hauling, 10.30 a.m. Sea, moderate. Air temperature, 15·3°. Sunshine, 45°–57·2°, black bulb thermometer. Rate of towing, 2½ miles per hour. Chief species caught, plaice, grey gurnard (28), latchet (36), thornback (2), skate (1), greater weever (1), spur-dog (1), *Asterias rubens* abundant.

| Section | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Placed in tanks on hauling. | | | | | | | In tanks after ½ hour's exposure. | | | | | | | In tanks after 1 hour's exposure. | | | | | | |
| | | Healthy. | | Moribund | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 | M. | 5 | 4 | 73 | 64 | 34 | 32 | 112 | 1 | 1 | 3 | 8 | 68 | 91 | 72 | — | — | 2 | 1 | 150 | 99 | 152 |
| | F. | 4 | | 59 | | 32 | | 95 | — | | 10 | | 76 | | 86 | — | | 2 | | 116 | | 118 |
| 20-24 | M. | — | 1 | 26 | 85 | 8 | 14 | 34 | — | — | 2 | 12 | 16 | 88 | 18 | — | — | — | 2 | 23 | 98 | 23 |
| | F. | 1 | | 40 | | 3 | | 44 | — | | 5 | | 36 | | 41 | — | | 1 | | 37 | | 38 |
| 25-29 | M. | — | — | 4 | 100 | — | — | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | — | | — | | — | | — | — | | — | | — | | — |
| 30+ | M. | — | — | — | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | 1 | | — | | 1 | — | | — | | — | | — | — | | — | | — | | — |
| Grand Total. | M. | 5 | 3 | 103 | 70 | 42 | 27 | 150 | 1 | — | 5 | 9 | 84 | 91 | 89 | — | — | 2 | 2 | 173 | 98 | 175 |
| | F. | 5 | | 100 | | 35 | | 140 | — | | 15 | | 112 | | 127 | — | | 3 | | 153 | | 156 |

## EXPERIMENT 25.

Date, 6/vii/07. Locality, Eider. Beam trawl. Duration of haul, 3 hours. Total weight of catch 175 kilogrammes or 385 lbs. Depth, 13 fathoms or 24 metres. Soil, sand. Time of hauling, 2.20 p.m. Sea, moderate. Air temperature, 15·3°. Sunshine, 36·4°, black bulb thermometer. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, grey gurnard (18), latchet (23), thornback (3), tope (2), smoothhound (1), several *Aurelia*, *Asterias rubens*, abundant.

| Section. | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Placed in tanks on hauling. | | | | | | | Placed in tanks after ½ hour's exposure. | | | | | | | Placed in tanks after 1 hour's exposure. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 | M. | 61 | 29 | 101 | 37 | 70 | 34 | 232 | 10 | 7 | 30 | 25 | 109 | 67 | 149 | — | — | — | — | 129 | 100 | 129 |
| | F. | 62 | | 55 | | 72 | | 189 | 10 | | 38 | | 72 | | 120 | — | | — | | 100 | | 100 |
| 20-24 | M. | 8 | 38 | 18 | 50 | 3 | 12 | 29 | 1 | 7 | 8 | 55 | 10 | 38 | 19 | — | — | — | 3 | 17 | 97 | 17 |
| | F. | 15 | | 12 | | 4 | | 31 | 2 | | 15 | | 6 | | 23 | — | | 1 | | 15 | | 16 |
| 25-29 | M. | 1 | 67 | 1 | 33 | — | — | 2 | — | 13 | 3 | 87 | - | — | 3 | — | — | 1 | 13 | 3 | 87 | 4 |
| | F. | 3 | | 1 | | — | | 4 | 1 | | 4 | | — | | 5 | — | | — | | 4 | | 4 |
| 30+ | M | - | — | — | — | — | — | — | — | 100 | — | — | — | — | — | — | — | — | — | — | — | — |
| | F. | — | | — | | — | | — | 1 | | — | | — | | 1 | — | | — | | — | | — |
| Grand Total. | M. | 70 | 31 | 120 | 39 | 73 | 31 | 263 | 11 | 8 | 41 | 31 | 119 | 61 | 171 | — | — | 1 | 1 | 149 | 99 | 150 |
| | F. | 80 | | 68 | | 76 | | 224 | 14 | | 57 | | 78 | | 149 | — | | 1 | | 119 | | 120 |

## EXPERIMENT 26.

Date, 7/vii/07. Locality, Sylt Outer. Beam trawl. Duration of haul, 1 hour. Total weight of catch, 96 kilogrammes or 211 lbs. Depth, 13 fathoms or 24 metres. Soil, sand. Time of hauling 9.10 p.m. Sea, moderate. Air temperature, 14·4°. Sunshine, 26·6° of black bulb thermometer. Rate of towing, 2 miles per hour. Chief species caught, plaice, dabs, grey gurnard (31), latchet (1), lobster (1). *Asterias rubens* fairly common.

Remarks :—It is difficult to account for the very high mortality of this catch. It forms a notable exception to the usual short hauls of the beam trawl, which are distinguished by a low mortality.

| Section | | 1. | | | | | | | 2. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Placed in tanks on hauling. | | | | | | | Placed in tanks after 1 hour exposure. | | | | | | |
| Length of Fish (cm.). | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 ... ... | M. | 3* | 100 | — | — | — | — | 3 | — | — | 1 | 1 | 101 | 99 | 102 |
| | F. | 1 | | — | | — | | 1 | — | | — | | 87 | | 87 |
| 20–24 ... ... | M. | 42 | 99 | — | — | — | 1 | 42 | — | 4 | — | — | 11 | 96 | 11 |
| | F. | 47 | | — | | 1 | | 48 | 1 | | — | | 16 | | 17 |
| 25–29 ... ... | M. | 15 | 100 | — | — | — | — | 15 | — | — | — | — | — | — | — |
| | F. | 22 | | — | | — | | 22 | — | | — | | — | | — |
| 30+ ... ... ... | M. | 1 | 100 | — | — | — | — | 1 | — | — | — | — | — | — | — |
| | F. | 5 | | — | | — | | 5 | — | | — | | — | | — |
| Grand Total ... | M. | 61 | 99 | — | — | — | 1 | 61 | — | 0 | 1 | 0 | 112 | 99 | 113 |
| | F. | 75 | | — | | 1 | | 76 | 1 | | — | | 103 | | 104 |

* One fish at 14 cm. had no tail.

## EXPERIMENT 27.

Date, 7/vii/07. Locality, Sylt Outer. Beam trawl. Duration of haul, 1 hour. Total weight of catch, 76 kilogrammes or 167 lbs. Depth, 13 fathoms or 24 metres. Soil, sand. Time of hauling 10.30 a.m. Sea, moderate. Sunshine, 54·5° of black bulb thermometer. Rate of towing, 2 miles per hour. Chief species caught plaice, dabs, grey gurnard (13) thornback (1). Few *Cyanea capillata*.

| Section | | 1. | | | | | | | 2. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Placed in tanks on hauling. | | | | | | | In tanks after ½ hour exposure and left about 4 hours. | | | | | | |
| Length of Fish (cm.) | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10-19 ... ... | M. | 5 | 80 | — | — | 1 | 20 | 6 | — | — | — | — | 122 | 100 | 122 |
| | F. | 3 | | — | | 1 | | 4 | — | | — | | 94 | | 94 |
| 20-24 ... ... | M. | 29 | 87 | — | — | 4 | 13 | 33 | — | — | — | — | 29 | 100 | 29 |
| | F. | 36 | | — | | 6 | | 42 | — | | — | | 43 | | 43 |
| 25-29 ... ... | M. | 5 | 100 | — | — | — | — | 5 | — | — | — | 20 | 1 | 80 | 1 |
| | F. | 14 | | — | | — | | 14 | — | | 1 | | 3 | | 4 |
| 30+ ... ... | M. | 1 | 100 | — | — | — | — | 1 | — | — | — | — | — | — | — |
| | F. | 1 | | — | | — | | 1 | — | | — | | — | | — |
| Grand Total ... | M. | 40 | 89 | — | — | 5 | 11 | 45 | — | — | — | 0 | 152 | 100 | 152 |
| | F. | 54 | | — | | 7 | | 61 | — | | 1 | | 140 | | 141 |

## EXPERIMENT 28.

Date, 10/vii/07. Locality, Eider. Otter trawl. Duration of haul, 4 hours. Total weight of catch, 143 kilogrammes or 314½ lbs. Depth, 13–16 fathoms or 24–29 metres. Soil, dark grey sand, fine sand. Time of hauling, 1 a.m. Sea, smooth. Air temperature, 13·9°. Sunshine, 16·6° of black bulb thermometer. Rate of towing, 2½ miles per hour. Chief species caught, plaice, dabs, grey gurnard (131), latchet (35), thornback (3), spur-dog (1), tope (1). Few *Cyanea*. *Asterias rubens* fairly common.

| Section. | | 1. | | | | | | | 2. | | | | | | | 3. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Placed in tanks on hauling, for 1 hour. | | | | | | | Placed in tanks after ½ hour exposure on deck. | | | | | | | Placed in tanks after 1½ hour exposure. | | | | | | |
| | | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. | Healthy. | | Moribund. | | Dead. | | Total. |
| | | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. | No. | Per cent. | No. | Per cent. | No. | Per cent. | No. |
| 10–19 | M. | — | 0 | 55 | 31 | 113 | 69 | 168 | 1 | 1 | 4 | 3 | 176 | 96 | 181 | — | — | 2 | 0 | 257 | 100 | 259 |
| | F. | 1 | | 29 | | 75 | | 105 | 1 | | 5 | | 108 | | 114 | — | | — | | 179 | | 179 |
| 20–24 | M. | 1 | 2 | 17 | 67 | 9 | 31 | 27 | — | — | 2 | 7 | 9 | 93 | 11 | — | — | — | — | 18 | 100 | 18 |
| | F. | — | | 21 | | 9 | | 30 | — | | — | | 19 | | 19 | — | | — | | 39 | | 39 |
| 25–29 | M. | — | — | — | 100 | — | — | — | — | — | — | — | 1 | 100 | 1 | — | — | — | — | 3 | 100 | 3 |
| | F. | — | | 2 | | — | | 2 | — | | — | | 3 | | 3 | - | | — | | 5 | | 5 |
| 30+ | M. | — | — | — | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 100 | — |
| | F. | - | | 1 | | — | | 1 | — | | — | | — | | — | — | | — | | 1 | | 1 |
| Grand Total. | M. | 1 | 1 | 72 | 38 | 122 | 61 | 195 | 1 | 2 | 6 | 3 | 186 | 95 | 193 | — | — | 2 | 0 | 278 | 100 | 280 |
| | F. | 1 | | 53 | | 84 | | 138 | 1 | | 5 | | 130 | | 136 | — | | — | | 224 | | 224 |

## Experiment 29.

Date, 26/vi/08. Locality, Texel Ground. Otter trawl. Duration of haul, 6 hours. Depth, 16-14½ fathoms. Soil, sand, sand and shells. Time of hauling, 7.40 a.m. Sea, smooth. Sunshine, cloudy. Rate of towing, 3 miles per hour. Chief species caught, plaice, dabs, grey gurnards, *Astropecten irregularis.*

Remarks :—Somewht heavy rolling occurred in the early morning of the 27th.

| Length of Fish (cm.). | | Placed in tanks on hauling. | | | | | |
|---|---|---|---|---|---|---|---|
| | | No. of Fish. | Per cent. alive after | | | | |
| | | | ½ hour. | 1 hour. | 2 hours. | 4 hours. | 30 hours. |
| 10–19 ... ... ... | M. | 105 | 55 | 49 | 42 | 35 | 6 |
| | F. | 90 | | | | | |
| 20–24 ... ... ... | M. | 49 | 77 | 69 | 66 | 56 | 18 |
| | F. | 75 | | | | | |
| 25–29 ... ... ... | M. | 5 | 73 | 70 | 60 | 57 | 27 |
| | F. | 25 | | | | | |

## Experiment 30.

Date, 30/vi/08. Locality. Graa Deep. Otter trawl. Duration of haul, 4 hours. Depth, 7-8 fathoms. Soil, dark sand and shells. Time of hauling, 10.30 a.m. Sea, smooth. Sunshine, clear. Rate of Towing, 2¼ miles per hour. Chief species caught, plaice. Many *Chrysaora, Asterias rubens.*

Remarks :—A very small catch.

| Length of Fish (cm.). | | Placed in tanks on hauling. | | | | |
|---|---|---|---|---|---|---|
| | | No. of Fish. | Percentage alive after | | | |
| | | | 1 hour. | 3 hours. | 9 hours. | 12 hours. |
| 10–19 ... ... ... | M. | 7 | 64 | 57 | 54 | 50 |
| | F. | 21 | | | | |
| 20–24 ... ... ... | M. | — | 62 | 62 | 50 | 25 |
| | F. | 8 | | | | |
| 25–29 ... ... ... | M. | — | L. | L. | 0 | 0 |
| | F. | 1 | | | | |

L=living.

## Experiment 31.

Date, 30/vi./08. Locality, Sylt Inner Ground. Otter trawl. Duration of haul, 4 hours. Total weight of catch, 80 kilogrammes or 176 lbs. Depth, 8–10½ fathoms. Soil, coarse sand, fine sand. Time of hauling, 4.20 p.m. Sea, smooth. Sunshine, cloudy. Rate of towing, 2½ miles per hour. Chief species caught, plaice, dabs, two or three baskets of *Chrysaora, Asterias rubens.*

| Length of Fish (cm.). | | Section | 1. | | | | 2. | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Put in tanks on hauling. | | | | Exposed on deck ½ hour. | | |
| | | | Number of Fish. | Per cent. alive after | | | Number of Fish. | Per cent. alive after | |
| | | | | 7 hours. | 12 hours. | 21 hours. | | 2 hours. | 6½ hours. |
| 10–19 ... ... ... ... ... | M. | | 17 | 84 | 72 | 42 | 29 | 38 | 24 |
| | F. | | 26 | | | | 26 | | |
| 20–24 ... ... ... ... ... | M. | | 42 | 91 | 78 | 56 | 18 | 36 | 22 |
| | F. | | 74 | | | | 27 | | |
| 25–29 ... ... ... ... ... | M. | | 5 | 95 | 90 | 85 | 1 | 0 | 0 |
| | F. | | 15 | | | | — | | |

## EXPERIMENT 32.

Date, 30/vi/08 to 1/vii/08. Locality, Sylt Inner Ground. Otter trawl. Duration of haul, 6 hours. Total weight of catch, 171+ kgs. or 376+ lbs. Depth, 10½–9½ fathoms. Soil, fine sand. Time of hauling, 5.45 a.m. Sea, smooth. Air temperature, 14·3°. Sunshine, sun obscured by light cloud, 25·3° Black bulb thermometer. Rate of towing, 2¼ miles per hour. Chief species caught, plaice, dabs, one basket of *Chrysaora*, and about a third of a basket of other invertebrates.

| Section | | 1. | | | | | | 2. | | | 3. | | 4. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Put in tanks on hauling. | | | | | | Exposed ½ hour on deck. | | | Exposed 1 hour on deck. | | Exposed 1½ hours on deck. | |
| | | No. of Fish. | Percentage alive after | | | | | No. of Fish. | Percentage alive after | | No. of Fish. | Percentage alive after 1 hr. | No. of Fish. | Percentage alive after 1 hr. |
| | | | 1 hr. | 3 hrs. | 5 hrs. | 7 hrs. | 10 hrs. | | ½ hr. | 7 hrs. | | | | |
| 10–19 | F. | 42 | 37 | 25 | 20 | 18 | 11 | 23 | 34 | 11 | 59 | 0 | 28 | 0 |
| | M. | 54 | | | | | | 33 | | | 56 | | 37 | |
| 20–24 | F. | 68 | 31 | 12 | 6 | 5 | 5 | 15 | 23 | 7 | 24 | 1 | 9 | 0 |
| | M. | 121 | | | | | | 28 | | | 45 | | 30 | |
| 25–29 | F. | 5 | 61 | 22 | 0 | 0 | 0 | 6 | 18 | 9 | 3 | 0 | 1 | 0 |
| | M. | 13 | | | | | | 5 | | | 1 | | 2 | |
| 30 + | F. | — | 50 | 50 | 50 | 50 | 0 | — | 0 | 0 | — | — | — | — |
| | M. | 2 | | | | | | 1 | | | | | | |

## EXPERIMENT 33.

Date, 1/vii/08. Locality, Sylt Inner Ground. Beam trawl. Duration of haul, 6 hours. Total weight of catch, 222+ kilogrammes or 488+ lbs. Depth, 9½–9 fathoms. Soil, fine sand, sand. Time of hauling, 1 p.m. Sea, smooth. Air temperature, 17·9°. Sunshine, 55·8° of black bulb thermometer. Rate of Towing, 2 miles per hour. Chief species caught, plaice, dabs, eight or nine baskets of Medusæ, chiefly *Chrysaora*.

| Section | | 1. | | | 2. | | 3. | |
|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Put in tanks on hauling. | | | Exposed on deck ½ hour. | | Exposed on deck 1 hour. | |
| | | No. of Fish. | Percentage alive after | | No. of Fish. | Percentage alive after 2 hours. | No. of Fish. | Percentage alive after 2 hours. |
| | | | 3 hours. | 20 hours. | | | | |
| 10–19 ... ... ... ... | M. | 45 | 23 | 14 | 43 | 1 | 41 | 0 |
| | F. | 53 | | | 31 | | 41 | |
| 20–24 ... ... ... .. | M. | 59 | 60 | 52 | 17 | 29 | 22 | 0 |
| | F. | 49 | | | 24 | | 26 | |
| 25–29 ... ... ... ... | M. | 7 | 61 | 61 | — | — | 2 | 0 |
| | F. | 6 | | | 2 | | 1 | |

## EXPERIMENT 34.

Date, 1/vii./08. Locality, Sylt Outer Ground. Beam trawl. Duration of haul, 4 hours. Total weight of catch, 178+ kilogrammes or 392+ lbs. Depth, 10 fathoms. Soil, fine sand. Time of hauling, 6.25 p.m. Sea, moderate. Air temperature, 15·1°. Sunshine, evening haul. Chief species caught, plaice, dabs, grey gurnard.

Remarks :—Rate of towing is not ascertainable in the case of experiments 34–38, owing to the vessel towing round a buoy at an uncertain distance from it.

| Section | | 1. | | 2. | | | 3. | |
|---|---|---|---|---|---|---|---|---|
| Length of Fish (cm.). | | Put in Tanks on hauling. | | Exposed on Deck ½ hour. | | | Exposed on Deck 1 hour. | |
| | | No. of Fish. | Percentage alive after 20 hours. | No. of Fish. | Percentage alive after | | No. of Fish. | Percentage after ½ hour. |
| | | | | | 3 hours. | 7½ hours. | | |
| 10-19 ... ... ... ... | M. | 37 | 66 | 40 | 41 | 38 | 38 | 1 |
| | F. | 30 | | 71 | | | 47 | |
| 20–24 ... ... ... ... | M. | 26 | 89 | 14 | 90 | 90 | 15 | 9 |
| | F. | 49 | | 16 | | | 17 | |
| 25–29 ... ... ... ... | M. | 4 | 90 | — | L | L | — | 0 |
| | F. | 6 | | 1 | | | 5 | |
| 30+ ... ... ... ... | F. | — | — | — | — | — | 1 | 0 |

L = living.

## EXPERIMENT 35.

Date, 1-2/vii/08. Locality, Sylt Outer Ground. Beam trawl. Duration of haul, 6 hours. Total weight of catch, 219+ kgs., or 482+ lbs. Depth, 10 fathoms. Soil, sand. Time of hauling, 1.15 a.m. (2nd). Sea smooth. Air temperature, 13·2°. Cloudy. Chief species caught, plaice, dabs, grey gurnard.

| Section | 1. | | | | 2. | | | 3. | | 4. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Put in tanks on hauling. | | | | Exposed on deck ½ hour. | | | Exposed on deck 1 hour. | | Exposed on deck 1½ hours. | |
| Length of Fish (cm.). | No. of Fish. | Percentage alive after | | | No. of Fish. | Percentage alive after | | No. of Fish. | Percentage alive after 1½ hours. | No. of Fish. | Percentage alive after 1 hour. |
| | | 2 hours. | 31¾ hours. | 55¾ hours. | | 1½ hours. | 7 hours. | | | | |
| 10-19 ... M. | 16 | 95 | 69 | 46 | 25 | 32 | 25 | 55 | 1 | 43 | 0 |
| 10-19 ... F. | 23 | | | | 28 | | | 44 | | 39 | |
| 20-24 ... M. | 35 | 97 | 79 | 69 | 13 | 78 | 74 | 6 | 22 | 6 | 0 |
| 20-24 ... F. | 32 | | | | 14 | | | 12 | | 9 | |
| 25-29 ... M. | 8 | 100 | 100 | 100 | | | | 1 | 100 | 3 | 20 |
| 25-29 ... F. | 13 | | | | | | | 1 | | 2 | |
| 30+... ... M. | — | 100 | 100 | 100 | | | | | | | |
| 30+... ... F. | 2 | | | | | | | | | | |

## EXPERIMENT 36.

Date, 2/vii/08. Locality, Sylt Outer Ground. Beam Trawl. Duration of haul, 2 hours. Total weight of catch, 61+kgs., or 134 lbs. Depth, 10 fathoms. Soil, sand. Time of hauling, 10.15 a.m. Air temperature, 16·8°. Sunshine, clear sky, fair breeze, 49·5° of Black-bulb thermometer. Sea, moderate. Chief species caught, plaice, dabs, a dozen or two *Medusæ*.

| Section | 1. | | | 2. | | 3. | |
|---|---|---|---|---|---|---|---|
| | Put in tanks on hauling. | | | Exposed on deck ½ hour. | | Exposed on deck 1 hour. | |
| Length of Fish (cm.). | No. of Fish. | Percentage alive after | | No. of Fish. | Percentage alive after 1 hour. | No. of Fish. | Percentage alive after ½ hour. |
| | | 22¼ hours. | 46¼ hours. | | | | |
| 10-19 ... ... ... ... M. | 30 | 99 | 92 | 62 | 1 | 27 | 0 |
| 10-19 ... ... ... ... F. | 35 | | | 50 | | 32 | |
| 20-24 ... ... ... ... M. | 27 | 98 | 98 | 7 | 7 | 7 | 0 |
| 20-24 ... ... ... ... F. | 24 | | | 8 | | 13 | |
| 25-29 ... ... ... ... M. | 2 | 100 | 100 | — | 0 | — | 0 |
| 25-29 ... ... ... ... F. | 3 | | | 2 | | 2 | |

## EXPERIMENT 37.

Date, 2/vii./08. Locality, Sylt Outer Ground. Beam Trawl. Duration of haul, 2 hours. Total weight of catch, 79 + kgs. or 174 lbs. Depth, 10 fathoms. Soil, sand. Time of hauling, 12.45 p.m. Sea, moderate. Air temperature, 16·8°. Sunshine, 39·9° Black Bulb thermometer. Chief species caught, plaice, dabs, a dozen or two *Medusæ*.

| Section | 1. | | | 2. | |
|---|---|---|---|---|---|
| | Put in tanks on hauling. | | | Exposed on deck ½ hour. | |
| Length of Fish (cm.). | No. of Fish. | Percentage alive after | | No. of Fish. | Percentage alive after 2 hours. |
| | | 19¾ hours. | 45¾ hours. | | |
| 10-19 ... ... ... M. | 10 | 67 | 33 | 26 | 0 |
| 10-19 ... ... ... F. | 17 | | | 33 | |
| 20-24 ... ... ... M. | 14 | 87 | 85 | 6 | 0 |
| 20-24 ... ... ... F. | 26 | | | 23 | |
| 25-29 ... ... ... M. | 1 | 100 | 100 | 1 | 0 |
| 25-29 ... ... ... F. | 3 | | | 2 | |

## EXPERIMENT, 38.

Date, 2/vii/08. Locality, Sylt Outer Ground. Duration of haul, 4 hours. Beam trawl. Total weight of catch, 169+ kilogrammes or 372+ lbs. Depth, 10 fathoms. Soil, sand. Time of hauling, 5.10 p.m. Air temperature, 15·8°. Sunshine, cloudy. Sea rough. Chief species caught, plaice, dabs, grey gurnard, about a dozen *Medusæ*.

| Length of fish (cm.). | Section | 1. Put in tanks on hauling. No. of Fsh. | 1. Percentage alive after 15½ hours. | 1. Percentage alive after 39¼ hours. | 2. Exposed on Deck ½ hour. No. of Fish. | 2. Exposed on Deck ½ hour. Percentage alive after 1½ hours. |
|---|---|---|---|---|---|---|
| 10–19 ... ... ... | M. | 25 | 60 | 40 | 35 | 19 |
| | F. | 32 | | | 28 | |
| 20–24 ... ... ... | M. | 25 | 92 | 63 | 7 | 48 |
| | F. | 40 | | | 14 | |
| 25–29 ... ... ... | M | 1 | 100 | 100 | 2 | 86 |
| | F. | 11 | | | 5 | |

# REPORT

ON THE

# SIZE AND AGE OF PLAICE AT MATURITY IN THE NORTH SEA AND ENGLISH CHANNEL.

BY


## WILLIAM WALLACE, D.Sc.,

*Assistant Naturalist on the Staff.*


WITH TABLES 1, 2 AND 2A, 3 AND 3A, 4 AND 4A IN THE TEXT AND DIAGRAMS, FIGS. 1, 2, 3. TABLES I AND IA, II, AND IIA AND ONE CHART AT THE END,

WITH

AN APPENDIX BY G. T. ATKINSON.

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# REPORT

ON THE

# SIZE AND AGE OF PLAICE AT MATURITY IN THE NORTH SEA AND ENGLISH CHANNEL.

BY

**WILLIAM WALLACE, D.Sc.**

## I.—INTRODUCTION.

### § 1. Nature of the Investigation

The objects of this research are as follows :—

(1.) The investigation of local differences in the age and size of plaice at first maturity in the North Sea and English Channel.

(2.) To obtain some evidence in regard to the distribution of the spawning shoals and the time and duration of the spawning period in the different parts of the North Sea.

(3.) To investigate the effect of maturity on the subsequent rate of growth ; to discover whether sexual and local differences in the age at first maturity give rise to corresponding differences in the age at which an arrest of growth takes place ; and, further, whether these differences are recognisable in the otoliths of mature plaice of different sexes from different localities.

The present report deals with the results so far obtained under the first two heads. In regard to (3), although interesting preliminary observations have been made, it is considered that more data are required to illustrate them. An account of these observations will be given in a later report.

### § 2. Material.

The material for this investigation consists of observations of size and maturity in 13,302 plaice in 4,107 of which the age also was determined by examination of the otoliths. These plaice, of which the condition of the reproductive organs was recorded, were caught on thirty-nine different occasions in various parts of the North Sea and English Channel by the S.S. *Huxley*, and partly by Lowestoft fishing smacks.

In the former case my colleagues and I made the necessary measurements, observations, and otolith collections on board. In this connection I have to thank especially Mr. G. T. Atkinson and Mr. R. A. Todd. The material from fishing smacks was either measured and examined on the Lowestoft Fish Market or—when otolith collections were required—was brought to the Laboratory. The market measurements and maturity examinations were made in the winters of 1907–08 by Mr. Atkinson, who has written an appendix to this paper (pp. 75, 76) giving details of the samples for which he is responsible. I am further indebted to Messrs. Atkinson and J. Potter for plotting on the Chart the central positions of the various stations on which the thirty-nine samples were obtained.

*Table* 1.—Table 1 summarises the material of the present investigation, and gives particulars of the thirty-nine samples referred to. In this table are given for each sample the locality, date, number of hours fishing and the numbers of immature and mature of either sex, distinguishing, in the case of the females, three degrees of ripeness (*see* p. 54).

*Locality.*—The arrangement of the samples in Table 1 is roughly according to the latitude of the fishing grounds. Beginning at the top with the Dogger Bank, the various grounds succeed one another in more or less geographical order from North to South

## TABLE 1.—Summary of Maturity Observations with Particulars of Samples.

| Reference No. of Sample. | Ground and Depth. | Date. | Vessel. Reference Nos. of Hauls. | No. of Hours Fishing. | Males. | | | | | Females. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | No. of Immature. | No. of which Maturity doubtful. | No. of Mature. | Totals. | Percentage Mature. | No. Immature. | Stages of Maturity. 1. Ripening. | 2. Ripe. | 3. Spent | No. Mature. | Totals. | Percentage Mature. |
| 1 | Dogger Bank ... ... ... ... | (10½–18 fms.) | 10–11/x/05 | O. 356–359 ... ... ... | 13 | 11 | 1 | 5 | 17 | **30** | 16 | 22 | 0 | 0 | 22 | 38 | **58** |
| 2 | " " ... ... ... ... | (10–15 " ) | 16–17/x/06 | O. 414–416 ... ... ... | 18 | 1 | 0 | 2 | 3 | **67** | 8 | 18 | 0 | 0 | 18 | 26 | **69** |
| 3 | " " ... ... ... ... | (10–17 " ) | 22–23/i/05 | O. 270–275 ... ... ... | 70 | 17 | 0 | 1 | 18 | **5** | 43 | 2 | 1 | 6 | 9 | 52 | **17** |
| 4* | " " ... ... ... ... | (10½–17 " ) | 11–12/iii/04 | O. 160–166 ... ... ... | — | — | — | — | — | — | 84 | 0 | 0 | 49 | 49 | 133 | — |
| 5 | Clay Deep, edge of Dogger ... ... | (20–24 " ) | 12/x/05 | O. 360–361 ... ... ... | 10 | 28 | 3 | 16 | 47 | **34+** | 64 | 17 | 0 | 0 | 17 | 81 | **21** |
| 6 | Horn Reef Outer and Clay Deep ... | (15–25 " ) | 25–27/ix/06 | B. 511, 515, 516, 519–521 ... | 22 | 76 | 0 | 8 | 84 | **10** | 73 | 16 | 0 | 0 | 16 | 89 | **18** |
| 7 | Flamborough Off Ground ... ... | (25–30 " ) | 19–20/x/05 | B 397. O. 362–366 ... .. | 27½ | 41 | 4 | 38 | 83 | **46+** | 80 | 41 | 0 | 0 | 41 | 121 | **34** |
| 8 | " " ... ... | (26–37 " ) | 20–23/x/06 | O. 417–420. B. 522–531 ... | 58¾ | 27 | 0 | 25 | 52 | **47** | 40 | 59 | 0 | 0 | 59 | 99 | **59** |
| 9 | " " ... ... | (26–31 " ) | 13–21/i/05 | B. 277. O. 266–269 ... ... | 20 | 14 | 2 | 168 | 184 | **91+** | 43 | 16 | 14 | 5 | 35 | 78 | **45** |
| 10 | " " ... ... | (23–30 " ) | 22–29/iii/06 | B. 415–417. O. 375–377 ... | 27¼ | 17 | 8 | 25 | 50 | **50+** | 65 | 0 | 2 | 35 | 37 | 102 | **36** |
| 11 | " " ... ... | (20–33 " ) | 10–13/iii/07 | O. 425–430, 434, 435 ... ... | 21 | 4 | 6 | 25 | 35 | **71+** | 9 | 0 | 7 | 2 | 9 | 18 | **50** |
| 12 | Well Bank Rough ... ... ... | (16–20 " ) | 15–23/iii/07 | O. 436–438. B. 546 ... ... | 13 | 11 | 5 | 6 | 22 | **27+** | 42 | 0 | 0 | 20 | 20 | 62 | **32** |
| 13 | Off Dudgeon Light Vessel ... ... | (11–16 fms.) | 1–6/xii/07 | LT. Smack, *Citizen* ... ... | — | 131 | — | 11 | 142 | **8** | 133 | 14 | 0 | 0 | 14 | 147 | **10** |
| 14 | Off Inner Dowsing Light Vessel ... | (11–19 " ) | 3–9/xii/07 | LT. Smack, *Chrysolite* ... | — | 139 | — | 20 | 159 | **12** | 195 | 27 | 0 | 0 | 27 | 222 | **12** |
| 15 | South Botney Ground ... ... ... | (17½–20 fms.) | 25/i/05 | O. 276 ... ... ... ... | 5 | 13 | 2 | 4 | 19 | **21+** | 36 | 4 | 2 | 9 | 15 | 51 | **29** |
| 16 | Leman Ground &c. ... ... ... | (12–17 " ) | 27–29/ix/04 | B. 213, 214, 220, 221 ... ... | 16¼ | 16 | 41 | 41 | 98 | **42+** | 78 | 42 | 0 | 0 | 42 | 120 | **35** |
| 17 | Leman Ground ... ... ... ... | (10–18 " ) | 24–25/x/05 | O. 368–370 ... ... ... | 15 | 194 | 6 | 56 | 256 | **22+** | 346 | 57 | 0 | 0 | 57 | 403 | **14** |
| 18 | Well Bank, N. end ... ... ... | (5½–19 " ) | 12–19/xi/07 | R. Smack, *Victoria Cross* ... | — | 46 | 2 | 52 | 100 | **52+** | 88 | 31 | 0 | 0 | 31 | 119 | **26** |
| 19 | Well Bank, S. end ... ... ... | (7–20 " ) | 8–14/xi/07 | LT. Smack, *Chrysolite* ... | — | 98 | 3 | 76 | 177 | **43+** | 187 | 103 | 0 | 0 | 103 | 290 | **35** |
| 20 | Leman Bank ... ... ... ... | (8–17 " ) | 2–8/iii/07 | LT. Smack, *Gladys* ... ... | — | ? | ? | ? | 31 | — | 51 | 1 | 2 | 49 | 52 | 103 | **50** |
| 21 | Leman to Smith's Knoll (S. part) ... | (14–20 " ) | 14–17/iii/06 | B. 407–414 ... ... ... | 39 | 66 | 14 | 59 | 139 | **42+** | 106 | 0 | 1 | 20 | 21 | 127 | **17** |
| 22 | Leman Bank to Smith's Knoll (N.part) | (5–23 " ) | 1–6/xi/07 | LT. Smack, *Chrysolite* ... | — | 61 | 10 | 101 | 172 | **58+** | 203 | 129 | 0 | 0 | 129 | 332 | **39** |
| 23 | E. and W. of Smith's Knoll ... ... | (23–28 " ) | 2–8/xi/07 | LT. Smack, *General Gordon* ... | — | 28 | — | 69 | 97 | **71** | 108 | 77 | 0 | 0 | 77 | 185 | **42** |
| 24 | E. of Smith's Knoll ... ... ... | (23–27 " ) | 5/11/xi/07 | LT. Smack, *Consolation* ... | — | 5 | 3 | 51 | 59 | **86+** | 61 | 125 | 0 | 0 | 125 | 186 | **67** |
| 25 | E. of Smith's Knoll ... ... ... | (23 " ) | 28/x–3/xi/07 | LT. Smack, *Emerald* ... ... | — | ? | ? | ? | 105 | — | 113 | 107 | 0 | 0 | 107 | 220 | **48** |
| 26 | Gabbard Deep Water ... ... ... | (23–25 fms.) | 15/i/08 | LT. Smack, *Forward* ... ... | [14] | 36 | 3 | 842 | 881 | **95+** | 166 | 12 | 32 | 17 | 61 | 227 | **27** |
| 27 | Eastern Deep Water ... ... ... | (20–27 " ) | 1–5/ii/07 | LT. Smack, *Rosebud* ... ... | [50⅓] | ? | ? | ? | 2,226 | — | 212 | 14 | 76 | 103 | 193 | 405 | **47** |
| 28 | " " " ... ... ... | (18½–25 " ) | 6–11/iii/06 | B. 400–406 ... ... ... | 34¾ | 9 | 14 | 58 | 81 | **72+** | 27 | 0 | 1 | 7 | 8 | 35 | **23** |
| 29 | " " " ... ... ... | (25–27 " ) | 28–29/iii/07 | B. 558–560 ... ... ... | 6 | — | 13 | 41 | 54 | **76+** | 7 | 0 | 0 | 4 | 4 | 11 | **36** |
| 30 | Hinder Ground ... ... ... ... | (16–22 " ) | 27–28/iii/07 | B. 552–557 ... ... ... | 19 | 43 | 22 | 213 | 278 | **76+** | 244 | 0 | 0 | 26 | 26 | 270 | **15** |
| 31 | Sandette Bank ... ... ... ... | (19–21 " ) | 26/xi/04 | B. 247–248 ... ... ... | 2 | 1 | 25 | 101 | 127 | **88+** | 5 | 11 | 1 | 0 | 12 | 17 | **70** |
| 32 | " " ... ... ... ... | (16–22 " ) | 29/xi/06 | B. 543–545 ... ... ... | 5¾ | 1 | 0 | 20 | 21 | **95** | 3 | 7 | 1 | 0 | 8 | 11 | **73** |
| 33 | Schouwen Ground ... ... ... | (16–17 " ) | 1–5/xi/07 | LT. Smack, *Holly* ... ... | — | 57 | 0 | 204 | 261 | **78** | 153 | 52 | 0 | 0 | 52 | 205 | **26** |
| 34 | " " ... ... ... | (13–19 " ) | 23–25/ii/07 | LT. Smack, *Comrades* ... ... | — | 888 | 0 | 618 | 1,506 | **41** | 1,469 | 0 | 0 | 66 | 66 | 1,535 | **4** |
| 35 | West Capelle Ground ... ... ... | (15–17 " ) | 1/xii/07 | LT. Smack, *Ena* ... ... | — | 129 | 5 | 732 | 866 | **84+** | 470 | ? | ? | ? | 55 | 525 | **10** |
| | English Channel, Western Part. | | | | | | | | | | | | | | | | |
| 36 | Inside "Eastern Scruff" ... ... | (17–23 fms.) | 26/ii/04 | O. 159 ... ... ... ... | 2½ | 25 | 3 | 11 | 39 | **28+** | 41 | 0 | 0 | 7 | 7 | 48 | **15** |
| 37 | Between Beer Head and Berry Head... | (20–29 " ) | 12, 27/ii/06 | O. 371, 373, 374 ... ... | 11¼ | 8 | 5 | 49 | 62 | **75+** | 30 | 0 | 4 | 14 | 18 | 48 | **38** |
| 38 | Inside "Eastern Scruff" ... ... | (19–30 " ) | 28/ii–1/iii/07 | O. 421–424 ... ... ... | 20 | 11 | 0 | 37 | 48 | **77** | 39 | 1 | 1 | 39 | 41 | 80 | **51** |
| 39 | Teignmouth Bay ... ... ... | (3–6 " ) | 27–28/xi/07 | Brixham Smack ... ... | — | 82 | 3 | 31 | 116 | **27** | 111 | 17 | 0 | 0 | 17 | 128 | **13** |

* Sample No. 4 represents only a portion of the fish actually caught. None of the males were examined in regard to maturity on this occasion.

and finally West, ending at the foot of the table with the Great West Bay (English Channel).

For the purpose of this investigation I have adopted a larger grouping of the various grounds into five main regions, viz. :—

(i.) The Dogger region, including the Flamborough Off Ground and Clay Deep, &c. Samples Nos. 1 to 12.

(ii.) The Inner Dowsing region : off the Wash. Samples Nos. 13 and 14.

(iii.) The Leman region, including the neighbourhood of Smith's Knoll. Samples Nos. 15 to 25.

(iv.) The Southern Bight, including the Eastern Deep Water, Hinder Ground, and Sandette Bank, together with the shallower grounds off Schouwen. Samples Nos. 26 to 35.

(v.) The Great West Bay at the Western end of the English Channel. Samples Nos. 36 to 39.

Reference is given to particular hauls of S.S. *Huxley* ; *e.g.*, O. 270 means Otter trawl, haul No. 270. Similarly, B. 397 means Beam trawl, haul No. 397.

As regards the position of the fishing grounds from which the fishing smacks obtained the samples included in Table 1, information as precise as possible was obtained from the skippers by Mr. Atkinson. The positions given are of course not so accurate as in the case of the hauls of the S.S. *Huxley*, but sufficiently accurate for our present purpose (*see* Appendix pp. 72, 73).

The CHART shows the central positions of the hauls or groups of hauls from which the thirty-nine samples referred to were obtained.

## § 3.—DETERMINATION OF MATURITY AND DEGREES OF RIPENESS.

In the first place it is necessary to define the term " mature " as used here. In this category are classed not only those fishes which were actually spawning (*i.e.*, exuding ripe eggs or sperms) or had spawned, but also those whose ovaries or testes were in various stages of the process of ripening and which were clearly destined to spawn during the current or approaching season.

Samples 1 to 39 were collected during the period September to March in different years. During the whole of this period it is quite easy to tell whether a female is mature, as just defined, or immature. In the case of the males there was sometimes in a *minority* of cases some doubt in the matter, especially at the beginning of this period. In the tables referring to males I have, therefore, had to introduce a column to accommodate such doubtful cases.

On reference to Table 1 it will be seen that I have distinguished in the case of the *females* three degrees of ripeness.

The significance of these three stages is as follows :—

*Stage* 1.—Ripening. This signifies that condition of ovary when developing eggs can be separately distinguished on its walls, either with the naked eye or with the aid of a low-power lens. In this condition of the ovary the eggs of the approaching season's crop are opaque, and white, yellow or pink in colour, the opacity being due to the presence of separate yolk spheres in the substance of the egg.

*Stage* 2.—Ripe or partly ripe. This means that a certain proportion of the eggs in the ovary were fully ripe, as indicated by their transparency and by their having attained the definitive size of plaice eggs. The ripe eggs by this time are free from the walls of the ovary.

Stage 2 includes actually spawning fishes, viz., those in which the number of ripe eggs is so great that they stream from the urino-genital orifice on the application of the slightest pressure.

*Stage* 3.—Spent. This means a fish which has completed spawning. The ovary in this case is markedly flaccid or " baggy," with a wide lumen. A residuum of ripe eggs (usually dead) may or may not be present.

Heincke and Maier* distinguished eight degrees of ripeness in both sexes (Stages I to VIII). In actual practice an attempt was also made by us to distinguish various minor grades of ripeness, such as quarter ripe, half ripe, three-quarters ripe, spawning and half spent. The attempt, however, was soon abandoned, partly on account of the uncertainty of diagnosis, amounting in the case of the males to practicable impossibility, and partly because the practical use of so many classes, when the numbers were so small, was not very apparent. All these intermediate grades are, therefore, included in Stage 2.

## II.—DISTRIBUTION OF THE SPAWNING SHOALS.

Some evidence as to the regions of the North Sea where plaice spawn and where they do *not* spawn is afforded by the data recorded in Table 1. In seeking information as to the distribution of the spawning shoals we shall be guided not only by the abundance of mature and actually spawning plaice, but also by another characteristic, which has been remarked upon by various international investigators, viz., a preponderance of the male sex. It has been found that in hauls in which spawning plaice occur in significant numbers males are much more numerous than females, whereas on the feeding grounds the reverse, or at least the equality of the sexes, is the rule.

According to Mr. A. E. Hefford's investigations,† the excess of males caught on the spawning grounds in the spawning season is probably due :—

(i.) Partly to the earlier maturity of the males and their consequent participation at a younger age in the spawning migration ;

(ii.) Partly to the more active habits of the reproductive males rendering them, as compared with the quiescent spawning females, more liable to capture in the trawl ; and

(iii.) Partly to the spawning migrations of the two sexes not being quite contemporaneous.

Turning now to Table 1, we may conveniently start by comparing (1) the proportion of the sexes and (2) percentages of mature of both sexes in three samples, all taken in January, 1905, viz., No. 3 from the South part of the Dogger, No. 9 from the Flamborough Off Ground, and No. 15 from the South Botney Ground.

The data for these three samples are as follows :—

No. 3.—18 males, 52 females ; 5 per cent. of males and 17 per cent. of females mature.

No. 9.—184 males, 78 females ; 91 per cent. of males and 45 per cent. of females mature.

No. 15.—19 males, 51 females ; 2 per cent. of males and 29 per cent. of females mature.

On comparison we note :—(i.) The great preponderance of males on the Flamborough Off Ground (9) and the decided preponderance of females on the Dogger (3) and on the South Botney Ground (15). (ii.) The fact that over 90 per cent. of males on the Flamborough Ground were mature whereas the proportion of mature males on the other two grounds was insignificant. (iii.) The much greater proportion of mature among the females on the Flamborough Ground than on the other two grounds.

Considering now the proportion of ripe (Stage 2) among the mature females in these three samples, we find that on the Flamborough Ground 14 out of a total of 35 mature were ripe ; on the Dogger only 1 out of 9 ; on the South Botney Ground only 2 out of 15.

Next let us compare two samples both obtained in the middle of March, 1907, viz., No. 11 on the Flamborough Off Ground, and No. 12 on the Well Bank Rough (*see* Chart) :—

No. 11.—35 males to 18 females ; 71 per cent. of males and 50 per cent. of females mature.

No. 12.—22 males to 62 females ; 27 per cent. of males and 32 per cent. of females mature.

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* Maier, "Beiträge zur Alterbestimmüng der Fische" ; *Arb. d. wissen. Komm. f. d. Intern. Meeres. No.* 5. *Bd. VIII*, 1907.

† "On the Proportionate Distribution of the Sexes of Plaice in the North Sea." (Not yet published). I am indebted to Mr. Hefford for permission to read his paper in manuscript form.

Of the mature females 7 out of 9 on the Flamborough Ground and none on the Well Bank Rough were ripe. In the sample from the latter ground all the 20 mature females were spent (Stage 3).

So far as they go, these observations indicate that plaice congregate for spawning purposes on the Flamborough Off Ground, but that they do not spawn, at least in appreciable numbers, either on the South part of the Dogger or on the South Botney Ground, or on the Well Bank Rough.

I have already drawn attention in my last report to the practical absence on the South part of the Dogger in January of the older age groups (V+) which were present in considerable numbers in samples obtained there in October and March. The absence of these older fishes in winter was regarded as essentially due to an emigration of mature fishes into deeper water for the purpose of spawning.

In the series of five samples (Nos. 7 to 11) obtained in October, January and March on the Flamborough Off Ground the proportions of the sexes were as follows :—

| | |
|---|---|
| No. 7, middle of October, 1905 ... ... | 83 males to 121 females. |
| No. 8, middle of October, 1906 ... ... | 51 males to 99 females. |
| No. 9, middle of January, 1905 ... ... | 184 males to 78 females. |
| No. 11, middle of March, 1907 ... ... | 35 males to 18 females. |
| No. 10, end of March, 1906 ... ... | 50 males to 102 females. |

Thus on the Flamborough Off Ground, to judge from these few samples, the relative proportions of the sexes are completely reversed during the spawning season. Hefford, in the work referred to, has investigated on a large scale the proportion of the sexes at different sizes, and has pointed out that not only at the smaller but also at the larger sizes (35 cm. and upwards) is there a preponderance of males on certain grounds in the spawning season ; so that we cannot entirely explain the preponderance by the fact of the earlier maturity of the males (*see* p. 68). Since Hefford deals with *sizes* it may be interesting to give some data illustrating the changes in the proportions of the sexes at different *ages* on a spawning ground such as the Flamborough Off Ground appears to be. Such results as are to hand refer to samples Nos. 7, 8, 9 and 10, and are contained in the accompanying table :—

| Sample No. | Date. | Sex. | Age Groups. | | | | | | | Totals.* |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | I. | II. | III. | IV. | V. | VI. | VII.+ | |
| 7 | 19–20/x/05 | Males ... ... | — | 8 | 19 | 25 | 19 | 10 | 2 | 83 |
| | | Females ... ... | — | 2 | 18 | 63 | 19 | 6 | 1 | 121 |
| | | Percentage males ... | — | 80 | 51 | 29 | 50 | 62 | 13 | 40 |
| 8 | '20–23/x/06 | Males ... ... | — | — | 10 | 16 | 19 | 5 | 1 | 51 |
| | | Females ... ... | — | 1 | 7 | 21 | 24 | 12 | 33 | 99 |
| | | Percentage males ... | — | — | 59 | 43 | 44 | 29 | 3 | 34 |
| 9 | 13–21/i/05 | Males ... ... | 3 | 3 | 15 | 36 | 36 | 9 | 6 | 108 |
| | | Females ... ... | 0 | 0 | 7 | 6 | 3 | 5 | 0 | 21 |
| | | Percentage males ... | 100 | 100 | 68 | 86 | 92 | 64 | 100 | 84 |
| 10 | 22–29/iii/06 | Males ... ... | 1 | 10 | 13 | 18 | 5 | 2 | — | 49 |
| | | Females ... ... | 0 | 6 | 10 | 53 | 17 | 9 | 4 | 99 |
| | | Percentage males ... | — | 63 | 57 | 25 | 33 | 18 | 0 | 33 |

* The numbers recorded for samples Nos. 9 and 10 in this table represent the samples taken for otolith investigations and do not include all the observations on maturity actually made. This accounts for the discrepancies between the totals for these samples in this table and in the statement above.

Referring to this table we find in *all* the samples up to three years of age (III. Group) inclusive a preponderance of males. In the older age groups on the other hand, of four years (IV. Group) and upwards, *taken as a whole*, there were more females than males in samples Nos. 7, 8 and 10 ; but in sample No. 9 (obtained in January) males greatly preponderated in each of the older as well as in the younger age groups. This result is in agreement with Hefford's conclusions.

We may now pursue the same line of investigation on more Southern grounds. If we compare as a whole the Leman region, as represented by samples Nos. 15 to 25, with the Southern Bight, as represented by samples Nos. 26 to 35, noting that in both regions

the samples were fished during the period November to March (except Nos. 16 and 17), we shall observe the following striking differences :—

(i.) *Females* preponderated in all the samples from the Leman region, except No. 21 from the neighbourhood of Smith's Knoll, where males *slightly* preponderated.

(ii.) *Males* preponderated in all samples from the Southern Bight, except No. 34, from the shallower and more inshore ground off Schouwen where females *slightly* preponderated.

(iii.) The percentage of mature among the *males* was higher in the samples from the Southern Bight than in the samples from the Leman region. The only exceptions are the above-mentioned sample No. 34 from off Schouwen and No. 24 from Smith's Knoll Deep Water.

In the case of the females the percentage of mature varied greatly and was generally under 50 per cent. except in the two samples from Sandette Bank, obtained at the end of November, one in 1904, the other in 1906. Here in the case of the females the percentages of mature were as high as 70 per cent. and 73 per cent. Here also we found the highest percentages of mature males, and nearly all were "milting."

It will be interesting now to compare two samples obtained at the same time of the year, viz., March, 1906, one (No. 21) from the Leman-Knoll region, the other (No. 28) from the Eastern Deep Water. The essential data are as follows :—

No. 21.—139 males to 127 females ; 42 per cent. of males and 17 per cent. of females mature.

No. 28.—81 males to 35 females ; 72 per cent. of males and 23 per cent. of females mature.

We see that there was a decidedly greater preponderance of males and a greater proportion of mature of both sexes in the sample from the Eastern Deep Water than in that from the Leman-Knoll region.

The facts just cited point to an accumulation of spawning plaice towards the Southern end of the North Sea, and it seems clear that plaice do not spawn in any appreciable numbers in the Leman region. This evidence agrees with the results of English* and Dutch† marking experiments showing a Southward tendency of the larger plaice in autumn and winter, and also with the Dutch‡ observations on the quantitative distribution of pelagic plaice eggs in the Southern Bight. The "setting in" of spawning plaice in the Southernmost part of the North Sea in winter has long been known to fishermen. The Lowestoft trawling smacks, for example, regularly go Southwards in winter to fish the spawning plaice, and some of the fishermen appear to have noted the preponderance of males in their catches at this season.

## III.—TIME AND DURATION OF THE SPAWNING PERIOD.

It has been often stated and seems to be fairly well known among the fishermen that the time of spawning is earlier in the Channel and in the Southern part of the North Sea than on more Northern grounds. On this point it will be useful to have some precise data, even although, as in the present case, these data are somewhat scanty (*see* Table I.).

By noting the proportions of the three different stages of ripeness in the case of the females in samples obtained from the same ground at different times and from different grounds at the same time, we can arrive at an approximate estimate of the time and duration of the spawning period in different regions.

The earliest appearance of ripe plaice (Stage 2) so far noted was at the end of November (1904 and 1906) in samples (Nos. 31 and 32) from Sandette Bank.

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* Garstang, "Experiments with marked Fish." *Mar. Biol. Assoc. Internat. Investigations, Report I., Southern Area*, 1902–03. *Cd.* 2670 (1905), pp. 13–33, and Charts : also "Provisional Report on the Natural History of the Plaice, based on the work of Committee B. in the period ending June 30, 1904," in *Vol. III. des Rapports et Procès-Verbaux du Conseil International pour l'exploration de la Mer* (1905), *Appendix H., p.* 9, *and Plate II.*

† Redeke. *Verhandelingen uit het Rijksinstituut voor het onderzoek der Zee. Eerste Deel II.*, 1906.

‡ Boeke. *Verhand. u. h. Rijksinst. v. h. onderz. der Zee. Eerste Deel IV.*, 1906.

The three samples (Nos. 9, 10, and 11) from the Flamborough Off Ground throw some light on the time and duration of the spawning period in this part of the North Sea. Below are given the numbers and percentages of the three grades of ripeness in the case of the females :—

| | Numbers. | | | Percentages. | | |
|---|---|---|---|---|---|---|
| | Ripening. | Ripe. | Spent. | Ripening. | Ripe. | Spent. |
| No. 9 ... ... ... | 16 | 14 | 5 | 46 | 40 | 14 |
| No. 11 ... ... ... | 0 | 7 | 2 | 0 | 78 | 22 |
| No. 10 ... ... ... | 0 | 2 | 35 | 0 | 5 | 95 |

From these examples it appears that on the Flamborough Ground in the third week of January, 1905 (No. 9), the spawning season was well advanced but not at its height, since 46 per cent. were still only in the ripening stage.

In the second week of March, 1907 (No. 11), the majority (although the numbers are very few) were "ripe," none were in the first or ripening stage.

In the last week of March, 1906, nearly all were spent.

These facts, though admittedly insufficient, indicate that in this region the spawning season is at its height in February.

For comparison it will be useful now to examine two samples from the Eastern Deep Water in the Southern Bight: one (No. 26) collected in the middle of January, 1908, the other (No. 27) at the beginning of February, 1907.

| | Numbers. | | | Percentages. | | |
|---|---|---|---|---|---|---|
| | Ripening. | Ripe. | Spent. | Ripening. | Ripe. | Spent. |
| No. 26 ... ... ... | 12 | 32 | 17 | 20 | 52 | 28 |
| No. 27 ... ... ... | 14 | 76 | 103 | 8 | 39 | 53 |

Comparing No. 26 with No. 9 from the Flamborough Ground, also obtained in January, though in another year (1905), we see that in the sample from the Eastern Deep the majority were "ripe" and that slightly more were "spent" than "ripening," whereas, on the Flamborough Ground, the majority were "ripening" and comparatively few were spent. As early as the beginning of February (1907), to judge from sample No. 27, the majority of females in the Eastern Deep Water were spent, whereas on the Flamborough Off Ground (No. 11) in the second week of March in the same year the great majority (though the numbers are too small to place much reliance on) were still in stage 2.

Again, in the offshore grounds in the Great West Bay (English Channel) at the end of February and beginning of March (1904, 1906, and 1907), the great majority of females were spent (*see* Nos. 36, 37, and 38).

There is, therefore, some evidence from these facts to show that the spawning of the plaice is distinctly earlier in the English Channel and Southern Bight of the North Sea than on the more Northern Grounds.

## IV.—THE SIZE AND AGE OF PLAICE AT FIRST MATURITY.

### § 1. Introductory.

Earlier investigations, viz., of Cunningham,* Fulton,† Holt,‡ and Kyle,§ clearly showed that mature plaice are met with in the English Channel and in the Southern part of the North Sea of a smaller size than are found in the Northern and central parts of the North Sea; and conversely that the largest immature plaice are found in the latter region. These observers also found that males were mature at a smaller size, and ostensibly earlier age, than the females. Kyle determined for the Northern and Southern parts of the North Sea what he called the *average size at first maturity*, that is the size at which fifty per cent.

* Cunningham.—*Journ. Marine Biol. Assoc., Vol. IV., pp.* 97–107 (1896), *No.* 2.

† Fulton.—Various *Ann. Reports of Fishery Board for Scotland, Part III., especially* 20*th* (1902), 22*nd* (1904), *and* 24*th* (1906).

‡ Holt.—*Journ. Marine Biol. Assoc., Vol. II., p.* 363, *&c.* (1891).

§ Kyle.—18*th Ann. Report Fishery Board for Scotland, pp.* 190–200 (1900); also *Journ. Marine Biol. Assoc., Vol. VI., No.* 4, *p.* 495, *&c.* (1903).

are mature and fifty per cent. immature. This size, as he pointed out, is most accurately determined in the following way. If the percentages of immature and mature at different sizes in a collection are represented graphically as in Fig. 1, it will be seen that the pair of curves thus constructed cross at a certain point (*m*). The *abscissa* (*a*) of this point is the average size at first maturity according to definition. Kyle found that (for a given sex) the place in the Southern part of the North Sea at first maturity were several centimetres smaller on an average than in the Northern part (*i.e.* off the Scottish Coast). Whether these well marked local differences in the average *size* at first-maturity represented differences in *age*, or whether, on the other hand, plaice (of the same sex) in all regions become first mature at the same age, the differences in the average size at first maturity being due to differences in local growth-rate, could not be decided at the time when these earlier researches were made, because no reliable method was then available for determining the age of fishes. Now, however, we are able to tell the age of a plaice by examining the *otoliths* (ear-stones) so that, by using this method in connection with the present research, it has been possible to obtain definite information in regard to the age as well as the size of the fishes at maturity.

In regard to the amount and nature of the material dealt with, the present research represents an advance on previous ones in the following respects :—

i. The number of observations made on plaice from any one region is larger.
ii. The proved reliability of the otolith method* has enabled the age as well as the size of the fishes to be taken into account.
iii. We know the exact locality from which our samples were obtained.

## § 2. Tabulation and Treatment of the Data.

The tables containing the details in regard to size, age, and maturity for the individual samples (Nos. 1–39) are placed at the end of this report.

*Tables I., Ia.* give the numbers of immature and mature at each centimetre in the different samples.

*Tables II., IIa.* give the number of immature and mature at each centimetre *in the different yearly groups* in those samples† of which the otoliths (of either the whole or part‡ of the catch) were examined.

The yearly groups are numbered 0, I, II, III, IV, V, VI, and VII + ; the 0 group including all plaice in the first year of their life, the I group consisting of plaice of the second year, and so on, until we come to the VII + group, which includes not only plaice in their eighth year but all older specimens as well.

In the text below will be found Summary tables (Tables 2, 2a, 3, 3a, and 4, 4a) in which the data for the individual samples are combined into five collections representing :— i. the Dogger Region, ii. the Inner Dowsing Region, iii. the Leman Region, iv. the Flemish Bight, and v. the Great West Bay. In Tables 2, 2a and 4, 4a instead of, as in the detailed tables, the numbers at each individual centimetre being given, a 2-centimetre grouping has been adopted so as to render the tables more compact and the curves constructed from the data (Figs. 1 and 2) smoother.

In all these tables the numbers of immature and mature at different sizes and ages are arranged side by side in vertical columns, the numbers of immature being printed in ordinary type, the numbers of mature in thick type. The *average size at first maturity* is indicated in the tables by a transverse line drawn across the two parallel columns at the point (size or age) where a majority of immature gives place to a majority of mature.

N.B.—In the subsequent text the average size at first maturity is generally referred to as the "F. M. average."

As will be seen from an inspection of the chart, *the thirty-nine samples naturally group themselves in five regions.* All the samples included in the Dogger region (Nos. 1–12) were collected north of 54° N. except No. 12 from the Well Bank Rough somewhat south of this latitude. This group is quite separate from the Leman group (Nos. 15–25) which is again quite distinct from the Inner Dowsing (Nos. 13 and 14) and, as a whole, from the Flemish Bight (Nos. 26–35) although the hauls (B. 400–414) which furnished samples No. 21 and No. 28 formed together a continuous series connecting the Leman Ground with the Eastern Deep Water.

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* *See* Maier ; Beiträge zur Alterbestimmung der Fische ; *Arb. d. Wissen. Komm. f. d. Intern. Meeres. No.* 5, *Bd. VIII.*, 1907 ; also Wallace : Report on the Age and Growth-Rate of Plaice in the Southern North Sea, *Mar. Biol. Assoc. Internat. Investigations, Report II. (Southern Area). Part I.* [Cd. 3837 ; 1907.]

† Nos. 1–10, 15–17, 21, 26, 28, 31, 32, 35, 36–39.

‡ This explains why the total number in a given age sample in Tables II., IIA. sometimes falls short of the total under the same reference No. in Table I.

*Fig.* 1, *Diagrams A, B, C, D, and* $A^1$, $B^1$, $C^1$, $D^1$. In these diagrams the *percentages* of immature and mature at different sizes in the four principal collections are represented graphically, *the F. M. average being the abscissa* (*a*) *of the point of crossing* (*M*) *of the pairs of curves.*

TABLE 2.—SIZE AND MATURITY.—FEMALES.

| Cm. | Dogger Region. Samples Nos. 1–12 combined. No. Im. | M. | Inner Dowsing Region Samples Nos. 13 & 14 combined. No. Im. | M. | Leman Region. Samples Nos. 15–25 combined. No. Im. | M. | Flemish Bight. Samples Nos. 26–35 combined. No. Im. | M. | English Channel, Great West Bay. Samples Nos. 36–39 combined. No. Im. | M. |
|---|---|---|---|---|---|---|---|---|---|---|
| 9–14 ... ... | — | — | — | — | 4 | — | 65 | — | 29 | — |
| 15–19 ... ... | 1 | — | 6 | — | 40 | — | 657 | 6 | 36 | — |
| 20–21 ... ... | 5 | — | 19 | — | 53 | — | 494 | 22 | 17 | — |
| 22–23 ... ... | 18 | — | 61 | — | 70 | 1 | 580 | 55 | 16 | 3 |
| 24–25 ... ... | 39 | 1 | 75 | — | 165 | 1 | 437 | 56 | 30 | 7 |
| 26–27 ... ... | 46 | — | 71 | — | 205 | 1 | 275 | 64 | 20 | 6 |
| 28–29 ... ... | 58 | 1 | 50 | — | 243 | 8 | 133 | 48 | 25 | 9 |
| 30–31 ... ... | 60 | 2 | 25 | — | 213 | 25 | 70 | 31 | 27 | 9 |
| 32–33 ... ... | 77 | 4 | 13 | 2 | 214 | 46 | 30 | 28 | 13 | 10 |
| 34–35 ... ... | 86 | 10 | 5 | 1 | 108 | 80 | 10 | 31 | 7 | 10 |
| 36–37 ... ... | 89 | 16 | 3 | 1 | 42 | 120 | 5 | 30 | 1 | 7 |
| 38–39 ... ... | 43 | 22 | — | 3 | 18 | 118 | — | 19 | — | 4 |
| 40–41 ... ... | 32 | 51 | — | 6 | 2 | 106 | — | 23 | — | 10 |
| 42–43 ... ... | 9 | 36 | — | 6 | — | 88 | — | 20 | — | 2 |
| 44–45 ... ... | 3 | 38 | — | 4 | — | 55 | — | 17 | — | 2 |
| 46–47 ... ... | 1 | 46 | — | 3 | — | 41 | — | 12 | — | — |
| 48–49 ... ... | — | 37 | — | 6 | — | 22 | — | 7 | — | 1 |
| 50+ ... ... | — | 68 | — | 9 | — | 47 | — | 16 | — | 3 |
| Totals ... | 567 | 332 | 328 | 41 | 1,377 | 759 | 2,756 | 485 | 221 | 83 |

TABLE 2*a*.—SIZE AND MATURITY.—MALES.

| Cm. | Dogger Region. Samples Nos. 1–12 combined. No. Im. | M. | Inner Dowsing Region. Samples Nos. 13 & 14 combined. No. Im. | M. | Leman Region. Samples Nos. 15–25 combined. No. Im. | M. | Flemish Bight. Samples Nos. 26–35 combined. No. Im. | M. | English Channel, Great West Bay. Samples Nos. 36–39 combined. No. Im. | M. |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 ... ... | — | — | — | — | — | — | — | — | 4 | — |
| 10–11 ... ... | — | — | — | — | — | — | — | — | 19 | — |
| 12–13 ... ... | 2 | — | — | — | 1 | — | 34 | 1 | 6 | — |
| 14–15 ... ... | 2 | — | — | — | 6 | 1 | 114 | 36 | 13 | — |
| 16–17 ... ... | 3 | — | — | — | 6 | 4 | $201^5$ | 145 | 17 | 1 |
| 18–19 ... ... | 6 | 3 | 9 | — | 28 | 9 | $236^8$ | 315 | $16^1$ | 2 |
| 20–21 ... ... | $7^2$ | 7 | 40 | — | $41^1$ | 6 | $254^{14}$ | 611 | $18^1$ | 7 |
| 22–23 ... ... | $19^1$ | 5 | 68 | 1 | $75^3$ | 18 | $170^{13}$ | 683 | $10^4$ | 19 |
| 24–25 ... ... | 37 | 9 | 75 | 4 | $110^7$ | 21 | $97^{12}$ | 418 | $16^2$ | 17 |
| 26–27 ... ... | $46^1$ | 11 | 44 | 6 | $108^3$ | 39 | $38^{12}$ | 217 | $5^1$ | 12 |
| 28–29 ... ... | $41^1$ | 14 | 18 | 5 | $84^{12}$ | 64 | $17^6$ | 142 | 1 | 14 |
| 30–31 ... ... | $33^4$ | 16 | 8 | 6 | $46^{31}$ | 88 | $3^4$ | 71 | $1^1$ | 22 |
| 32–33 ... ... | $24^8$ | 39 | 7 | 5 | $18^{12}$ | 93 | $—^3$ | 75 | — | 17 |
| 34–35 ... ... | $21^7$ | 44 | 1 | 2 | $3^7$ | 88 | $—^2$ | 40 | $—^1$ | 10 |
| 36–37 ... ... | $4^4$ | 58 | — | — | $1^4$ | 54 | $—^2$ | 35 | — | 6 |
| 38–39 ... ... | 1 | 55 | — | 1 | — | 15 | $—^1$ | 19 | — | — |
| 40+ ... ... | $1^1$ | 58 | — | 1 | $—^1$ | 9 | — | 21 | — | — |
| Totals ... | $247^{29}$ | 319 | 270 | 31 | $527^{81}$ | 509 | $1164^{82}$ | 2829 | $126^{11}$ | 127 |

NOTE.—*Index figures* = maturity doubtful.

## § 3. Analysis of the Data regarding Size and Maturity.

A study of the details of the individual samples (*see* Tables I., Ia.) is not only necessary to enable us to criticise the accuracy of our results, but is interesting because it raises certain questions connected with the migrations of plaice in the North Sea and the existence of more than one "race."

In the first place we see that the curves in Fig. 1, representing the percentages of immature and mature at different sizes, are smoother in the case of the females (A, B) than in that of the males* ($A^1$, $B^1$).

Considering in more detail the curves for the *males*, we observe that both in $A^1$ and $B^1$ the curves approximate or tend to approximate and diverge again before crossing definitely. The approximation point is about 21 cm. in the former case and 17 cm. in the latter. In $C^1$, representing the male collection from the Flemish Bight, the crossing point (F. M. average) is about 18 cm. Now this point agrees fairly well with the approximation points in the curves for the Dogger and Leman regions and rather suggests that shoals of Southern origin maturing on an average at about 17–21 cm. are also sparsely represented in the more northern regions where, however, shoals maturing at a larger size, viz., about 30–32 cm. predominate. The corresponding curves for the females (A. and B.) do not, however, show this double feature.

To understand the peculiar irregularities of the male curves and the relative smoothness of the female curves we must examine the details of the individual samples in Table I., Ia. If we do so we shall notice that in the data for females the F. M. average, that is the size at which a majority of immature gives place to a majority of mature, is approximately the same in all samples from the same region.† In the case of the males, however, the F. M. average is less easily definable, and moreover, there are considerable differences between samples collected in the same region on different occasions. In other words, the female material from the same region is more homogeneous than the male material, and this accounts for the greater smoothness of the female curves.

An examination of the different samples caught on different occasions in the Flamborough Off and Leman regions in connection with the dates of collection leads to the recognition of certain seasonal differences in the size of the smallest mature and in the proportions of mature under a certain size, showing that *smaller mature specimens (of either sex) and proportionately greater numbers of mature under a certain size were met with in the Flamborough Off and Leman grounds in the spawning season than in autumn.*

The males in our samples from the Flamborough Off Ground show the following seasonal differences :—

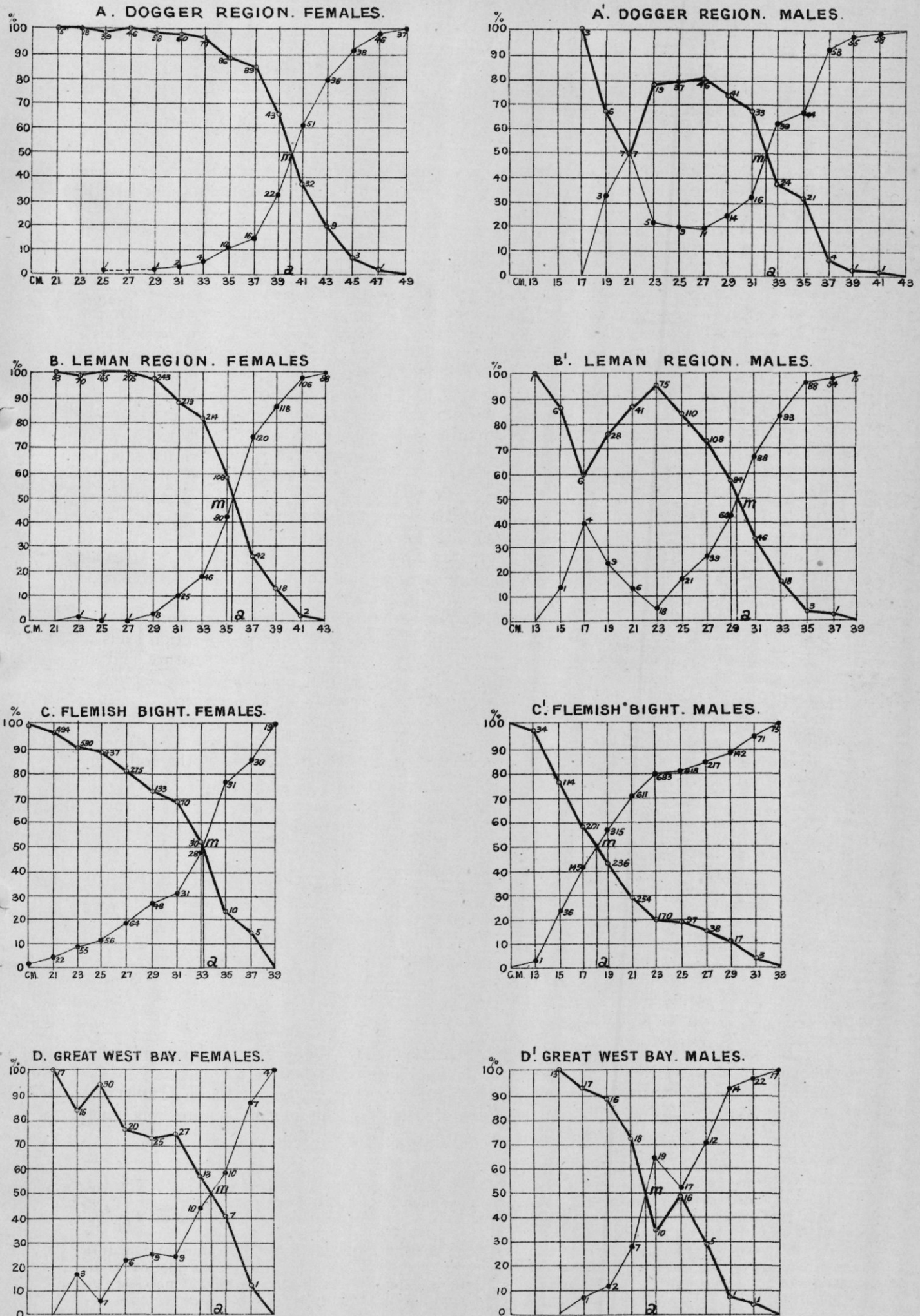
| Sample No. | Date. | Smallest Mature. | Number under 26 cm. | | |
|---|---|---|---|---|---|
| | | | Immature. | Mature. | Doubtful. |
| 7 ... ... | 19–20/x/05 | 29 cm. | 13 | 0 | — |
| 8 ... ... | 20–23/x/06 | 24 cm. | 7 | 1 | — |
| 9 ... ... | 13–21/i/05 | 18 cm. | 0 | 14 | — |
| 11 ... ... | 10–13/iii/07 | 19 cm. | 3 | 6 | 3 |
| 10 ... ... | 22–29/iii/06 | 18 cm. | 10 | 3 | — |

Here we see that whereas in October (1905) and (1906), the small males under 26 cm. were practically all immature ; in January (1905) they were all mature ; in the middle of March (1907) the majority were mature ; and at the end of March (1906) the majority were immature. We also note that the size of the smallest mature was much lower in the January and March samples than in the October samples.

* In the curves for the males the cases of doubtful maturity have necessarily been omitted. These doubtful cases, however, only amount to 5 per cent. in the collection from the Dogger region, 7 per cent. in the Leman collection, and 2 per cent. and 4 per cent. in the collections from the Flemish Bight and Great West Bay respectively.

† The numbers in the individual samples being small, the percentages of immature and mature in each 5 cm. group instead of in each 2 cm. group, were calculated and the curves plotted as in Fig. 1. for each sample. In the resulting diagrams, which it has not been thought necessary to publish, the crossing occurs at approximately the same size in all samples from the same region.

FIG. 1. DIAGRAMS A, B, C, D, (FEMALES), AND A', B', C', D' (MALES) SHOWING PERCENTAGES OF IMMATURE AND MATURE PLAICE AT DIFFERENT SIZES, IN COLLECTIONS FROM FOUR DIFFERENT REGIONS.




*The abscissa (a) of the point (m), where the two curves cross is the average size at first maturity. Figures at points of the curves indicate number of observations.*

——o——o—— = IMMATURE ——•——•—— = MATURE

*Wallace. Size and Age of Plaice. To face p. 62.*

2204 Weller & Graham, Ltd. Litho, London.



The various samples from the Leman region exhibit the following differences :—

| Sample No. | Date. | Smallest Mature. | Number under 26 cm. | | |
|---|---|---|---|---|---|
| | | | Immature. | Mature. | Doubtful. |
| 16 ... ... | 27–29/ix/04 | 27 cm. | 9 | 0 | 0 |
| 17 ... ... | 24–25/x/05 | 23 cm. | 123 | 3 | 2 |
| 18 ... ... | 12–19/xi/07 | 23 cm. | 19 | 7 | 1 |
| 19 ... ... | 8–14/xi/07 | 25 cm. | 43 | 3 | 0 |
| 21 ... ... | 14–17/iii/06 | 15 cm. | 42 | 40 | 4 |
| 22 ... ... | 1–6/xi/07 | 22 cm. | 19 | 2 | 4 |
| 23 ... ... | 2–8/xi/07 | 23 cm. | 11 | 2 | — |

In the above table we note the much lower size of the smallest mature in the sample obtained in March 1906, than in any of the other samples which were collected during September–November in different years. In the March sample also there was by far the greatest proportion of mature under 26 cm., the latter nearly equal in number to the immature which in all the other samples greatly preponderated.

In the females the seasonal differences in our samples from these grounds are not nearly so marked as in the case of the males, still they are clearly indicated and point in the same direction. The following are the essential data in regard to the Flamborough Off Ground :—

| Sample No. | Date. | Smallest Mature Female. | Number under 31 cm. | |
|---|---|---|---|---|
| | | | Immature. | Mature. |
| 7 ... ... ... ... | 19–20/x/05 | 31 cm. | 14 | 0 |
| 8 ... ... ... ... | 20–23/x/06 | 34 cm. | 5 | 0 |
| 9 ... ... ... ... | 13–21/i/05 | 25 cm. | 9 | 2 |
| 10 ... ... ... ... | 22–29/iii/06 | 33 cm. | 14 | 0 |
| 11 ... ... ... ... | 10–13/iii/07 | 39 cm. | 5 | 0 |

We see from the above that the size of the smallest mature female was distinctly lower and the *proportion* of mature under 31 cm. higher in the January sample than in the samples obtained in October and March.

The various samples from the Leman ground show the following differences :—

| Sample No. | Date. | Smallest Mature. | Number under 31 cm. | |
|---|---|---|---|---|
| | | | Immature. | Mature. |
| 16 ... ... ... ... | 27–29/ix/04 | 33 cm. | 37 | 0 |
| 17 ... ... ... ... | 24–25/x/05 | 29 cm. | 256 | 3 |
| 18 ... ... ... ... | 12–19/xi/07 | 29 cm. | 61 | 2 |
| 19 ... ... ... ... | 8–14/xi/07 | 29 cm. | 131 | 3 |
| 21 ... ... ... ... | 14–17/iii/06 | 23 cm. | 94 | 4 |
| 22 ... ... ... ... | 1–6/xi/07 | 30 cm. | 115 | 2 |

Here we see that in the March sample the size of the smallest mature specimen was much lower and the proportion of mature under 31 cm. distinctly higher than in the other samples obtained in autumn.

It is clearly the presence of the small mature males in the samples collected on the Flamborough Off and Leman grounds in the spawning season (January and March) which accounts for the above-noted approximation of the pairs of percentage curves at 21 cm. and 17 cm. in diagrams $A^1$ and $B^1$ respectively. (Fig. 1.)

Turning now to the Flemish Bight collection (C and $C^1$) ; in the central parts (samples Nos. 26—32) mature males vastly preponderated, even down to 14 cm., while on the shallow coastal grounds off Schouwen the F. M. average was about 18—21 cm. It is the latter group which predominates in the total collection represented in $C^1$, in which the crossing point is about 18 cm.

At this stage two questions present themselves :—

(1.) Whence are derived the small mature plaice found on the Flamborough Off and Leman grounds in the spawning season but not in autumn ?

(2.) Is 18 cm. (or thereabouts) the true average size at first maturity of males reared on the Dutch coast ?

If about 18 cm. be the true average size at first maturity of male plaice and about 32 cm. the corresponding size of female plaice reared in this region, the difference between the two amounts to 14 cm. representing roughly *two* years' growth. Now in the collections from the Dogger region and in the Great West Bay the difference between the F. M. averages for the two sexes amount to *one* year's growth. Moreover in the Flemish Bight collection itself the difference between the *smallest* mature male, viz. 13 cm., and the *smallest* mature female (18 cm.) amounts to 5 cm., also representing just *one* year's growth. It seems not improbable, therefore, that 18 cm. is not the true average size at first maturity of male plaice in this region, and there is ground for supposing this in the fact that the samples were collected entirely in winter (November to February). For it has been remarked by several naturalists engaged in the international investigations, and is well known to fishermen, that small plaice (say under 26 cm.) are very scarce in winter, and this is generally explained by saying that these small plaice "sand themselves." We should hardly expect, however, that *mature* males of these sizes would sand themselves, because they would be actively engaged in spawning. Here then we have what seems a likely explanation or part-explanation both of the great increase in the proportions of mature to immature males under 26 cm. on certain grounds in the spawning season, and of the apparently too low F. M. average observed in our male collection from the Flemish Bight. On the other hand, this explanation does not appear adequate to account for the fact, that both on the Flamborough Off and Leman grounds in the spawning season (January-March) the size of the *smallest* mature specimen (of either sex) was much lower than in the autumn ; since even if, by the suppression of the immature owing to hybernation, the small mature males are brought more into prominence, this does not provide the reason why the *minimum* size of mature specimens should be lower in winter than in autumn.

*Where do these smaller mature specimens which are found on the Flamborough Off and Leman grounds in the spawning season but not in the autumn come from ?* * Do they come from the English coast ? This question cannot be answered with certainty, but such evidence as we possess points to the contrary and to the origin of these small plaice from the Dutch coast. The evidence is as follows :—

Samples Nos. 13 and 14 and Sample No. 35 were fished at the same time of the same year (December, 1907), Nos. 13 and 14 in the neighbourhood of the Wash (Inner Dowsing region), and No. 35 off Schouwen, the distance from land and depth of water being much the same for both English and Dutch samples.

The essential data for comparison are as follows :—

| Sample No. | Range of Size. | | Smallest Mature. | | Males under 26 cm. | | Females under 31 cm. | |
|---|---|---|---|---|---|---|---|---|
| | Males. | Females. | Males. | Females. | Immature. | Mature. | Immature. | Mature. |
| | cm. | cm. | cm. | cm. | | | | |
| 13, 14 ... | 18–34 | 18–50 | 22 | 33 | 192 | 5 | 292 | 0 |
| 35 ... ... | 18–33 | 18–33 | 18 | 20 | 121 | 655 | 267 | 54 |

From the above we see that whereas in the neighbourhood of the English coast (in December, 1907) there were very few mature males under 26 cm. and no mature females under 31 cm. ; off the Dutch coast at the same time there were over six times as many mature as immature males, and a considerable number of mature females *under the specified sizes.*

So far as it goes then the above evidence rather points to *the derivation from the Dutch rather than from the English coast of those small mature plaice which are found on the Flamborough and Leman grounds in the spawning season.*

* The possibility must not be lost sight of that they may have been produced on the spot by the growing mature of plaice already there. It is of course quite possible, and perhaps even probable, that some specimens recorded as immature in autumn become ripe in the course of the breeding season. The point is one which requires further investigation. The theory I put forward is merely intended as a provisional one, partly suggested by the apparent absence of these small mature plaice on the English coast and their relative abundance on the Dutch coast.

## § 4. Summary of Results.

The chief data, viz., the average minimum and maximum sizes at first maturity in our collections from the five different regions are recorded in the following Table :—

| Region. | Smallest Mature. | | Average Size at First-maturity. | | Largest Immature. | | Number of Specimens. | |
|---|---|---|---|---|---|---|---|---|
| | Female. | Male. | Female. | Male. | Female. | Male. | Female. | Male. |
| | cm. | cm. | cm. | cm. | cm. | cm. | cm. | cm. |
| Dogger, &c. ... ... | 25 | 18 | 40 | 31–32 | 47 | 40 | 901 | 594 |
| Leman, &c. ... ... | 23 | 15 | 35 | 29–30 | 41 | 36 | 2096 | 1111 |
| Flemish Bight ... ... | 18 | 13 | 32–33 | (18) | 36 | 31 | 3231 | 4075 |
| Great West Bay ... ... | 22 | 17 | 32–34 | 22–25 | 37 | 30 | 304 | 263 |

This Table shows that *the average size at first maturity and also the size of the smallest mature and of the largest immature (of either sex) were highest on the grounds on and around the Dogger, lowest in the Southernmost part of the North Sea, and intermediate in the region of the Leman Banks.* We have already referred to the scarcity of mature plaice under a certain size in the samples obtained in the neighbourhood of the English coast (Inner Dowsing region) and contrasted this with the relative abundance of these small mature specimens on the Dutch side. As regards the Great West Bay, the F. M. average for females in our collection was about the same as in the collection from the Flemish Bight, and the sizes of the largest immature males and females in the two collections agree very closely. So far, however, we have not found in the western part of the Channel mature specimens of a size so small as in the collection from the Flemish Bight. Again, we cannot compare with any degree of certainty the F. M. averages for males in the two regions, since there are reasons for believing, as mentioned above, that the value of the F. M. average in our Flemish Bight collection is too low to be the true average size of the males at first maturity in this part of the North Sea.

We cannot enter further into the comparison between the different regions until we take into account *the question of age* as inferred from an examination of the otoliths of certain samples. But before presenting the results of this part of the investigation it will be well to see how far our determinations of F. M. averages for different regions agree with those of other observers.

## § 5. Comparison of Present Results with Previous Investigations.

The values of the F. M. averages for different regions, as determined by the observations of Cunningham, Fulton, Holt, Kyle and myself, are recorded in the accompanying Table :—

| Reference Number. | Region. | Author and Reference.* | Females. | | | Males. | | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Number. | | F.M. Average cm. | Number. | | F.M. Average cm. | |
| | | | Imm. | Mat. | | Imm. | Mat. | | |
| 1 | Scotland (East Coast) .. .. | Kyle ; 18th S.F.B. ; pp. 198, 199 .. .. .. .. | 64 | 34 | 39-40 | 68 | 81 | 32 | |
| 2 | „ „ .. .. | Fulton ; 22nd S.F.B. ; pp. 156, 157 .. .. .. .. | 82 | 52 | 40-42 | 25 | 98 | 33 | |
| 3 | „ „ .. .. | Fulton ; 24th S.F.B. ; pp. 189, &c. .. .. .. .. | 679 | 49 | 42-43 | — | — | — | |
| 4 | Grimsby Market .. .. .. | Holt ; M.B.A. II. ; p. 376 .. | ? | ? | 41-43 | ? | ? | 35-36 | |
| 5 | **Dogger Region** .. .. .. | Wallace : present report .. | **571** | **330** | **39-40** | **247** | **318** | **31-32** | 29 Doubtful males omitted. |
| 6 | Heligoland .. .. .. .. | Kyle : 18th S.F.B. ; pp. 195, 196 .. .. .. .. | 43 | 47 | 32-33 | — | — | — | |
| 7 | Leman Shoal .. .. .. .. | Cunningham ; M.B.A., IV. ; p. 104 .. .. .. | 34 | 29 | 35-36 | — | — | — | |
| 8 | **Leman Region** .. .. .. | Wallace : present report .. | **1337** | **759** | **35-36** | **527** | **508** | **29-30** | 76 Doubtful males omitted. |
| 9 | Brown Ridges .. .. .. .. | Cunningham ; M.B.A., IV. ; p. 99 .. .. .. .. | 67 | 38 | 32 | — | — | — | |
| 10 | Off Dutch Coast .. .. .. | Cunningham ; M.B.A., IV. ; p. 99 .. .. .. .. | 62 | 33 | 30-31 | 35 | 67 | 25 | |
| 11 | **Flemish Bight** .. .. .. | Wallace : present report .. | **2746** | **485** | **33-34** | **1164** | **2829** | **(18)** | 82 Doubtful males omitted. |
| 12 | Helder and Lowestoft Markets .. | Kyle ; 18th S.F.B. ; pp. 195, 196. .. .. .. .. | 105 | 61 | 32-33 | 34 | 106 | < 24 | |
| 13 | English Channel (Western part).. | Kyle ; M.B.A. VI. ; pp. 495-498 .. .. .. .. | 91 | 178 | 31-32 | 54 | 237 | 25 | |
| 14 | **English Channel (Western part).** | Wallace : present report .. | **222** | **82** | **32-34** | **126** | **128** | **21-22** | 11 Doubtful males omitted |

* "M.B.A. II.," &c. refers to volumes of the Journal of the Marine Biological Association. "18th S.F.B.," &c. refer to Annual Reports of the Fishery Board for Scotland, Part III.

According to Kyle's results the F. M. averages in a collection of plaice from Aberdeen and St. Andrews markets (No. 1) were 39–40 cm. for females and 32 cm. for males, therefore the same as in my collection from the Dogger region (No. 5). Fulton's values for the Scottish coast are a trifle higher, but practically identical.

It is also important to note that the *smallest mature male so far found by Fulton off the East Coast of Scotland measured* 30 *cm., the smallest mature female* 36 *cm.** Holt's investigation of plaice obtained on the Grimsby market in 1901 (No. 4) also gives a slightly higher F. M. average for the female than that obtained by Kyle for the Scotch coast and myself for the Dogger region, and a considerably higher average for males.

Referring now to the Leman region it will be seen that according to Cunningham's observations (No. 7), the average size of the females at first-maturity was about 35–36 cm., the same as in my collection (No. 8) from this region. Also Cunningham's and my values for the female average in the Southernmost part of the North Sea (Nos. 9, 10, 11) agree, but he gives 25 cm. as the F.M. average for males in a sample collected in the neighbourhood of the Dutch coast. This is perhaps more likely to be the true average for males than mine (18 cm.) for reasons above stated (p. 64), and it makes the average difference between males and females one of a year's growth (6 cm.). Again, in samples from Helder and Lowestoft markets, examined by Kyle, the average size of females at first-maturity was about 32–33 cm. Therefore the observations of these three different observers on plaice from this part of the North Sea agree perfectly as regards the females. Finally Kyle's collections from the Western part of the Channel give values for the F. M. averages which agree very well with my own. It would seem, therefore, that *the values we are dealing with are very constant and characteristic of different regions.*

In attempting to account for these well-marked regional differences in the average size at first-maturity, the earlier investigators, whose observations have just been recorded, were handicapped by not having any reliable method of determining the ages of the fishes they were dealing with. Fulton, however, following the method of Petersen, attempted to define yearly groups of plaice from a study of the frequencies of certain sizes in different samples. His frequency curve for a large collection from Aberdeen Bay (obtained in November)† shows at least two well-defined size-groups with cusps at about 12 cm. and 21 cm. These doubtless represent plaice nearly two and three years old respectively (what we should call the I and II groups), but the significance of the cusps in that portion of the curve representing the sizes of the *larger* fishes is a matter of speculation. The configuration of his fourth group (our III group), for example, rather suggests that two years (III and IV) may be amalgamated in it. Accordingly the conclusion which Fulton draws from his investigations, viz., that, off the Scottish coast, the males become mature when *four* years old (III group) and the females when *five* years old (IV group) must be accepted with reserve. Judging from our collections from the Dogger region (*see* Table 3*a*) the majority of males in this region are not mature till they are *five* years old (IV group) and females not until *six* years old (V group), namely a year later than Fulton supposes. Further, Fulton considered it " probable that maturity is determined in the plaice in any given region not by size but by age, that the variation in size of mature and immature specimens and their overlapping is due to variation in growth, and that *the plaice in all regions spawn at the same age*‡, differences in the average size at first-maturity being due to differences in rate of growth in the different regions . . . . It is, I believe, the cause of the variations in the age at first-maturity which Cunningham found among plaice collected from various localities, sometimes not far apart, in the southern part of the North Sea."

Kyle, however, who also concluded from his observations that the males mature a year earlier than the females, considered that *the difference between the plaice of the Southern and Northern portions of the North Sea is just one year's growth.*‡ (M.B.A. VI, p. 496.)

To anticipate, it may be stated that my results, based on otolith-investigations, confirm the latter view.

As a result of his researches, Cunningham (M.B.A. IV, p. 104) accurately concluded as follows:—"It would appear that Channel conditions extend northward along the Dutch coast, while *the size of mature plaice which is characteristic of more northern grounds extends southward to some extent along the English coast.*‡ The latter half of this statement is confirmed by observations mentioned above, on plaice from the region of the Wash (*see* pp. 64, 65).

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* The italics are mine. *See* 10th, 22nd, 24th S. F. B. reports.

† *See* 20th S. F. B. report. Plate XIV. &c. (1902).

‡ The italics are mine.—W.W.

I must now refer to certain observations made by foreign colleagues in the course of the International Investigations.

Heincke* states that the average size of plaice at first-maturity in the German Bight is 30–35 cm. for males and 35–39 cm. for females. Heincke concludes that "there are grounds for believing that two races occur, a Southern race extending from the English Channel to Heligoland, and a Northern race extending from Heligoland to the North, the first of which is constitutionally smaller than the second. We have also received spawning plaice of very small size caught off Borkum by a German sailing cutter in March, *one female with running spawn measured only 22 cm.*"

Further, in a sample from Heligoland, Kyle (*see* above table) found the value of the F. M. average for females was 32–33 cm. just as in samples from the Flemish Bight. From these observations, therefore, it appears fairly certain that *the small sizes of mature plaice characteristic of the Dutch coast extends along the German coast as far as Heligoland.* How far further north along the continental coast they extend is still somewhat uncertain, owing to the lack of sufficient observations. In this connection Johansen's observation on the plaice in the region of Horn Reef are of interest.† He says :— "By 'Thors' trawling experiments in the spring of 1903, a conspicuous size group of plaice was found, the average size of which was 24–26 cm. south of the Horn Reef, and 27–28 cm. north of the Reef. Among several hundred individuals of this group not a single mature specimen occurred, neither among males or females. *The smallest mature female I ever found at Horn Reef was of 27 cm.* (italics are mine). The age of individuals of this group must at least have been four, possibly five years. Here we notice that neither males or females of four years reach maturity in the Horn Reef area. The bulk of the plaice developed here, both males and females, are at least five years old at maturity." Further Danish observations from the Horn Reef area are recorded in Appendix C. of "Rapports et Procès-Verbaux," Vol. VII. In a collection made in 20–45 metres in September 1905, of which details of size and age are recorded in Table LV. of that appendix, the F. M. average for males appears to be about 30–31 cm. (but the total number of mature was only 33). Of 351 females ranging from 11 to 40 cm. there were only five mature, according to these observations, and *the smallest was 36 cm. long.*

From these observations of Johansen's it would seem probable that the average size at first-maturity of plaice in the Horn Reef area is about the same as in the Dogger region and off the Scottish coast, and that the smaller averages characteristic of the Dutch and German coasts do not extend so far north as what are usually called the "Eastern Grounds" (Danish coast), where the average size at first-maturity is apparently about the same as on the British coast as far south at least as the Wash (*see* pp. 64–66).

## V.—AGE AND MATURITY.

### § 1. Analysis.

The age-and-maturity data for the individual samples are given in the detailed tables (Tables II., II*a*.) at the end of this report. They are combined in four collections in the summary tables appended here (Tables 3, 3*a*), and displayed in a graphic form in Figs. 2

Table 3.—Age and Maturity.—Females.

| Age Groups. | Dogger Region. Otolith Samples Nos. 1, 2, 3, 5, 7, 8, 9, 10 combined. | | Leman Region. Otolith Samples Nos. 15, 16, 17, 21 combined. | | Flemish Bight. Otolith Samples Nos. 26, 28, 31, 32 & 35 combined. | | English Channel, Great West Bay. Otolith Samples Nos. 36–39 combined. | |
|---|---|---|---|---|---|---|---|---|
| | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 0 ... ... ... ... | — | — | — | — | — | — | 21 | — |
| I ... ... ... ... | — | — | 27 | — | 18 | — | 85 | — |
| II ... ... ... ... | 14 | 1 | 89 | — | 122 | 5 | 80 | 16 |
| III ... ... ... ... | 124 | 1 | 103 | 5 | 193 | 34 | 32 | 36 |
| IV ... ... ... ... | 214 | 33 | 74 | 21 | 10 | 22 | 4 | 17 |
| V ... ... ... ... | 41 | 57 | 8 | 20 | — | 12 | — | 6 |
| VI ... ... ... ... | 12 | 35 | 1 | 8 | — | — | — | 5 |
| VII+ ... ... ... ... | — | 74 | — | 22 | — | 21 | — | 3 |
| Totals ... ... | 406 | 201 | 302 | 76 | 343 | 94 | 222 | 83 |

* *Conseil permanent international pour l'exploration de la Mer. Rapports et Procès-Verbaux. Vol. III.*, 1905. *Appendix E, p.* 19.

† *Johansen. Medd. fra Komm. for Havundersögelser. Serie: Fiskeri. Bd. I., No.* 2. (1905), *p.* 24 (*footnote*).

and 3, the actual numbers given in the tables being converted into percentages in the diagrams.

TABLE 3*a*.—AGE AND MATURITY.—MALES.

| Age Groups. | Dogger Region. Otolith Samples Nos. 1, 2, 3, 5, 7, 8, 9, 10 combined. | | Leman Region. Otolith Samples Nos. 15, 16, 17, 21 combined. | | Flemish Bight. Otolith Samples Nos. 26, 28, 31, 32 & 35 combined. | | English Channel, Great West Bay. Otolith Samples Nos. 36–39 combined. | |
|---|---|---|---|---|---|---|---|---|
| | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 0 ... ... ... ... | — | — | — | — | — | — | 25 | — |
| I ... ... ... ... | 1 | 3 | 18 | 6 | $15^{6}$ | 95 | $77^{1}$ | 20 |
| II ... ... ... ... | $16^{1}$ | 6 | $58^{5}$ | 29 | $32^{14}$ | 306 | $23^{10}$ | 50 |
| III ... ... ... ... | $111^{3}$ | 23 | $61^{17}$ | 19 | $29^{12}$ | 554 | 1 | 44 |
| IV ... ... ... ... | $77^{6}$ | 77 | $15^{17}$ | 31 | $6^{10}$ | 175 | — | 14 |
| V ... ... ... ... | $18^{4}$ | 72 | $—^{1}$ | 17 | $—^{1}$ | 57 | — | — |
| VI ... ... ... ... | 3 | 25 | — | 4 | — | 25 | — | — |
| VII+ ... ... ... ... | 1 | 9 | — | — | — | 14 | — | — |
| Totals ... ... | $227^{14}$ | 215 | $152^{40}$ | 106 | $82^{43}$ | 1226 | $126^{11}$ | 128 |

NOTE.—*Index figures* = Maturity doubtful.

In Fig. 2 the same graphic method of representation (Kyle's) has been adopted as in the case of the size data (Fig. 1), that is to say, the percentages of immature and mature at different ages are plotted out in the form of two curves. The abscissa (a) of the point (m) where these two curves cross may be called the *average age at first-maturity*.

Taking firstly the females, if we regard the position of the crossing point in the series of four diagrams, A, B, C, D in Fig. 2, we find that, beginning with A this point is between IV. and V., but near V.; in B it is midway between III. and IV.; and in D between II. and III. This is a diagrammatic way of representing the fact that (according to our samples) *the average age of the females at first-maturity is younger in the Leman region than in the Dogger region, younger still in the Flemish Bight, and youngest in the Western part of the Channel.*

The corresponding series of diagrams for the males,* viz., $A^1$, $B^1$, and $D^1$, show corresponding regional differences in the average age at first-maturity, which in each case is about a year earlier than the females; namely, in $A^1$ the crossing point is at IV.; in $B^1$ it is midway between III. and IV.; in $D^1$ it is between I. and II. In $C^1$, however, the curves representing the percentages of immature and mature in the collection from the Flemish Bight do not cross because the mature greatly outnumbered the immature in *all* the age groups even the youngest present (the I. Group). Whether this is to be ascribed to a special selective migration of mature males into the central part of the Flemish Bight in winter or to the suppression of the small immature individuals owing to hybernation (as mentioned on p. 64), or to both these causes, is not certainly known.

*Fig.* 3 shows very clearly the percentages of mature (shaded portions of the rectangles) at different ages in the four collections represented by the diagrams A, B, C, D (females), and $A^1$, $B^1$, $C^1$, $D^1$ (males).

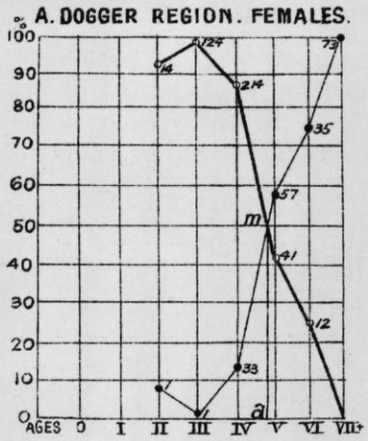
Comparing these diagrams we see that among plaice of any given age a larger proportion of mature occurred in the Leman region (B and $B^1$) than in the Dogger region (A and $A^1$), a still greater proportion in the Flemish Bight (C)†, and the greatest proportion in the Western part of the Channel (D and $D^1$). Take, for example, the III. Group, females. In the Dogger region (A) only about 1 per cent. of this group was mature; in the Leman region (B) 4 per cent.; in the Flemish Bight (C) 15 per cent.; and in the Great West Bay (D) $52\frac{1}{2}$ per cent.

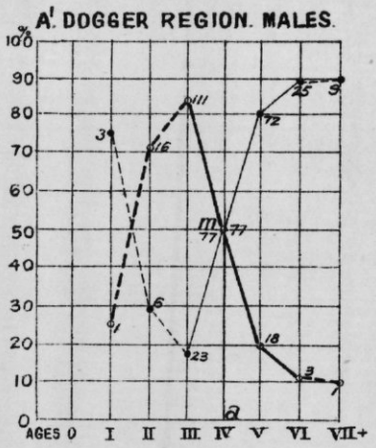
This is simply another way of showing that the average age at first-maturity is earlier in the Leman region than in the Dogger region, younger still in the Flemish Bight, and youngest in the Channel.

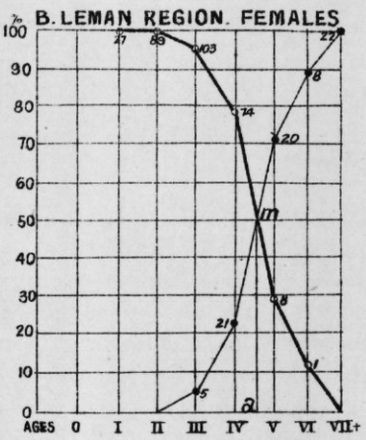
* In the construction of these diagrams the cases of doubtful maturity (index figures in Table 3a) have necessarily been omitted. These doubtful cases, however, only amount to 3 per cent. in the collection from the Dogger region, 13 per cent. in the Leman collection, and 3 per cent. and 4 per cent. in the collections from the Flemish Bight and Great West Bay respectively.

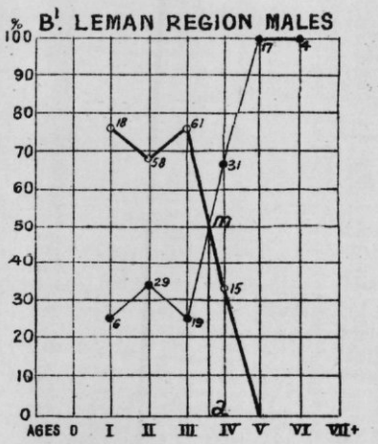
† Diagram $C^1$ is exceptional, representing, as explained on page 64, the special conditions affecting the males on the central part of the Flemish Bight in winter.

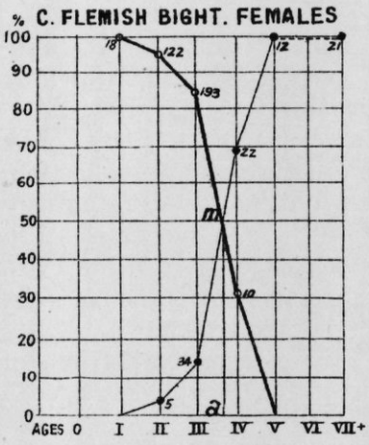
FIG. 2. DIAGRAMS A, B, C, D, (FEMALES) AND A', B', C', D', (MALES) SHOWING PERCENTAGES OF IMMATURE AND MATURE PLAICE AT DIFFERENT AGES, IN COLLECTIONS FROM FOUR DIFFERENT REGIONS.

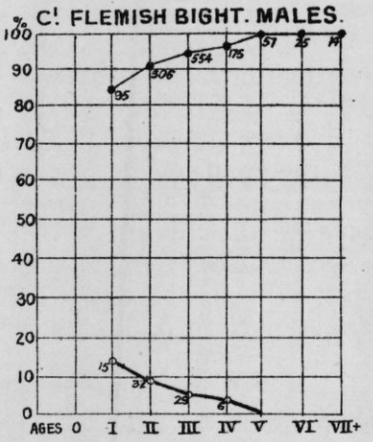


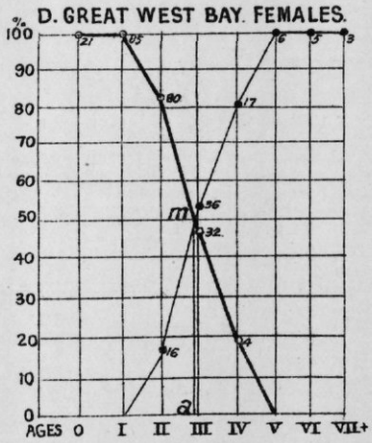



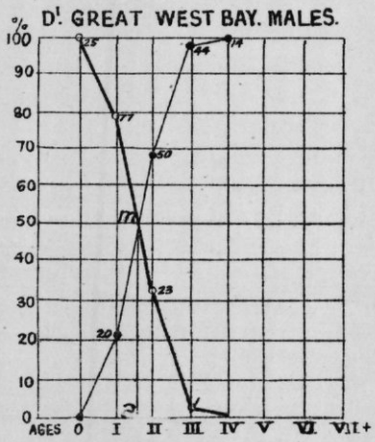




*The average age at first maturity is the abscissa (a) of the point (m) where the two curves cross. Figures at the points of the curves give the number of observations.*

——o——o—— = IMMATURE —•—•— = MATURE

*Wallace. Size and Age of Plaice. To face p. 68.*

2204.

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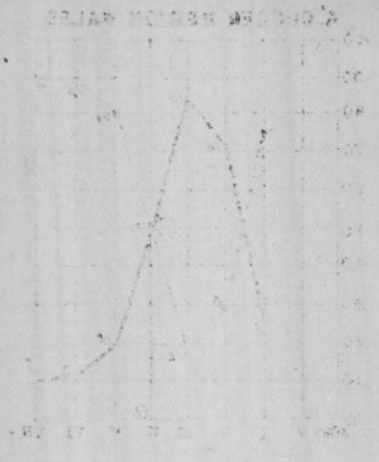
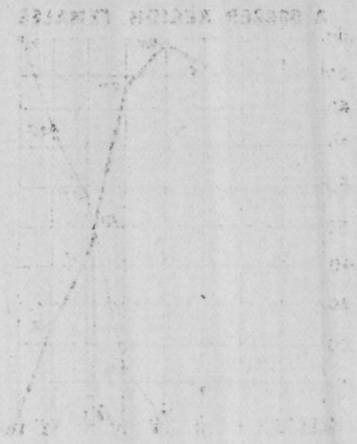
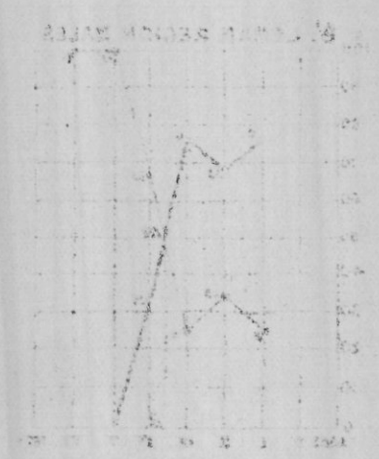










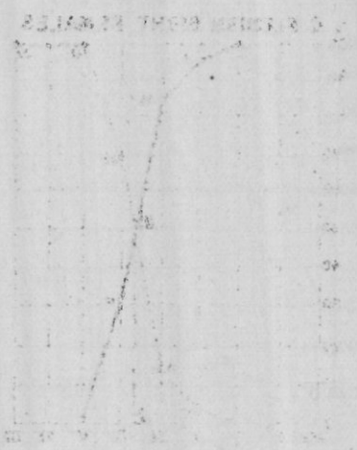
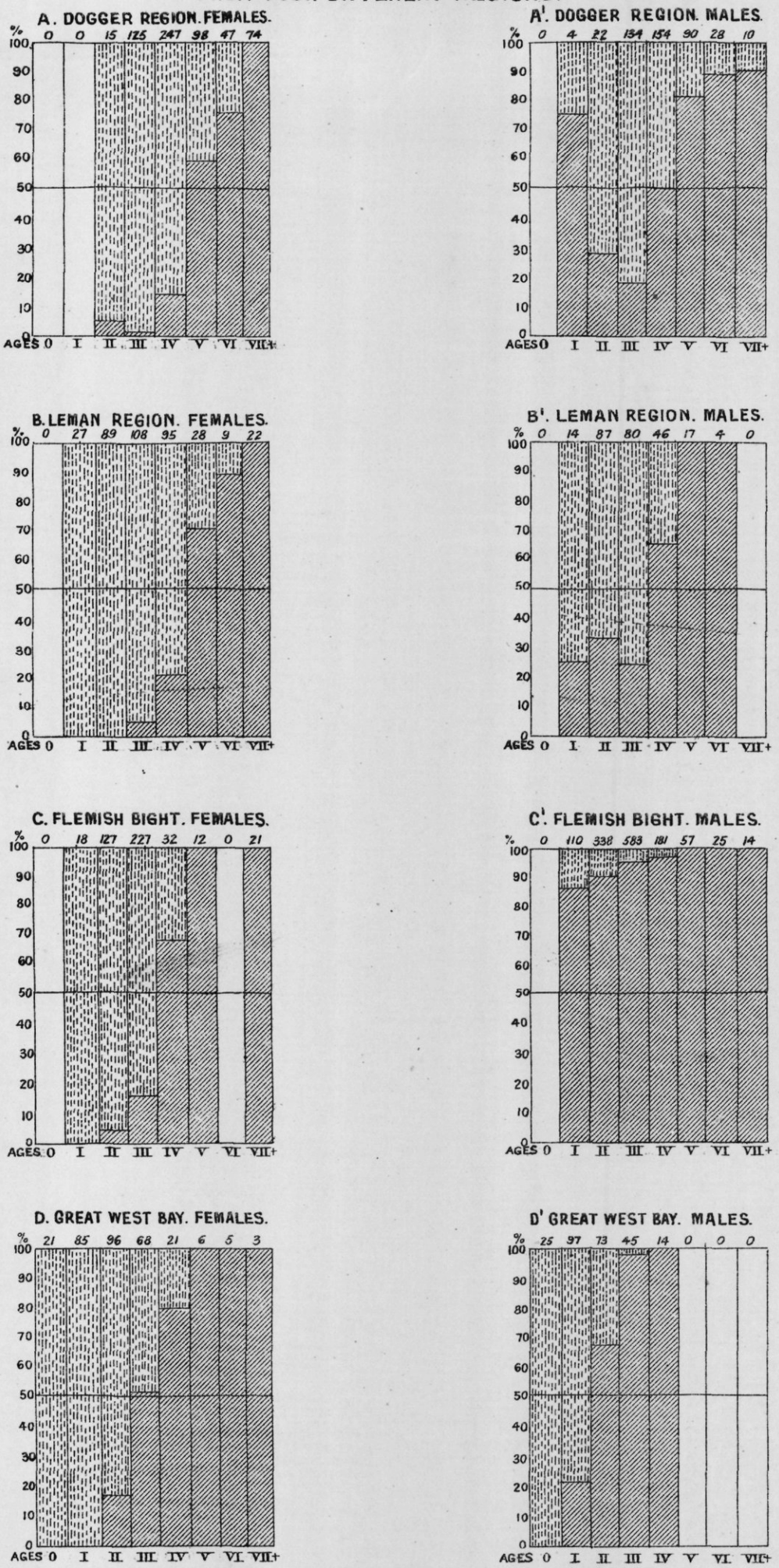






FIG 3. DIAGRAMS A, B, C, D. (FEMALES) AND A', B', C', D', (MALES) SHOWING PERCENTAGES OF IMMATURE AND MATURE PLAICE, AT DIFFERENT AGES (0, I, II ..... VII+) IN COLLECTIONS FROM FOUR DIFFERENT REGIONS.




*A, A' = Dogger Region. B, B' = Leman Region. C. C' = Flemish Bight. D, D' = Great West Bay.*

*Figures at the top of the columns indicate number of observations.*

IMMATURE MATURE NO OBSERVATIONS.



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Comparing the difference between the percentages of mature in adjacent age groups, we note that *the most rapid rise in the percentages of mature invariably takes place at the age at which over 50 per cent. of mature first occurs.*

For example, in the females of the Dogger Bank and Leman regions (diagrams A and B) the youngest age group containing over 50 per cent. of mature is the V group, and we see that the greatest rise in the percentage of mature is from IV to V. In the Flemish Bight (C) the youngest group with a majority of mature is the IV group, and the most rapid rise in the percentage of mature is from III to IV. In the Great West Bay (D) the youngest group, containing over 50 per cent. mature, is the III group, and the most rapid rise in the percentage of mature is from II to III.

In the males of the Dogger and Leman regions, discounting minor irregularities, the causes of which have already been discussed (p. 62), the youngest group containing over 50 per cent. of mature is the IV group, and the most rapid rise in the percentage of mature takes place from III to IV. In the Great West Bay the youngest age group with a majority of mature is the II group, and the most rapid rise in the percentage of mature is from I to II.

*The relatively rapid rise in the percentage of mature in all these cases clearly means that at these particular ages in the different regions, the greatest numbers of plaice become mature for the first time.**

## § 2. Summary of Results.

(1.) There is a considerable range of individual variation in the age as well as the size at which plaice become ripe for the first time.

(2.) So far we have not met anywhere a mature female which had less than two white rings in its otoliths. According to our investigations these youngest mature specimens would be in the third year of their lives and just three years old when fully ripe. Relatively few, however, were found to be mature at this age. Even in the Channel where mature specimens of this age were relatively most abundant, only 17 per cent. of them were mature.

(3.) The youngest mature males, so far obtained, belonged to the I group. In other words the minimum age of the males at first-maturity is two years. Ripe individuals of this group are quite common in the spawning season, especially in the Flemish Bight.

(4.) We find much older immature specimens of both sexes in the Dogger region than in the Flemish Bight or in the western past of the Channel. The oldest immature females so far found in the two last regions belonged to the IV group. Several of the V group and one (out of a total of 9) of the VI group in the Leman region and 12 out of 37 of this group in the Dogger region were immature. The oldest immature male in the collection from the Great West Bay belonged to the III group. In the Flemish Bight and Leman region the oldest immature belonged to the IV group. In the Dogger region, however, much older immature males were found (*see* Table 3*a*).

(5.) In the Dogger region the majority of females become mature when six years old (V group), males when five years old (IV group) ; therefore just one year earlier than the females. In the collection from the Leman region the same relations hold, but the average age at first-maturity (*see* Fig. 2, B, $B^1$) is somewhat earlier. In the neighbourhood of the Dutch coast (Flemish Bight) the majority of females become mature when five years old (IV group).† In our male collection from this region, immature specimens formed only a small minority even of the youngest age group present, so that it is impossible to say from these observations what is the age of the majority of males in this region at first-maturity. In the Great West Bay the average age at first-maturity is earlier than in the Flemish Bight, the majority of females apparently becoming ripe for the first time when four years old (III group), the males when three years old (II group).

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* Of course the greater proportion of mature in an older than in a younger group is partly due to the fact that the older group contains not only fishes which are spawning for the first time but also some which are spawning for the second time, &c., according to the age of the group.

† The otolith-investigations of H. Maier ("Beiträge zur Alterbestimmung der Fische" *Arb. d. wissen. Komm. f. d. Intern. Meeres. No. 5, Bd. VIII.* 1907, *p.* 99) show that on the German coast also the majority of females become ripe for the first time when five years old (IV group), males when four years old (III group).

## VI.—AGE, SIZE, AND MATURITY.

As a result of the otolith-investigations we know that in a given region there is a certain age at which the great majority of plaice (of a given sex) become ripe for the first time.

Now the question arises :—Are the majority now ripe because they have attained this particular age, or because at this age the majority attain the size which is most favourable for reproduction ?

Tables 4 and 4*a* appear to throw some light on this question.

TABLE 4.—AGE, SIZE, AND MATURITY.—FEMALES.

| — | Dogger Region. | | | | | | Leman Region. | | | | | | Flemish Bight. | | | | | | Great West Bay. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ages. | III. | | IV. | | V. | | III. | | IV. | | V. | | III. | | IV. | | V. | | III. | | IV. | | V. | |
| Cm. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 19 .. | — | — | — | — | — | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 20–21 .. | 3 | — | — | — | — | — | 4 | — | — | — | — | — | 5 | 5 | — | — | — | — | — | — | — | — | — | — |
| 22–23 .. | 8 | — | — | — | 1 | — | 5 | 1 | 1 | — | — | — | 36 | 5 | 1 | 1 | — | — | — | 1 | — | — | — | — |
| 24–25 .. | 27 | — | — | — | — | — | 13 | — | 1 | — | — | — | 70 | 8 | — | — | — | — | 2 | 3 | — | — | — | — |
| 26–27 .. | 25 | — | 4 | — | 1 | — | 14 | 2 | 2 | — | — | — | 46 | 8 | — | — | — | — | 3 | 4 | — | — | — | — |
| 28–29 .. | 16 | — | 21 | — | 2 | — | 33 | 1 | 5 | — | — | — | 18 | 4 | 4 | 3 | — | — | 4 | 4 | — | 1 | — | — |
| 30–31 .. | 18 | — | 20 | — | 3 | — | 18 | — | 8 | 1 | — | — | 10 | 3 | 2 | 2 | — | — | 14 | 7 | 1 | — | — | — |
| 32–33 .. | 13 | 1 | 34 | 1 | 2 | — | 10 | — | 31 | 6 | 3 | — | 6 | 1 | 2 | 4 | — | — | 5 | 6 | 2 | 4 | — | — |
| 34–35 .. | 9 | — | 40 | 5 | 4 | 2 | 3 | — | 15 | 4 | — | 1 | 2 | — | — | 6 | — | 1 | 4 | 3 | 1 | 5 | — | — |
| 36–37 .. | 3 | — | 53 | 2 | 9 | 6 | 1 | 1 | 8 | 7 | 1 | 2 | — | — | 1 | 2 | — | 2 | — | 4 | — | 3 | — | — |
| 38–39 .. | 1 | — | 26 | 8 | 4 | 5 | — | — | 3 | 2 | 3 | 11 | — | — | — | 3 | — | 4 | — | 2 | — | 1 | — | 1 |
| 40–41 .. | 1 | — | 13 | 13 | 10 | 14 | — | — | — | 1 | 1 | 4 | — | — | — | — | — | 3 | — | 2 | — | 3 | — | 3 |
| 42–43 .. | — | — | 2 | 3 | 5 | 8 | — | — | — | — | — | 1 | — | — | — | 1 | — | 2 | — | — | — | — | — | 2 |
| 44–45 .. | — | — | 1 | 1 | — | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | - | — | — |
| 46–47 .. | — | — | — | — | — | 9 | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — |
| 48–49 .. | — | — | — | — | — | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Totals .. | 124 | 1 | 214 | 33 | 41 | 56 | 103 | 5 | 74 | 21 | 8 | 20 | 193 | 34 | 10 | 22 | — | 12 | 32 | 36 | 4 | 17 | — | 6 |
| Average Size cm. | 28·6 | — | 35·0 | 39·3 | 37·0 | 42·6 | 28·4 | 28·7 | 33·2 | 35·5 | 36·9 | 39·6 | 26·0 | 25·9 | 30·5 | 34·0 | — | 39·2 | 30·7 | 31·8 | 32·7 | 36·9 | — | 41·3 |

TABLE 4*a*.—AGE, SIZE, AND MATURITY.—MALES.

| — | Dogger Region. | | | | | | Leman Region. | | | | | | Flemish Bight. | | | | | | Great West Bay. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ages. | II. | | III. | | IV. | | II. | | III. | | IV. | | II. | | III. | | IV. | | II. | | III. | | IV. | |
| Cm. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 14–15 .. | — | — | 1 | — | — | — | 1 | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — |
| 16–17 .. | 2 | — | — | — | — | — | 1 | 2 | — | — | — | — | 2 | 19 | — | 1 | — | — | — | 1 | — | — | — | — |
| 18–19 .. | 5 | 1 | — | — | — | — | 2 | 4 | — | 1 | — | — | $5^2$ | 64 | — | 14 | — | — | $1^1$ | 1 | — | — | — | — |
| 20–21 .. | 3 | 1 | 4 | — | — | — | $12^1$ | 5 | 2 | — | 1 | — | $10^1$ | 98 | $2^1$ | 73 | — | 2 | 7 | 4 | — | — | — | — |
| 22–23 .. | 3 | 1 | 15 | — | 1 | 1 | $15^1$ | 9 | 3 | 5 | — | — | $9^4$ | 90 | $8^4$ | 149 | — | 5 | $1^4$ | 6 | 1 | 5 | — | — |
| 24–25 .. | — | 2 | 30 | 1 | 4 | 1 | $14^1$ | 6 | $14^2$ | 3 | 2 | — | $5^6$ | 22 | $8^1$ | 133 | — | 11 | $9^2$ | 9 | — | 4 | — | — |
| 26–27 .. | $—^1$ | — | 31 | 2 | 12 | — | $8^2$ | 2 | $16^1$ | 2 | 2 | 1 | $—^1$ | 10 | $5^4$ | 83 | $4^3$ | 24 | $3^1$ | 10 | — | 1 | — | — |
| 28–29 .. | 2 | — | 21 | 4 | 12 | 3 | 4 | 1 | $16^2$ | 1 | $5^3$ | 3 | 1 | 1 | $5^2$ | 61 | $2^3$ | 44 | 1 | 6 | — | 5 | — | 1 |
| 30–31 .. | — | — | 4 | 1 | 20 | 6 | 1 | — | $9^6$ | 4 | $3^{12}$ | 8 | — | 1 | 1 | 24 | $—^1$ | 28 | $1^1$ | 7 | — | 11 | — | 4 |
| 32–33 .. | — | — | $2^2$ | 9 | $18^3$ | 15 | — | — | $1^4$ | — | $2^1$ | 7 | — | — | — | 13 | $—^2$ | 29 | — | 4 | — | 11 | — | 2 |
| 34–35 .. | — | 1 | $3^1$ | 4 | $8^1$ | 21 | — | — | $—^1$ | 2 | $—^1$ | 10 | — | — | — | 2 | $—^1$ | 16 | $—^1$ | 2 | — | 4 | — | 4 |
| 36–37 .. | — | — | — | — | $2^2$ | 12 | — | — | — | 1 | — | 1 | — | — | — | 1 | — | 11 | — | — | — | 3 | — | 3 |
| 38–39 .. | — | — | — | 1 | — | 13 | — | — | — | — | — | 1 | — | — | — | — | — | 4 | — | — | — | — | — | — |
| 40–41 .. | — | — | — | 1 | — | 4 | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — |
| 42–43 .. | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Totals .. | $15^1$ | 6 | $61^3$ | 23 | $77^6$ | 77 | $58^5$ | 29 | $61^{17}$ | 19 | $15^{17}$ | 31 | $32^{14}$ | 306 | $29^{12}$ | 554 | $6^{10}$ | 175 | $23^{10}$ | 50 | 1 | 44 | — | 14 |
| Average Size cm. | 21·3 | 24·3 | 27·3 | 32·4 | 30·7 | 35·1 | 23·8 | 22·6 | 27·3 | 27·7 | 28·4 | 32·9 | 21·8 | 21·4 | 25·4 | 25·0 | 27·5 | 30·5 | 24·1 | 26·9 | — | 30·5 | — | 33·6 |

* Compiled from Tables II and II*a* at the end.

We learn from these tables that, given two or more adjacent age groups, the range of size of each of which includes the average size at first-maturity characteristic of a particular region*, the following relations exist between the three factors—age, size, and maturity.

(1.) Among plaice of a given age the average size of the mature is greater than the average size of the immature.†

(2.) Except where the numbers are obviously too small to give reliable proportions, we find *in each age group* a majority of immature at sizes *below* and a majority of mature at sizes *above* the average size at first-maturity.

These observations clearly show the importance of the attainment of a certain *size* at maturity, apart from age. The average size at first-maturity represents the size at which the majority of individuals of a given "race" or local population attain the bodily condition necessary for reproduction. Whether this is attained in a longer or shorter period, by slower or more rapid growth, would appear to be of secondary importance.

## VII.—CONCLUSIONS.

Evidence adduced on pp. 56–58 tends to show that plaice spawn in the deep water off the Yorkshire coast on the one hand and in the deep water of the narrow Southern termination of the North Sea on the other; but that they do not spawn to any appreciable extent on the Dogger Bank, or in the region of the Leman banks and other shallower areas in the middle of the North Sea. There is also evidence to show that the spawning period in the region of the Dogger is somewhat later than in the Southern Bight of the North Sea and English Channel (p. 59).

Observations on the relations of size, age, and maturity (pp. 60–74) show that although there is considerable range of individual variation in the age as well as in the size at which plaice become ripe for the first time, the average sizes at first-maturity have different and definite values in different regions. (*See* Table, p. 61).

It appears that about 40 cm. for females and 31–32 cm. for males represent the average sizes at first-maturity of plaice in the region of the Dogger, and in the neighbourhood of the Scottish, English, and Danish coasts, although more data, especially from the first and last-named regions, are required to confirm the generalisation in its entirety.

In this region the majority of females are just six years old and the majority of males five years old on spawning for the first time.

In the neighbourhood of the Dutch and German coasts, the average size of the females at first-maturity is 33–34 cm., and the corresponding age five years; a year earlier, that is to say, than in the Northern and central parts of the North Sea. The average size and age at first-maturity of the males in this region are somewhat uncertain, for reasons discussed on p. 64.

In the Western part of the Channel the average size at first-maturity appears to be the same as on the Dutch coast and German coast, but the corresponding age is about a year earlier owing to the more rapid rate of growth of the young plaice in the Devon Bays.

Finally, according to Atkinson's observations‡ it would appear that the average size at first-maturity in the Barents Sea is the same as in the northern part of the North Sea, although the corresponding age there is much higher owing to the slower rate of growth.

These facts seem most readily explainable on the hypothesis that there are two "races" of plaice, each characterised by the attainment of a certain average size at first-maturity; "a Southern race" (as Heincke says) "extending from the English Channel to Heligoland and a Northern extending from Heligoland to the West and North, the first of which is constitutionally smaller than the second." The Barents Sea plaice would appear to be related (as we should expect) to those found in the Northern North Sea. When we say that the plaice found in the Channel and Southern North

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* This is indicated *approximately* by a line drawn across the vertical columns of figures in Tables 4, 4*a*.

† Exceptions to this rule occur in the case of the Flemish Bight males, but here, as already stated, we have to do with special conditions affecting the males in the central parts of this region in winter.

‡ Atkinson. "Notes on a Fishing Voyage to the Barents Sea in August 1907." *Journ. Marine Biol. Assoc., Vol. VIII., No.* 2, *May*, 1908, *page* 82. Mr. Atkinson informs me that the values for the average sizes at first-maturity (males and females) there stated have been confirmed by observations made in June of the present year (1908).

Sea are "constitutionally smaller" than those found in the Northern North Sea, we do not refer to the rate of growth previous to maturity (which is very different in the Devon Bays and on the Dutch coast on the one hand, and in the Barents Sea and the Northern North Sea on the other), but we mean that these Southern plaice are so constituted as to be capable of reproduction at a smaller size than the Northern form.

It is evident that, owing to migrations, the two forms must mingle considerably in the intermediate region of the North Sea (between say Lat. 53° and 54° N.), and this is indicated by observations on the plaice in the Leman region; while from evidence adduced on p. 64 it appears that smaller mature plaice, probably derived from the Dutch coast, appear on the Leman Ground and off the Yorkshire coast in the spawning season than are found there in the autumn. But although there must be a certain mingling of the two forms, the general movements of the fishes and the direction of the surface drift in the North Sea, affecting the distribution of the eggs, must tend on the whole to keep the two apart.

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# APPENDIX.

## Observations on the Market and on Sailing Trawlers.

### With Chart.

By GEORGE T. ATKINSON.

In order to render more complete our observations on the maturity of plaice in the southernmost parts of the North Sea, it has been found desirable to supplement the records resulting from the voyages of the "Huxley" by examining from time to time the plaice in the catches of certain Lowestoft and Ramsgate smacks. This work has been done for the most part at the Lowestoft Market (Samples Nos. 13, 14, 18-20, 22-27, 33-35) usually on board the vessels stated. In this way fourteen of Dr. Wallace's samples have been obtained. It was found that the most advantageous and inexpensive method of dealing with large numbers of plaice was to measure them and examine the stage of maturity in the early morning when the catches were being packed for sale. In this way it was sometimes possible to work through the whole or the greater part of catches of plaice as brought to market (*see* samples 19, 22, 23, 24); on the other occasions the samples were sufficiently large for the limits of mature and immature, and the average size at first maturity to be obtained. As the plaice in late autumn and early winter are usually gutted before being brought to market, the examination of the reproductive organs could be readily made.

Two of the Samples (Nos. 27 and 34) have been dealt with on board smacks at sea. The former by myself on the smack "Rosebud" LT 580 with the assistance of the skipper and owner Mr. Frank Hutchings, and the latter by Mr. Hefford and myself on the smack "Comrades" LT 315 on one of the most successful "small plaice" voyages in 1907. In connection with the latter it is interesting to note that the "small plaice" had made their appearance after the "winter-rest" only about a week previously.

In the case of Sample 26 the skipper and owner of the "Forward" LT 708, Mr. W. Wharton, had instructions to bring in the whole catch of plaice from the last three hauls for otolith investigations.

I would here take the opportunity of thanking the skippers, smack owners and fish-buyers, through whose courtesy we have been enabled to collect this valuable material. Without their good-will much of this work would have been impossible; with it, some of the problems connected with the natural history of the plaice have been brought nearer solution.

I would also tender my thanks to Mr. A. W. James for his valuable assistance in recording the observations in the autumn, 1907.

The value of these records lies not only in the large numbers of specimens which can be dealt with in a short time, but also in the fact that the catches have been derived from the most important spawning area of the plaice in the North Sea and at the most critical period in this regard. Moreover at this period the services of the "Huxley" have seldom been available, but it is also to be borne in mind that, except along the Dutch coast, the area is for the most part ill-suited to the successful operations of a steam trawler on account of the rough nature of the bottom.

There are, however, many difficulties which the examination of fish from commercial fishing vessels involves; to avoid erroneous results one must always consider the amount of sorting into market sizes which the fish dealt with have undergone between capture and landing. It must also be ascertained accurately the extent of the area and the range of depths in which a vessel has worked. It must further be determined whether any fish have not been brought to market on account of their small size, though this consideration scarcely concerns our samples dealt with in the autumn and winter, for at these periods the smallest plaice caught are marketable. As will be shown later, the smallest plaice caught at these periods are *chiefly males* and these *mature* fish, the vast majority of small immature fish, which appear suddenly and are taken in great numbers throughout the spring, being protected by the mysterious habit of hibernation.

In the records I have obtained for Dr. Wallace's use every care has been taken to secure the fullest particulars regarding the catches dealt with.

## Particulars of Samples of Plaice from Commercial Fishing Vessels Examined for Maturity.

The following are the particulars of Samples other than those dealt with on the "Huxley" (the particulars of these will be found by reference to Table 1, p. 54). For the approximate positions of the grounds from which all the Samples have been obtained *see* the Chart, for the drawing of which I am indebted to Mr. Potter.

| No. of Sample. | Date Measured and Vessel. | Ground. | Remarks. |
|---|---|---|---|
| 13 | 6.12.07. *Citizen*, LT. 65. | Dudgeon Light-vessel in sight bearing W.N.W. to W.S.W., 11–13 fathoms; once 16 fathoms. | Fish not sorted at sea. Two baskets out of a total of five measured on board. |
| 14 | 9.12.07. *Chrysolite*, LT. 635. | Inside the Outer Dowsing LV., 11–13 fathoms; once 19 fathoms. | Sample of three baskets measured from total of about ten baskets. Measured on board. |
| 18 | 19.11.07. *Victoria Cross*, R. 167. | North part of Well Bank, 5½–19 fathoms. | Two and a half out of a total of about eight baskets measured on board. |
| 19 | 14.11.07. *Chrysolite*, LT. 635. | Both sides of Well Bank, 7–20 fathoms. | About seven baskets out of a total of about ten baskets. This sample possibly includes a few specimens from Smith's Knoll where one basket of plaice was caught. |
| 20 | 9.3.07. *Gladys*, LT. 233. | Close to Leman Bank, 8–17 fathoms. | Contents of one trunk out of a total of two were measured on the market. Close examination of the males not possible owing to the fish being required by the merchant for packing. |
| 22 | 7.11.07. *Chrysolite*, LT. 635. | North part of Smith's Knoll to South part of Leman Bank, 23–5 fathoms. | Whole catch measured on board with exception of less than a score of fish. Largest individual catch on Leman Bank (5 fathoms). |
| 23 | 8.11.07. *General Gordon*, LT. 348. | South from Smith's Knoll, both sides of the bank, 23–28 fathoms. | With the exception of one basket of 'large' fish the whole catch was measured on board. |
| 24 | 12.11.07. *Consolation*, LT. 170 | South from Smith's Knoll, East side of the Bank, 23–27 fathoms. | Whole catch, between four and five baskets measured on board. |
| 25 | 4.11.07. *Emerald*, LT. 296. | North from Smith's Knoll to South Leman Buoy, chiefly in 23 fathoms. | About four baskets out of total catch of about nine baskets measured on board. Larger fish probably a little over-represented. Maturity of the males not determined. |
| 26 | 15.1.08. *Forward*, LT. 708. | Gabbard Deep Water, 23–25 fathoms. | Whole catch from last three hauls brought to Laboratory for otolith investigations. |
| 27 | 1–5.2.07. *Rosebud*, LT. 580. | Eastern Deep Water (including one haul in Southwold Deep Water), 20–27 fathoms. | Every plaice caught was measured at sea. Maturity of males not determined. |
| 33 | 6.11.07. *Holly*, LT. 105. | West of Schouwen Light-vessel (land light also in sight), 16–17 fathoms. | Measured contents of one trunk of small plaice on the market out of a catch of fourteen trunks. |
| 34 | 23–25.2.07. *Comrades*, LT. 315. | West of Maas Light-vessel, 16–19 fathoms; once 13 fathoms. | Measured at sea; on this account the sample includes more of the smallest individuals caught than would have been represented if the fish had been measured on the market. |
| 35 | 2.12.07. *Ena*, LT. 660. | West Kapelle. | This sample includes the smallest sizes caught but not the largest, these having been separated at sea. Contents of about three trunks measured (including one trunk of 400 fish bought for otolith investigations). Measured on board and in Laboratory. |

## TABLE I.—Length and Maturity—Females.

Dogger Region (Nos. 1–12). Inner Dowsing Region (Nos. 13, 14).

| Sample No. | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cm. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 9-14 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 15-19 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | 2 | — | 4 | — |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | 3 | — | 4 | — |
| 21 | — | — | — | — | — | — | 1 | — | — | — | — | — | 2 | — | — | — | — | — | 1 | — | — | — | — | — | 4 | — | 8 | — |
| 22 | — | — | — | — | — | — | 2 | — | — | — | 2 | — | 1 | — | — | — | — | — | — | — | 1 | — | 2 | — | 11 | — | 8 | — |
| 23 | — | — | — | — | 1 | — | 2 | — | — | — | 3 | — | — | — | 1 | — | 1 | — | 1 | — | 1 | — | — | — | 15 | — | 27 | — |
| 24 | — | — | — | — | — | — | 4 | — | 1 | — | 10 | — | — | — | 2 | — | — | — | 2 | — | — | — | — | — | 18 | — | 17 | — |
| 25 | 2 | — | — | — | 2 | — | 3 | — | 1 | — | 9 | — | — | — | 1 | — | 1 | 1 | — | — | — | — | 1 | — | 15 | — | 25 | — |
| 26 | 1 | — | — | — | 2 | — | 1 | — | 1 | — | 10 | — | 3 | — | — | — | 1 | — | 3 | — | 1 | — | — | — | 12 | — | 19 | — |
| 27 | — | — | — | — | — | — | 3 | — | 1 | — | 8 | — | 1 | — | — | — | 1 | — | 3 | — | 1 | — | 5 | — | 15 | — | 25 | — |
| 28 | 1 | — | — | — | 1 | — | 5 | — | 4 | — | 10 | — | — | — | — | — | 1 | 1 | 1 | — | 1 | — | 1 | — | 9 | — | 18 | — |
| 29 | 4 | — | — | — | 2 | — | 4 | — | 8 | — | 4 | — | 3 | — | 1 | — | 3 | — | 1 | — | — | — | 3 | — | 12 | — | 11 | — |
| 30 | 2 | — | — | — | 4 | — | 6 | — | 8 | — | 7 | — | 4 | — | — | — | 1 | — | — | — | — | — | 1 | 1 | 2 | — | 8 | — |
| 31 | — | — | — | — | 5 | — | 5 | — | 7 | — | 1 | — | 1 | 1 | — | — | 2 | — | 2 | — | 1 | — | 3 | — | 8 | — | 7 | — |
| 32 | 1 | — | — | — | 5 | — | 9 | — | 12 | — | 2 | — | 3 | — | — | — | 4 | — | 1 | — | — | — | 4 | 1 | 3 | — | 8 | — |
| 33 | 1 | — | 1 | — | 1 | — | 6 | — | 6 | — | 2 | — | 9 | 1 | 3 | — | 2 | 1 | 2 | 1 | — | — | 3 | — | — | — | 2 | 2 |
| 34 | 3 | — | — | — | 8 | — | 8 | 1 | 4 | — | 1 | — | 9 | — | 4 | 1 | 6 | — | 4 | 2 | — | — | 2 | 1 | 2 | — | 1 | 1 |
| 35 | — | — | — | — | 4 | — | 5 | — | 3 | 1 | 1 | — | 6 | 2 | 4 | — | 3 | — | 4 | 1 | — | — | 7 | 1 | 1 | — | 1 | — |
| 36 | — | — | — | — | 1 | — | 5 | 2 | 4 | — | — | — | 12 | 1 | 5 | 2 | 8 | — | 5 | 1 | 1 | — | 3 | 1 | 1 | — | 2 | — |
| 37 | 1 | — | — | — | 4 | — | 3 | 2 | 2 | 1 | — | — | 9 | — | 4 | 3 | 3 | 1 | 14 | 1 | — | — | 5 | 1 | — | 1 | — | — |
| 38 | — | — | — | — | — | — | 4 | 1 | 2 | 2 | 1 | — | 4 | 1 | 7 | — | 2 | — | 5 | 1 | 1 | — | — | 1 | — | — | — | — |
| 39 | — | 1 | 1 | 1 | 2 | — | 3 | 3 | — | 2 | 1 | — | 4 | 1 | — | 1 | 1 | 2 | 4 | 4 | 1 | 1 | — | — | — | 1 | — | 2 |
| 40 | — | 1 | 4 | — | — | — | 2 | 2 | — | — | — | 2 | 4 | 7 | 1 | 4 | 2 | 1 | 2 | 5 | — | — | 2 | 2 | — | 1 | — | 2 |
| 41 | — | 2 | 1 | 1 | — | — | 2 | 3 | — | 1 | — | — | 5 | 3 | 4 | 8 | — | 4 | 3 | 2 | — | — | — | 3 | — | 1 | — | 2 |
| 42 | — | 2 | — | — | — | 1 | 1 | 5 | — | — | 1 | 1 | — | 1 | 2 | 2 | — | 3 | 3 | 3 | — | — | — | 2 | — | 3 | — | 1 |
| 43 | — | 3 | — | — | — | — | — | 2 | — | — | — | 1 | — | 1 | — | 1 | — | 3 | 2 | 1 | — | 3 | — | 1 | — | — | — | 2 |
| 44 | — | 1 | — | — | 1 | 2 | — | 3 | — | 1 | — | 2 | — | 2 | 1 | 3 | — | 3 | — | 6 | — | — | — | — | — | 1 | — | 2 |
| 45 | — | — | 1 | — | — | — | — | 2 | — | 2 | — | 1 | — | 2 | — | 2 | — | 1 | — | 3 | — | 1 | — | 1 | — | — | — | 1 |
| 46 | — | 5 | — | — | — | — | — | 3 | — | 1 | — | 3 | — | 2 | — | 3 | — | 3 | — | 4 | — | 1 | — | — | — | — | — | 2 |
| 47 | — | 1 | — | — | — | 1 | — | 5 | — | 1 | — | 1 | — | 3 | — | 4 | 1 | 1 | — | — | — | 1 | — | 3 | — | 1 | — | — |
| 48 | — | 2 | — | 2 | — | — | — | 8 | — | — | — | 1 | — | 4 | — | 2 | — | 7 | — | — | — | — | — | — | — | — | — | 4 |
| 49 | — | — | — | — | — | 1 | — | — | — | 1 | — | 1 | — | 1 | — | 5 | — | 1 | — | 1 | — | — | — | — | — | 2 | — | — |
| 50+ | — | 4 | — | 14 | — | 4 | — | 7 | — | 4 | — | 3 | — | 8 | — | 18 | — | 2 | — | 1 | — | 2 | — | 1 | — | 3 | — | 6 |
| Totals .. | 16 | 22 | 8 | 18 | 43 | 9 | 84 | 49 | 64 | 17 | 73 | 16 | 80 | 41 | 40 | 59 | 43 | 35 | 65 | 37 | 9 | 9 | 42 | 20 | 133 | 14 | 195 | 27 |

TABLE I.—LENGTH AND MATURITY—FEMALES—*continued.*

LEMAN REGION.

| Sample No. | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | | 22 | | 23 | | 24 | | 25 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cm. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 9–14 | — | — | 1 | — | — | — | — | — | — | — | — | — | 3 | — | — | — | — | — | — | — | — | — |
| 15–19 | 1 | — | 2 | — | 18 | — | — | — | 2 | — | — | — | 16 | — | 1 | — | — | — | — | — | — | — |
| 20 | — | — | 2 | — | 17 | — | 1 | — | 5 | — | — | — | 6 | — | 1 | — | — | — | — | — | — | — |
| 21 | — | — | — | — | 11 | — | 1 | — | 3 | — | — | — | 5 | — | 1 | — | — | — | — | — | — | — |
| 22 | — | — | 3 | — | 16 | — | 3 | — | 7 | — | — | — | 4 | — | 1 | — | — | — | — | — | 3 | — |
| 23 | — | — | 2 | — | 12 | — | 1 | — | 2 | — | — | — | 9 | 1 | 2 | — | 3 | — | — | — | 2 | — |
| 24 | 2 | — | 1 | — | 30 | — | 6 | — | 10 | — | — | — | 6 | — | 11 | — | 3 | — | 2 | — | 3 | — |
| 25 | 3 | — | — | — | 25 | — | 4 | — | 18 | — | — | — | 16 | — | 12 | — | 2 | — | 3 | — | 8 | 1 |
| 26 | 4 | — | 4 | — | 41 | — | 7 | — | 15 | — | — | — | 8 | 1 | 10 | — | 8 | — | 2 | — | 9 | — |
| 27 | 5 | — | 2 | — | 25 | — | 7 | — | 15 | — | 1 | — | 7 | — | 10 | — | 13 | — | 1 | — | 11 | — |
| 28 | 7 | — | 6 | — | 26 | — | 5 | — | 24 | — | — | — | 8 | — | 34 | — | 12 | 2 | 4 | — | 11 | — |
| 29 | 3 | — | 9 | — | 20 | 1 | 11 | 1 | 18 | 1 | 3 | — | 3 | 2 | 18 | — | 12 | — | 2 | — | 7 | 1 |
| 30 | 4 | — | 5 | — | 15 | 2 | 15 | 1 | 12 | 2 | 7 | 1 | 3 | — | 14 | 2 | 8 | — | 9 | 2 | 14 | 3 |
| 31 | 1 | — | 7 | — | 18 | 1 | 6 | 2 | 14 | 1 | 8 | — | 1 | — | 26 | 2 | 8 | 1 | 7 | 2 | 11 | 3 |
| 32 | 2 | — | 11 | — | 19 | 2 | 5 | — | 13 | 1 | 12 | 1 | 3 | 1 | 23 | 3 | 11 | 8 | 6 | 10 | 12 | 4 |
| 33 | 1 | — | 5 | 3 | 19 | 3 | 6 | — | 9 | 2 | 7 | — | 6 | 1 | 15 | 3 | 12 | 4 | 6 | 2 | 11 | 3 |
| 34 | 2 | — | 7 | 1 | 12 | 1 | 5 | 2 | 10 | 3 | 3 | 3 | — | 1 | 8 | 9 | 5 | 2 | 12 | 6 | 3 | 4 |
| 35 | — | — | 4 | 5 | 9 | 3 | 2 | 2 | 4 | 4 | 5 | 3 | 2 | 1 | 6 | 7 | 6 | 8 | 1 | 8 | 2 | 7 |
| 36 | — | — | 4 | 3 | 5 | 3 | 3 | 3 | 3 | 5 | 1 | 11 | — | 2 | 7 | 7 | 3 | 7 | 4 | 9 | 1 | 9 |
| 37 | 1 | 2 | — | 7 | 2 | 2 | — | 1 | — | 5 | 2 | 4 | — | — | 2 | 11 | 1 | 2 | 2 | 9 | 1 | 18 |
| 38 | — | — | 1 | 5 | 2 | 3 | — | 6 | 1 | 6 | 2 | 3 | — | 4 | — | 11 | 1 | 2 | — | 10 | 2 | 2 |
| 39 | — | 2 | 1 | 4 | 3 | 2 | — | 2 | 2 | 9 | — | 3 | — | 1 | 1 | 12 | — | 10 | — | 10 | 2 | 6 |
| 40 | — | 1 | 1 | 3 | 1 | 7 | — | 4 | — | 8 | — | 2 | — | — | — | 10 | — | 6 | — | 6 | — | 10 |
| 41 | — | — | — | 1 | — | 3 | — | 2 | — | 9 | — | 3 | — | 2 | — | 8 | — | 7 | — | 6 | — | 8 |
| 42 | — | — | — | — | — | 2 | — | 2 | — | 10 | — | 5 | — | — | — | 6 | — | 8 | — | 11 | — | 8 |
| 43 | — | 3 | — | 1 | — | 3 | — | — | — | 4 | — | 2 | — | — | — | 9 | — | 5 | — | 4 | — | 5 |
| 44 | — | 2 | — | 3 | — | 1 | — | 2 | — | 9 | — | 2 | — | — | — | 7 | — | 2 | — | 8 | — | 1 |
| 45 | — | 1 | — | 1 | — | 3 | — | — | — | 3 | — | 1 | — | — | — | 3 | — | 1 | — | 4 | — | 1 |
| 46 | — | 1 | — | 1 | — | 3 | — | 1 | — | 3 | — | 1 | — | — | — | 3 | — | 3 | — | 3 | — | 3 |
| 47 | — | 1 | — | 1 | — | 2 | — | — | — | 6 | — | 1 | — | — | — | 2 | — | 2 | — | 2 | — | 2 |
| 48 | — | — | — | 2 | — | 4 | — | — | — | 4 | — | — | — | — | — | 3 | — | — | — | 3 | — | — |
| 49 | — | 1 | — | 1 | — | — | — | — | — | — | — | 1 | — | — | — | 1 | — | — | — | 2 | — | — |
| 50+ | — | 1 | — | — | — | 6 | — | — | — | 8 | — | 5 | — | 4 | — | 10 | — | 2 | — | 8 | — | 3 |
| Totals... | 36 | 15 | 78 | 42 | 346 | 57 | 88 | 31 | 187 | 103 | 51 | 52 | 106 | 21 | 203 | 129 | 108 | 72 | 61 | 185 | 113 | 107 |

TABLE I.—LENGTH AND MATURITY—FEMALES—*continued.*

FLEMISH BIGHT (Nos. 26–35). GREAT WEST BAY (Nos. 36–39).

| Sample No. | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cm. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 9-14 | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | 64 | — | — | — | — | — | — | — | — | — | 29 | — |
| 15-19 | 10 | 2 | 1 | — | 2 | — | — | — | 55 | — | — | — | — | — | 19 | 3 | 548 | 1 | 22 | — | 6 | — | — | — | — | — | 30 | — |
| 20 | 6 | 1 | 1 | 1 | 5 | — | 1 | — | 25 | 1 | — | — | — | — | 17 | 2 | 152 | 3 | 31 | 2 | 2 | — | — | — | 1 | — | 3 | — |
| 21 | 7 | 3 | 2 | 1 | — | — | 1 | — | 24 | 1 | — | — | — | — | 18 | 3 | 151 | 2 | 53 | 2 | 3 | — | — | — | 2 | — | 6 | — |
| 22 | 2 | 1 | 1 | 1 | 2 | 1 | — | 1 | 26 | — | — | — | — | — | 20 | 7 | 162 | 6 | 78 | 5 | 1 | — | — | — | 2 | 1 | 8 | — |
| 23 | 14 | 2 | 11 | 4 | 3 | 1 | 1 | — | 21 | 2 | — | — | — | — | 36 | 8 | 105 | 5 | 98 | 11 | 2 | — | — | — | 2 | 2 | 1 | — |
| 24 | 28 | 1 | 11 | 5 | 1 | — | — | — | 25 | 3 | — | — | 1 | — | 20 | 8 | 103 | 5 | 64 | 9 | 2 | — | 3 | — | 4 | 2 | 3 | — |
| 25 | 29 | 4 | 11 | — | 2 | — | — | 1 | 26 | 4 | — | — | — | — | 10 | 4 | 58 | 5 | 48 | 7 | 3 | 1 | 3 | — | 6 | 4 | 6 | — |
| 26 | 27 | 1 | 25 | 9 | 3 | — | — | — | 23 | 4 | — | — | — | — | 5 | 4 | 48 | 9 | 42 | 8 | 2 | 1 | — | — | 6 | 2 | 5 | — |
| 27 | 10 | 2 | 23 | 6 | 1 | — | — | 1 | 7 | 1 | — | — | 1 | — | 5 | 3 | 33 | 12 | 22 | 4 | 3 | — | 1 | 1 | 1 | 2 | 2 | — |
| 28 | 10 | 2 | 29 | 13 | — | — | — | — | 5 | 3 | — | — | — | — | — | 5 | 28 | 4 | 5 | 2 | 4 | — | 2 | — | 1 | 3 | 4 | — |
| 29 | 8 | 2 | 27 | 5 | 5 | — | — | — | 3 | — | — | — | — | 2 | 1 | — | 10 | 8 | 2 | 2 | 4 | — | 4 | — | 1 | 4 | 5 | 2 |
| 30 | 6 | 1 | 30 | 6 | — | — | 1 | — | 2 | 1 | 1 | — | — | — | 1 | 2 | 5 | 3 | 2 | 2 | 1 | 2 | 6 | 1 | 3 | 2 | 3 | — |
| 31 | 4 | — | 12 | 9 | 1 | — | — | — | — | 1 | 1 | 1 | — | 2 | 1 | — | 1 | 2 | 2 | 1 | 4 | — | 4 | — | 4 | 3 | 2 | 1 |
| 32 | 2 | 1 | 14 | 6 | 1 | — | 2 | — | 1 | 2 | — | 2 | 1 | — | — | — | 1 | 1 | — | — | 2 | — | 2 | 2 | 2 | 3 | 3 | 2 |
| 33 | 1 | 2 | 5 | 12 | 1 | — | — | — | — | 1 | 1 | — | — | 1 | — | — | — | — | — | — | 2 | 2 | 1 | 1 | 1 | — | — | — |
| 34 | 1 | 1 | 3 | 11 | — | — | — | — | — | — | — | 1 | — | — | — | 1 | — | — | 1 | — | — | — | 3 | 2 | 3 | 3 | 1 | 1 |
| 35 | — | 1 | 4 | 11 | — | 2 | — | — | — | — | 1 | 1 | — | 1 | — | 1 | — | — | — | — | — | — | — | 1 | — | 1 | — | 2 |
| 36 | 1 | 1 | 2 | 9 | — | — | 1 | — | — | — | 1 | 3 | — | 1 | — | 1 | — | — | — | — | — | — | — | 1 | — | 1 | — | 2 |
| 37 | — | 2 | — | 12 | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | 1 | 1 | 1 | — | — | — | 1 |
| 38 | — | 4 | — | 5 | — | 1 | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | 1 | — | 2 | — | — |
| 39 | — | 1 | — | 5 | — | — | — | — | — | 1 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — |
| 40 | — | 5 | — | 8 | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | 3 | — | 4 |
| 41 | — | 1 | — | 7 | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | 1 | — | — | — | 1 |
| 42 | — | 2 | — | 7 | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 43 | — | 3 | — | 6 | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | 1 |
| 44 | — | 1 | — | 5 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — |
| 45 | — | 2 | — | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — |
| 46 | — | 1 | — | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 47 | — | 1 | — | 5 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 48 | — | 1 | — | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — |
| 49 | — | — | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50+ | — | 9 | — | 6 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2 | — | 1 | — | — |
| Totals .. | 166 | 61 | 212 | 193 | 27 | 8 | 7 | 4 | 244 | 26 | 5 | 12 | 3 | 8 | 153 | 52 | 1,469 | 66 | 470 | 55 | 41 | 7 | 30 | 18 | 39 | 41 | 111 | 17 |

## TABLE I*a*.—Length and Maturity.—Males.

### Dogger Region (Nos. 1–12). Inner Dowsing Region (Nos. 13, 14).

| Sample No. | 1 | | 2 | | 3 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cm. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 9 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 11 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — |
| 13 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — |
| 14 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 15 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | 1 | — | — | — | — | — | — | — |
| 16 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2 | — | 1 | — | — | — | — | — | — | — |
| 17 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 18 | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | 1 | — | 1 | — | — | — | — | 1 | — | 1 | — |
| 19 | — | — | — | — | — | — | — | — | — | — | 3 | — | — | — | — | — | 1 | — | — | 1 | 1 | — | 4 | — | 3 | — |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | 2 | — | — | 2 | 2 | 1 | —[1] | 2 | — | — | 8 | — | 8 | — |
| 21 | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | 1 | 2 | — | —[1] | 1 | — | — | 13 | — | 11 | — |
| 22 | — | — | — | — | — | — | — | — | 2 | — | 2 | — | — | — | — | 1 | — | — | — | — | — | — | 15 | — | 12 | 1 |
| 23 | — | — | — | — | — | — | — | — | 8 | — | 4 | — | 2 | — | — | 2 | 1 | 1 | —[1] | 1 | — | — | 21 | — | 20 | — |
| 24 | — | — | — | — | — | — | 2 | — | 15 | — | 3 | — | 1 | 1 | — | 3 | — | — | — | 1 | 1 | — | 20 | 1 | 20 | 1 |
| 25 | — | — | — | — | — | — | 2 | — | 11 | — | — | — | 1 | — | — | 4 | — | — | — | — | 1 | — | 11 | 2 | 24 | — |
| 26 | — | — | — | — | 1 | — | 2 | — | 12 | — | 1 | — | 2 | — | — | 2 | 1[1] | — | — | 1 | — | — | 12 | 2 | 14 | 2 |
| 27 | — | — | — | — | 2 | — | 3 | — | 12 | — | 4 | — | 3 | — | 2 | 6 | — | — | — | — | 1 | 2 | 12 | 1 | 6 | 1 |
| 28 | 1 | — | — | — | 1 | — | 2 | — | 3 | — | 6 | — | — | — | 2 | 7 | 1 | — | — | — | 2 | 1 | 5 | 1 | 9 | 3 |
| 29 | 2 | — | 1 | — | 4 | — | 2 | — | 6 | — | 4 | 1 | 1 | — | 1 | 4 | 1 | — | — | 1 | 1[1] | — | — | — | 4 | 1 |
| 30 | 2[1] | — | — | — | 1 | 1 | 5 | 2 | 3 | — | 3 | — | 1 | — | 2 | 3 | — | 1 | — | 1 | 1 | — | 4 | 1 | 2 | — |
| 31 | 2 | — | — | — | 2 | — | 3 | 2 | 2 | — | 2 | 1 | — | — | —[1] | 3 | 1 | 1 | —[1] | 1 | 3[1] | — | 1 | 1 | 1 | 4 |
| 32 | 1 | — | — | — | 1 | — | 4[2] | 3 | 1 | 2 | 2 | 1 | 4 | 1 | 3 | 11 | —[3] | 1 | — | 1 | — | 1 | 2 | 1 | 2 | 3 |
| 33 | 1 | 1 | — | — | 2 | — | — | — | 1 | — | 2[1] | 3 | — | 3 | 1 | 8 | 1[1] | 3 | —[1] | — | — | — | 2 | 1 | 1 | — |
| 34 | 1 | — | — | — | 2 | — | 2 | 3 | — | 1 | 1[1] | 4 | 4 | 3 | 1 | 8 | 2 | 2 | 1 | — | —[3] | — | — | — | 1 | 2 |
| 35 | 1 | 1 | — | — | 1 | — | — | 2 | — | — | 1 | 7 | 2 | — | 2[1] | 10 | —[2] | 1 | — | 1 | — | 1 | — | — | — | — |
| 36 | — | 1 | — | — | — | — | 1[1] | 1 | — | — | 1[2] | 5 | — | 2 | — | 19 | —[1] | 2 | — | 2 | — | — | — | — | — | — |
| 37 | — | — | — | — | — | — | — | 1 | — | 1 | 1 | 4 | 1 | 3 | — | 11 | — | 2 | — | 4 | — | — | — | — | — | — |
| 38 | — | — | — | — | — | — | — | — | — | — | — | 6 | — | 5 | — | 12 | — | 3 | — | 1 | — | 1 | — | — | — | — |
| 39 | — | — | — | — | — | — | — | 2 | — | 3 | — | 2 | 1 | 2 | — | 14 | — | 3 | — | 1 | — | — | — | — | — | 1 |
| 40+ | — | 2 | — | 2 | — | — | — | — | — | 1 | — | 4 | 1 | 5 | — | 36 | — | 3 | —[1] | 5 | — | — | — | — | — | 1 |
| Totals.. | 11[1] | 5 | 1 | 2 | 17 | 1 | 28[3] | 16 | 76 | 8 | 41[4] | 38 | 27 | 24 | 14[2] | 168 | 17[3] | 25 | 4[6] | 25 | 11[5] | 6 | 131 | 11 | 139 | 20 |

NOTE.—*Index figures* = maturity doubtful.

TABLE I*a*.—LENGTH AND MATURITY—MALES—*continued*.

LEMAN REGION.

| Sample No. | 15 | | 16 | | 17 | | 18 | | 19 | | 21 | | 22 | | 23 | | 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cm. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 9 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 11 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 13 | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — |
| 14 | — | — | 1 | — | — | — | — | — | — | — | 4 | — | — | — | — | — | — | — |
| 15 | — | — | — | — | — | — | — | — | — | — | 1 | 1 | — | — | — | — | — | — |
| 16 | — | — | — | — | — | — | — | — | — | — | 3 | 1 | — | — | — | — | — | — |
| 17 | — | — | — | — | 3 | — | — | — | — | — | — | 3 | — | — | — | — | — | — |
| 18 | — | — | — | — | 11 | — | — | — | — | — | 2 | 5 | — | — | — | — | — | — |
| 19 | — | — | — | — | 11 | — | — | — | 2 | — | 2 | 4 | — | — | — | — | — | — |
| 20 | — | — | 1 | — | 9 | — | — | — | 2 | — | $3^{1}$ | 3 | 1 | — | — | — | — | — |
| 21 | — | — | 2 | — | 12 | — | 1 | — | 2 | — | 8 | 3 | — | — | — | — | — | — |
| 22 | — | — | — | — | 16 | — | 1 | — | 6 | — | $5^{1}$ | 5 | 4 | 1 | — | — | — | — |
| 23 | — | 2 | — | — | 20 | 1 | $4^{1}$ | 1 | 13 | — | 1 | 7 | $3^{1}$ | — | 2 | 1 | — | — |
| 24 | 1 | — | 3 | — | 18 | — | 4 | 2 | 7 | — | 6 | 4 | $6^{2}$ | — | 2 | — | — | — |
| 25 | — | — | 2 | — | $23^{2}$ | 2 | 9 | 4 | 11 | 3 | $6^{2}$ | 4 | $5^{1}$ | 1 | 7 | 1 | — | — |
| 26 | 3 | — | 2 | — | 12 | 1 | $7^{1}$ | 2 | 11 | 2 | 8 | 1 | 10 | 3 | 4 | 1 | — | — |
| 27 | 3 | — | — | 1 | $12^{1}$ | 3 | 8 | 6 | 8 | 3 | $5^{1}$ | 5 | 8 | 7 | 4 | 4 | 3 | — |
| 28 | 1 | — | $2^{1}$ | — | 16 | 5 | 5 | 6 | 10 | 5 | 3 | 5 | $10^{1}$ | 10 | — | 5 | 1 | 6 |
| 29 | 3 | — | $2^{9}$ | 1 | $10^{1}$ | 2 | 1 | 4 | 9 | 2 | 4 | — | 5 | 4 | 2 | 5 | — | 4 |
| 30 | — | — | $—^{9}$ | 2 | 9 | 2 | 2 | 7 | 4 | 7 | $2^{2}$ | 1 | $2^{2}$ | 9 | 4 | 5 | $—^{1}$ | 3 |
| 31 | 1 | — | $—^{11}$ | 9 | $9^{2}$ | 5 | 2 | 1 | 5 | 9 | $1^{4}$ | 1 | 3 | 9 | 2 | 10 | — | 8 |
| 32 | $1^{1}$ | — | $—^{4}$ | 5 | 1 | 10 | 1 | 4 | 5 | 5 | 1 | — | 1 | 13 | 1 | 11 | 1 | 6 |
| 33 | — | — | $—^{4}$ | 5 | 1 | 5 | 1 | 1 | 3 | 7 | $—^{2}$ | 1 | $1^{1}$ | 7 | — | 5 | — | 8 |
| 34 | $—^{1}$ | 1 | $—^{2}$ | 7 | — | 5 | — | 1 | — | 5 | $—^{1}$ | 1 | $1^{2}$ | 17 | — | 11 | — | 6 |
| 35 | — | — | $1^{1}$ | 7 | — | 7 | — | 3 | — | 5 | — | 2 | 1 | 5 | — | 3 | — | 2 |
| 36 | — | — | — | 2 | 1 | 6 | — | 2 | $—^{1}$ | 9 | — | — | — | 8 | — | 3 | $—^{1}$ | 3 |
| 37 | — | — | — | 2 | — | 1 | — | 4 | $—^{1}$ | 6 | — | — | — | 3 | — | 3 | $—^{1}$ | 2 |
| 38 | — | — | — | — | — | — | — | — | — | 4 | — | 1 | — | 2 | — | — | — | 1 |
| 39 | — | — | — | — | — | 1 | — | 1 | — | 2 | — | 1 | — | 1 | — | — | — | 1 |
| 40+ | — | 1 | — | — | — | — | — | 3 | $—^{1}$ | 2 | — | — | — | 1 | — | 1 | — | 1 |
| Totals ... | $13^{2}$ | 4 | $16^{41}$ | 41 | $194^{6}$ | 56 | $46^{2}$ | 52 | $98^{3}$ | 76 | $66^{14}$ | 59 | $61^{10}$ | 101 | 28 | 69 | $5^{3}$ | 51 |

TABLE I*a*.—LENGTH AND MATURITY—MALES—*continued*.

FLEMISH BIGHT (Nos. 26–35). GREAT WEST BAY (Nos. 36–39).

| Sample No. | 26 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cm. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. | Im. | M. |
| 9 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 4 | — |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 12 | — |
| 11 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 7 | — |
| 12 | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | 7 | — | — | — | 1 | — | — | — | — | — | 2 | — |
| 13 | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | 25 | 1 | — | — | — | — | — | — | — | — | 3 | — |
| 14 | — | 1 | 1 | — | — | — | — | — | — | — | — | — | — | — | 40 | 5 | — | — | 1 | — | — | — | — | — | 2 | — |
| 15 | 1 | 11 | 1 | — | — | — | 1 | 2 | — | — | — | — | — | — | 70 | 17 | — | — | — | — | — | — | 1 | — | 9 | — |
| 16 | $1^{1}$ | 24 | 2 | 1 | — | — | $4^{2}$ | 5 | — | — | — | — | — | — | 81 | 19 | — | — | 1 | — | 2 | — | — | — | 8 | — |
| 17 | 5 | 38 | $-^{1}$ | 1 | — | 1 | $2^{1}$ | 10 | — | — | — | — | — | — | 106 | 46 | — | — | 1 | — | — | — | — | 2 | 5 | — |
| 18 | 2 | 27 | — | 4 | $-^{1}$ | — | $4^{1}$ | 18 | — | — | — | — | 3 | 1 | 91 | 68 | 8 | 7 | 2 | — | 1 | — | 1 | — | 5 | — |
| 19 | $2^{1}$ | 65 | $1^{1}$ | 5 | — | 1 | $12^{3}$ | 16 | — | — | — | — | 9 | 8 | 97 | 74 | $7^{1}$ | 21 | 3 | — | $-^{1}$ | — | — | 2 | 4 | — |
| 20 | 2 | 69 | — | 2 | $-^{2}$ | 2 | $6^{3}$ | 23 | $-^{2}$ | — | — | — | 10 | 42 | 116 | 83 | 10 | 66 | $3^{1}$ | — | — | — | 1 | 1 | 3 | 1 |
| 21 | 1 | 67 | 1 | 3 | $-^{1}$ | 1 | $6^{2}$ | 15 | $1^{3}$ | — | — | 1 | 15 | 41 | 68 | 76 | $18^{1}$ | 120 | 2 | 2 | 1 | 2 | 4 | — | 4 | 1 |
| 22 | $2^{1}$ | 90 | — | 6 | — | 2 | $2^{1}$ | 22 | $-^{4}$ | — | — | — | 11 | 38 | 57 | 63 | $25^{1}$ | 136 | 1 | 1 | $1^{2}$ | 1 | — | 4 | 4 | — |
| 23 | 2 | 70 | $1^{1}$ | — | — | — | $2^{2}$ | 25 | $-^{3}$ | — | — | 3 | 7 | 34 | 38 | 48 | 23 | 146 | 2 | — | $-^{2}$ | 6 | 1 | 5 | 1 | 2 |
| 24 | 5 | 58 | $-^{1}$ | 3 | — | 1 | $1^{1}$ | 21 | $-^{3}$ | 1 | — | 3 | — | 19 | 37 | 41 | $20^{1}$ | 91 | 3 | — | 1 | 4 | 2 | 5 | 5 | 2 |
| 25 | 4 | 44 | — | 3 | $-^{1}$ | 1 | $-^{2}$ | 25 | $-^{3}$ | 2 | — | 1 | — | 7 | 20 | 29 | 10 | 68 | $2^{1}$ | — | — | 3 | — | 2 | $3^{1}$ | 1 |
| 26 | 2 | 47 | $-^{4}$ | 1 | $-^{1}$ | 2 | — | 13 | — | 6 | 1 | 3 | 2 | 4 | 13 | 24 | 4 | 37 | $2^{1}$ | — | — | 4 | 1 | 1 | 1 | 2 |
| 27 | 2 | 29 | $-^{2}$ | 2 | — | 1 | $-^{2}$ | 8 | $-^{2}$ | 7 | — | — | — | 5 | 12 | 10 | $2^{1}$ | 18 | — | — | 1 | 4 | — | — | — | 1 |
| 28 | 2 | 62 | $1^{1}$ | 5 | $-^{1}$ | 1 | 1 | 4 | $-^{1}$ | 11 | — | 1 | — | 3 | 5 | 6 | 1 | 14 | — | — | — | 2 | — | 1 | — | 1 |
| 29 | 2 | 13 | $1^{1}$ | 1 | — | — | $-^{1}$ | — | $-^{1}$ | 12 | — | 1 | — | 1 | 3 | 3 | 1 | 4 | 1 | 1 | — | 2 | — | 1 | — | 6 |
| 30 | — | 21 | $-^{1}$ | 1 | $-^{1}$ | — | $-^{1}$ | 3 | — | 11 | — | 1 | — | — | 1 | 2 | — | — | — | 1 | 1 | 3 | — | 2 | $-^{1}$ | 5 |
| 31 | 1 | 16 | $-^{1}$ | 1 | — | 1 | — | — | — | 11 | — | — | — | 1 | 1 | 1 | — | 1 | — | 2 | — | 3 | — | 3 | — | 3 |
| 32 | — | 22 | — | 1 | $-^{1}$ | 4 | — | — | $-^{1}$ | 10 | — | 3 | — | — | — | — | — | 1 | — | 1 | — | 4 | — | 1 | — | 2 |
| 33 | — | 13 | — | 3 | — | 1 | — | 2 | $-^{1}$ | 11 | — | 1 | — | — | — | 1 | — | 2 | — | 1 | — | 2 | — | 2 | — | 4 |
| 34 | — | 9 | — | 4 | $-^{1}$ | — | — | — | $-^{1}$ | 8 | — | 1 | — | — | — | — | — | — | — | 1 | — | 4 | — | 1 | $-^{1}$ | — |
| 35 | — | 9 | — | 3 | — | 3 | — | — | — | 3 | — | — | — | — | — | — | — | — | — | 1 | — | 2 | — | 1 | — | — |
| 36 | — | 12 | — | 3 | — | 1 | — | 1 | — | 3 | — | — | — | — | — | — | — | — | — | — | — | 3 | — | 1 | — | — |
| 37 | — | 4 | — | 3 | $-^{2}$ | 7 | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | 2 | — | — |
| 38 | — | 7 | — | — | — | 3 | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 39 | — | 3 | — | — | $-^{1}$ | 2 | — | — | — | 2 | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — |
| 40+ | — | 11 | — | 2 | — | 6 | — | — | — | 1 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Totals | $36^{3}$ | 842 | $9^{14}$ | 58 | $-^{13}$ | 41 | $43^{22}$ | 213 | $1^{25}$ | 101 | 1 | 20 | 57 | 204 | 888 | 618 | $129^{5}$ | 732 | $25^{3}$ | 11 | $8^{5}$ | 49 | 11 | 37 | $82^{3}$ | 31 |

## TABLE II.—Age, Size, and Maturity—Females.

### Dogger Region.

| Length in cm. | Sample No. 1. | | | | | | | | | | Sample No. 2. | | | | | | | | | | Sample No. 3. | | | | | | | | | |
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| 22 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
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| 24 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| 25 | 1 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2 | — | — | — | — | — | | | | |
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| 27 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| 28 | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | | | | |
| 29 | 1 | — | 1 | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | | | | |
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| 39 | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | 2 | — | — | — | | | | |
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| 48 | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | | |
| 49 | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | 1 | — | 1 | | |
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## TABLE II.—AGE, SIZE, AND MATURITY.—FEMALES—*continued.*

### FLAMBOROUGH OFF GROUND.

| Length in cm. | Sample No. 7. | | | | | | | | | | | | Sample No. 8. | | | | | | | | | | | | Sample No. 9. | | | | | | | | Sample No. 10. | | | | | | | | | | | |
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| 31 | — | 1 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | 1 | — | 1 | — | — | — | — | — |
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TABLE II.—AGE, SIZE, AND MATURITY.—FEMALES—*continued.*

LEMAN REGION.

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## TABLE II.—AGE, SIZE, AND MATURITY.—FEMALES—*continued*.

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TABLE II.—AGE, SIZE, AND MATURITY.—FEMALES—(*continued*),

GREAT WEST BAY.

| Length in Cm. | Sample No. 36. | | | | | Sample No. 37. | | | | | | | | | Sample No. 38. | | | | | | | | | | | | Sample No. 39. | | | | | | | | | | |
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## TABLE II*a*.—AGE, SIZE, AND MATURITY—MALES.

### GREAT WEST BAY.

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NOTE.—*Index figures* = Maturity doubtful.

TABLE II*a*.—AGE, SIZE, AND MATURITY—MALES—*continued*.

FLAMBOROUGH OFF GROUND.

| Length in Cm. | Sample No. 7. | | | | | | | | | | | | Sample No. 8. | | | | | | | | | | | | Sample No. 9. | | | | | | | | | | | | | | Sample No. 10. | | | | | | | | | | | |
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| 26 | — | 1 | — | — | — | — | — | — | — | — | — | | 2 | — | — | — | — | — | — | — | | | | | — | — | — | — | — | — | — | — | — | — | | | | — | 1 | — | 1 | — | — | — | — | — | — | — |
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| 33 | — | 1 | 2 | —[1] | 1 | 1 | — | — | — | — | — | | — | — | 2 | — | 1 | — | — | — | | | | | — | — | — | — | — | 4 | — | 1 | 1 | — | | | | — | — | — | — | 3 | 1[1] | — | — | — | — | — |
| 34 | — | 1 | — | — | 3 | — | — | — | — | — | 1 | | 1 | 1 | 3 | 2 | — | — | — | — | | | | | — | — | — | — | — | 1 | 3 | — | 1 | 1 | — | | | | — | — | 1 | 1 | 1 | — | — | 2 | — | — | — |
| 35 | — | — | — | — | 4 | 2 | 2 | — | 1 | — | — | | — | 2 | — | — | — | — | — | — | | | | | — | — | — | 2 | — | 3 | — | 2 | 1 | — | | | | — | — | — | —[1] | — | —[1] | 1 | — | — | — | — |
| 36 | — | — | — | — | 2 | 1[2] | 2 | — | 1 | — | — | | — | — | 1 | — | — | — | 1 | — | | | | | — | — | — | — | — | 4 | — | 6 | 1 | 1 | | | | — | — | — | — | — | —[1] | 1 | — | 1 | — | — |
| 37 | — | — | — | 1 | — | — | 2 | — | 2 | — | — | | — | — | — | 1 | 3 | — | — | — | | | | | — | — | — | — | — | — | — | 5 | — | — | | | | — | — | — | — | — | — | 2 | — | — | — | — |
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TABLE II*a*.—AGE, SIZE, AND MATURITY.—MALES—*continued*.

LEMAN REGION.

| Length in Cm. | Sample No. 15. | | | | | | | Sample No. 16. | | | | | | | Sample No. 17. | | | | | | | | | | | | Sample No. 21. | | | | | | | | | | | |
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| 22 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 4 | — | — | — | — | — | — | — | — | — | $4^{1}$ | 5 | 1 | — | — | — | — | — | — | — | — |
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| 27 | — | — | 3 | — | — | — | — | — | —$^{1}$ | — | — | — | — | — | — | $3^{1}$ | — | 1 | — | — | — | — | — | — | — | $2^{1}$ | 1 | 2 | 2 | 1 | 1 | — | 1 | — | — | — |
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| 30 | — | — | — | — | — | — | — | — | —$^{1}$ | 1 | —$^{3}$ | 1 | — | — | — | 1 | — | 1 | 1 | 2 | — | — | — | — | — | — | — | 2 | — | —$^{1}$ | 1 | — | — | — | — | — | — |
| 31 | — | — | 1 | — | — | — | — | — | —$^{2}$ | 1 | —$^{4}$ | 4 | 1 | — | — | — | — | 5 | — | $1^{2}$ | 2 | — | — | — | — | — | — | —$^{3}$ | 1 | —$^{2}$ | — | — | — | — | — | — |
| 32 | — | — | —$^{1}$ | — | 1 | — | — | — | —$^{1}$ | — | —$^{1}$ | 2 | 1 | — | — | — | — | — | — | — | 3 | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — |
| 33 | — | — | — | — | — | — | — | — | —$^{1}$ | — | — | — | 1 | 1 | — | — | — | — | — | — | 1 | 2 | — | — | — | — | — | — | —$^{1}$ | — | — | — | —$^{1}$ | — | — | 1 |
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| 39 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — |
| 40+ | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Totals . | 1 | 1 | $10^{1}$ | 1 | $1^{1}$ | 1 | 1 | 1 | $6^{9}$ | 4 | $2^{10}$ | 12 | 6 | 2 | 8 | $30^{1}$ | 1 | $21^{1}$ | 3 | $7^{3}$ | 11 | 7 | 1 | 10 | 6 | $26^{4}$ | 27 | $24^{6}$ | 11 | $5^{3}$ | 7 | —$^{1}$ | 3 | 1 | | |

TABLE IIa.—AGE, SIZE, AND MATURITY.—MALES—*continued.*

FLEMISH BIGHT.

| Length in Cm. | Sample No. 26. | | | | | | | | | | | | | | Sample No. 28. | | | | | | | | | | | | Sample No. 31. | | | | | | | | | | | | Sample No. 32. | | | | Sample No. 35. | | | | | | | |
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| 21 | — | 2 | 1 | 33 | — | 37 | — | 2 | — | — | — | — | — | — | — | — | 1 | 3 | — | — | — | — | — | — | — | — | —[2] | — | — | — | —[1] | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | 5 | 10 | — | 13 | — | — |
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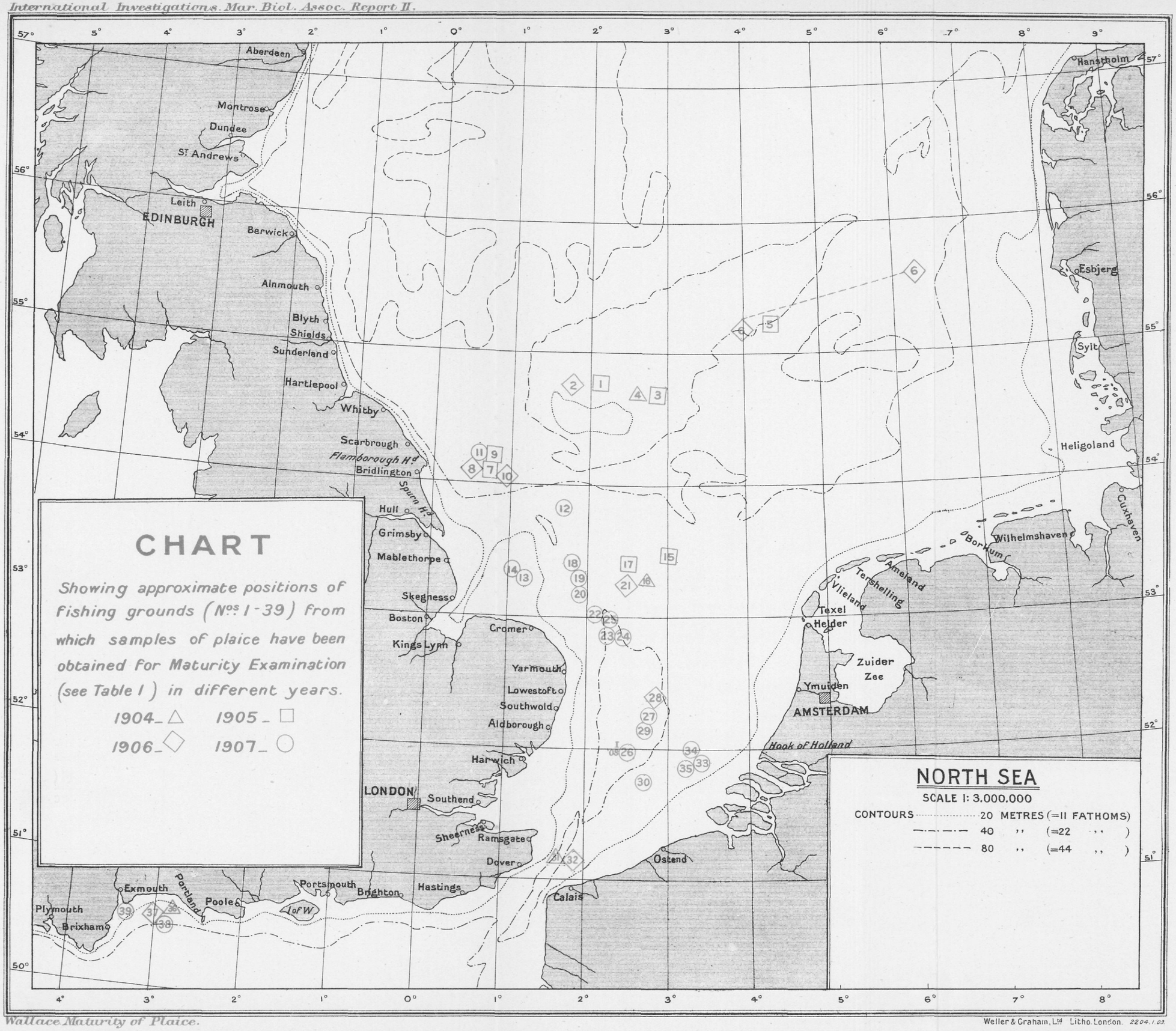
| 28 | — | — | — | — | 2 | 34 | — | 23 | — | 2 | — | 3 | — | — | — | — | 1[2] | 1 | —[1] | 2 | — | — | — | — | — | — | — | — | — | 7 | —[1] | 4 | — | — | — | — | — | — | 1 | — | — | — | — | — | — | 1 | — | — | 5 | — | 8 |
| 29 | — | — | — | 1 | 2 | 7 | — | 3 | — | 2 | — | — | — | — | — | — | — | 2 | 1 | — | — | — | — | — | — | — | — | — | — | 3 | —[1] | 8 | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | 1 | 1 |
| 30 | — | — | — | — | — | 7 | — | 8 | — | 6 | — | — | — | — | — | — | — | — | — | 1 | —[1] | — | — | — | — | — | — | — | — | 4 | — | 6 | 1 | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — |
| 31 | — | — | — | 1 | 1 | 6 | — | 6 | — | 2 | — | 1 | — | — | — | — | — | — | —[1] | 1 | — | — | — | — | — | — | — | — | — | 5 | — | 6 | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | 1 | — | — |
| 32 | — | — | — | — | — | 6 | — | 7 | — | 7 | — | 2 | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | 1 | —[1] | 7 | 3 | — | — | — | — | — | 1 | 1 | 1 | — | — | — | — | — | — | — | — | — | — |
| 33 | — | — | — | — | — | 1 | — | 5 | — | 4 | — | 2 | — | 1 | — | — | — | 1 | — | 1 | — | 1 | — | — | — | — | — | — | — | 2 | —[1] | 7 | 2 | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — |
| 34 | — | — | — | — | — | — | — | 2 | — | 4 | — | 2 | — | 1 | — | — | — | — | — | 4 | — | — | — | — | — | — | — | — | — | — | —[1] | 4 | 3 | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — |
| 35 | — | — | — | — | — | — | — | 1 | — | 4 | — | 4 | — | — | — | — | — | — | — | 1 | — | 2 | — | — | — | — | — | — | — | 1 | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 36 | — | — | — | — | — | — | — | 5 | — | 3 | — | 3 | — | 1 | — | — | — | 1 | — | 2 | — | — | — | — | — | — | — | — | — | — | — | 1 | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 37 | — | — | — | — | — | — | — | 1 | — | 1 | — | 2 | — | — | — | — | — | — | — | 1 | — | 1 | — | 1 | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 38 | — | — | — | — | — | — | — | 1 | — | 2 | — | 1 | — | 3 | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 39 | — | — | — | — | — | — | — | 1 | — | — | — | 1 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40+ | — | — | — | — | — | — | — | 1 | — | 3 | — | 2 | — | 5 | — | — | — | — | — | — | — | — | 2 | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Totals ... | 8[1] | 88 | 10[2] | 228 | 18 | 358 | — | 91 | — | 42 | — | 23 | — | 12 | 3[1] | 3 | 5[3] | 16 | 1[5] | 16 | 1[5] | 16 | —[1] | 2 | 2 | 1 | —[4] | — | —[9] | 6 | —[7] | 33 | —[5] | 49 | 12 | 1 | 5 | 1 | 10 | 3 | 1 | 4 | 4 | 17 | 51 | 9 | 138 | 5 | 16 |



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# REPORT

ON THE

# LOWESTOFT SAILING TRAWLER RECORDS, 1903–1906.

BY

**ROSA M. LEE, M.A.,**

*Statistical Assistant on the Staff.*

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WITH FIGURES 1–4; TABLES I.–X.; APPENDIX I. AND ONE CHART.

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# REPORT

ON THE

# LOWESTOFT SAILING TRAWLER RECORDS, 1903–1906.

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## I.—INTRODUCTION.

### The Records and their Treatment.

This report is intended to furnish, as far as the material allows, a survey of the trawling grounds of the Southern North Sea, including only those parts that are fished by the Lowestoft smacksmen. With the exception of the records of four voyages made by four other skippers, all the material has been recorded by three skippers who fish regularly from Lowestoft. They were supplied with record books, in which they filled up all the particulars of each haul they made. Copies of the forms used in these books are given in the Appendix.

These have been regularly kept since the time they were commenced in April, 1903, and as the particulars of each haul are given in great detail, it is hoped that this will somewhat compensate for the disadvantages that arise from the fact that the regular records are those of only three men.

I take this opportunity at the outset, of acknowledging my indebtedness to my colleagues at the Lowestoft Laboratory, especially to Dr. Garstang, for his most valuable help at the commencement of my work, and to Dr. Allen and Mr. Borley for the many suggestions and criticisms they have made during the preparation of this paper.

The first problem to be dealt with in using this mass of statistical data was the finding of a method of reducing the material in such a way as to give the most reliable results. The object in view is to represent as simply and as accurately as possible, the fluctuations in abundance of some of the principal food fishes in the particular areas covered by the statistics. This first part of the report contains the analysis of the records of the two species, economically most important, plaice and soles.

The sources of error which are inevitably present in any such group of records must be sought for, and their influence eliminated as far as possible. The great amount of detail that is given makes it possible to do this to some extent. There is naturally a bias towards over or under estimation of the amounts by the fishermen, and it is possible to determine for each man in what direction this "personal equation" or "bias" lies, so that even though it may not be feasible to apply an accurate correction, yet we can attain some idea of the amount of this bias and of the reliability of the figures. However, remembering that the resulting figures will only be used for purposes of comparison and not as absolute measures, these biased errors by an important statistical principle, become relatively unimportant in the ratio of two estimates. It will be found that, though errors are present due to several sources, they are not enough to obscure the fluctuations in the figures produced by the seasonal influences.

### The Grounds Trawled and Division into Areas.

The fishermen whose records are here examined, fish regularly in the Southern part of the North Sea, south of the line of latitude 53° 30′ and north of 51° 30′, and well within a radius of 80 miles from Lowestoft.

This area contains fishing grounds of very diverse characters, and for purposes of comparison of one part with another, has been sub-divided into nine smaller areas, the sub-division being based as far as possible on the natural distinctions of depths and the

nature of the bottom. Within each area the sea bottom is of very fairly uniform character in all cases except those of A, E and H.

These areas are :—

(i.) Three northern areas named A, B and C where comparatively little fishing is done except in the summer. These include the Cromer Grounds, the Leman Banks and the Brown Bank.

(ii.) The shallow ground, D, between the Norfolk and Suffolk Coast and the Deep Water, *i.e.* the Yarmouth and Lowestoft Flats.

(iii.) The deep water opposite Yarmouth and Lowestoft which is divided into two main portions, E the northern part, including Smith's Knoll and Knoll Deep, and the southern portion H, in which are Middle Deep and Gabbard Deep. In these areas the depths are 21 fathoms and over.

(iv.) Area F, on the east of the Deep Water, including Winterton Shoal, the lower part of the Brown Ridges, and a part of the Broad fourteens. Here the depth varies from 14 to 21 fathoms.

(v.) Area J, containing the Brown Ridges, Lowestoft Shoal and the edge of the Deep Water. The average depth is about 19 fathoms. Our statistics show that this locality is much frequented and well fished over.

(vi.) Lastly area M, embracing the Hinder, and Schouwen Grounds, and east of the Brown Ridges. The depth varies considerably in the different parts of this area.

The appended *Chart* shows the arrangement of these areas in the southern part of the North Sea.

## Tabulation of Records.

In dealing with the records, each haul was allotted to its particular area as given by the data supplied by the fishermen. These positions are only approximate, as owing to the fact that the vessels are smacks, it is not easy for the men to give their exact distance from Lowestoft nor their true bearings to a point. When any discrepancies were found between the name of the fishing ground, bearings, distance, and depth furnished by the records, the depth was considered the most reliable datum and the position of the vessel was judged from that.

Any accident to the fishing gear, such as a rent net, or loss of trawl is noted by the fishermen in the record of the haul. All such hauls have been omitted from the statistics as not being comparable with other hauls made under ordinary conditions.

In tabulating the returns, each man's records were first dealt with alone. The catches of all hauls made in a month, with the number of hours fishing in each, were entered upon a sheet and classified according to areas. The total catches were then made up for each area month by month throughout the four years. Finally the total catches of the several vessels were amalgamated and reduced to a series of averages extending month by month over the whole period. In this series there were some gaps owing to the scarcity of fishing or total lack of it in certain areas, and it was necessary, in order to smooth the results and to arrive at some measure of the seasonal fluctuations, to put together the catches of each month from all the years and take their average, thus obtaining a general representative average for each monthly period.

## Treatment of the Tabulated Records.

The simplest average to calculate is that obtained by dividing the total amount of fish in each month by the number of hauls, giving an average amount *per haul*. This would certainly be the best method were it true that the duration of all hauls was approximately the same. But an examination of the figures shows that this is not the case and that great differences exist, the length of a haul being anything from three hours to 12 hours or even more. Moreover, one of the fishermen in particular was found to make hauls of a duration considerably exceeding the others. If we assume that the longer the duration of a haul, the greater is the amount of fish caught, which is true, other circumstances being the same, then it is evident that the inclusion with or exclusion of this man's catches from the others, would materially alter the average. Their reasons for long hauls of 9, 10 or 12 hours' duration do not seem to be due to any generally accepted principle of action, but to a variety of motives, of which perhaps that of saving the time of hauling is the chief. Shorter hauls were made over muddy, and muddy and sandy bottoms than on sandy grounds.

It was at first thought that the duration of the hauls was protracted when there was little or no wind in order that the smacks might trawl over as much ground as would be covered in a shorter haul with an ordinary wind, and since in such a haul the catch per hour is naturally less than that which would be obtained were the vessel moving faster with a fresh wind, it was considered that the average per haul would give a better result than the catch per uniform time. This theory was tested by an examination of the figures, which did not at all bear out the idea that the duration of the haul was correlated to the force of the wind. Indeed it was found that long hauls went as often with strong winds as with no wind, and short hauls as often with no wind as with strong winds.

The correlation co-efficient between the two in the records for one year, was calculated and was found to be —·01. This shows definitely that there is no correlation, and it is clear that the duration of the hauls depends on causes which together far exceed in importance the strength of the wind ; and one comes to the conclusion that it will not do to allow that all lengthy hauls are but efforts on the fishermen's part to make up in time what they have lost in distance trawled through lack of wind.

From these considerations it is evident that the only figures which will be comparable are those averages that are based on a uniform time of fishing. The most usual duration of a haul is six hours (corresponding to the duration of a tide), and this has been selected as the unit so that all averages are calculated per six hours' fishing.

The following table (Table I.) gives the total number of hauls and of hours fishing made by each man in each year, and brings out the difference in the average duration of their hauls.

TABLE I.—Showing for each of three fishermen, the total number of hauls and hours fishing, and the average duration of a haul.

| —— | Skipper. | 1903. April–Dec. | 1904. | 1905. | 1906. |
|---|---|---|---|---|---|
| Number of hauls ... ... | i | 310 | 376 | 423 | 465 |
| | ii | 253 | 385 | 378 | 388 |
| | iii | 330 | 485 | 479 | 522 |
| | **All.** | **893** | **1,246** | **1,280** | **1,375** |
| Number of hours fishing ... | i | 1778½ | 2,350 | 2,585 | 2,892½ |
| | ii | 2234¼ | 3,217½ | 2,972¾ | 2,835¼ |
| | iii | 1965 | 3,138 | 2,778¾ | 2,997½ |
| | **All.** | **5977¾** | **8,705½** | **8,336½** | **8,725¼** |
| Average duration of haul in hours. | i | 5·74 | 6·25 | 6·11 | 6·22 |
| | ii | 8·83 | 8·36 | 7·87 | 7·31 |
| | iii | 5·95 | 6·47 | 5·80 | 5·74 |
| | **All.** | **6·69** | **6·99** | **6·51** | **6·35** |

N.B.—This table does not include the hauls in which the net was rent nor the few hauls recorded by the other fishermen in 1903 and 1904.

## DISTRIBUTION OF THE FISHING OVER THE AREAS INVESTIGATED.

Table II. has been drawn up to show how the fishing has been distributed in the various parts of our region. It gives the total number of hours fishing in each area and the percentage that this forms of the whole amount of fishing in each year. We find that a very small proportion of the whole fishing occurs in A, B, C and D, and that E, F, H, J and M share between them and nearly equally the greater part of the rest.

There is no very great change in the distribution of the fishing from year to year, and for this reason it was thought justifiable to combine the totals from all areas and form yearly averages for all species, which would be fairly comparable and not unduly biased by unequal distribution in well-stocked or ill-stocked areas. The amount of fishing in A, B, C and D is so small that the variations in these will not much affect a general average, while the variations in the other and more important areas and their effects will be discussed with respect to the yearly averages of the several species.

TABLE II.—Showing the total yearly amounts of fishing in each area in hours, and the percentages of the total number of hours fishing occurring in each area in each year.

| Area. | | 1903. | 1904. | 1905. | 1906. | 1903–6. |
|---|---|---|---|---|---|---|
| A | Hours ... ... ... | 55 | 66 | 125¼ | 79 | 325¼ |
| | Percentage ... ... | 0·9 | 0·7 | 1·5 | 0·9 | 1·0 |
| B | Hours ... ... ... | 414½ | 507½ | 256½ | 85 | 1,263½ |
| | Percentage ... ... | 6·7 | 5·4 | 3·1 | 1·0 | 3·9 |
| C | Hours ... ... ... | 146½ | 166 | 35 | 15 | 362½ |
| | Percentage ... ... | 2·4 | 1·8 | 0·4 | 0·2 | 1·1 |
| D | Hours ... ... ... | 154 | 37 | 268½ | 274 | 733½ |
| | Percentage ... ... | 2·5 | 0·4 | 3·2 | 3·1 | 2·2 |
| E | Hours ... ... ... | 1,708 | 1,711 | 1,579 | 1,403½ | 6,401½ |
| | Percentage ... ... | 27·7 | 18·2 | 18·9 | 16·1 | 19·6 |
| F | Hours ... ... ... | 1,532¾ | 1,788½ | 1,359½ | 1,070½ | 5,751¼ |
| | Percentage ... ... | 24·8 | 19·0 | 16·3 | 12·3 | 17·6 |
| H | Hours ... ... ... | 1,042½ | 1,714¾ | 1,470¼ | 1,622¼ | 5,849¾ |
| | Percentage ... ... | 16·9 | 18·3 | 17·6 | 18·6 | 17·9 |
| J | Hours ... ... ... | 834¼ | 1,882¾ | 1,749 | 2,045½ | 6,511½ |
| | Percentage ... ... | 13·5 | 20·0 | 21·0 | 23·4 | 20·0 |
| M | Hours ... ... ... | 285¾ | 1,520 | 1,493½ | 2,130½ | 5,429¾ |
| | Percentage ... ... | 4·6 | 16·2 | 17·9 | 24·4 | 16·6 |
| | Total ... ... | 6,173¼ | 9,393½ | 8,336½ | 8,725¼ | 32,628½ |

## II.—ACCOUNT OF SEPARATE SPECIES.

### A.—PLAICE.

*Unreliability of Fishermen's Estimates with regard to Size Distinctions.*

In the Record forms the amounts of large, medium and small size plaice are given separately, and in tabulating, these distinctions were first kept. But it soon became evident that these distinctions introduced a source of error and that one man's estimates were not comparable with another's. In some cases the plaice would be divided into only two groups, large and small, while another man would record his plaice taken at the same time from the same area as medium and small. Moreover they were not consistent in this, and would occasionally change their method of classification. The result was that instead of the large, medium and small fish forming approximately the same proportion of the total catch, for each of the three men, as one would expect them to do when they fish in the same areas under the same conditions, and the average of a large number of hauls is taken, a great difference was found in their various estimates.

The following table illustrates this point. It represents the average catch in cwts. per six hours' fishing in the area F, during the three summer months of 1904. The average weights of the different size groups are very different, but the weights of the whole catch are very nearly equal in the three men :—

TABLE III.—Showing the average catch in cwts. obtained per six hours' fishing by three Skippers in area F, during July to September, 1904 :—

| | Skipper. | | |
|---|---|---|---|
| | i. | ii. | iii. |
| Large ... ... ... ... | ·27 | — | ·17 |
| Medium ... ... ... | ·59 | ·65 | ·82 |
| Small ... ... ... ... | ·09 | ·52 | ·11 |
| Total weight ... | ·95 | 1·17 | 1·10 |

The estimated average lengths of large, medium and small plaice are $17\frac{3}{4}$ inches, 13 inches and $9\frac{3}{4}$ inches respectively. When questioned on this matter two of the men said that they reckoned a fish of 12 or 13 inches in length to be of *medium* size, but the other takes as *large plaice* those of 12 inches and over, while *medium* are about nine inches, and *small* eight inches and under on the average.

Seeing that so much diversity of opinion on this matter of size exists, and that in each haul the proportion which the large, medium and small fish form of the total catch, must of necessity be but rough estimates, it becomes evident that in these cases the size distinctions are unreliable and that better results will be obtained by grouping all sizes together.

The totals and averages given in the tables represent only the actual amounts of plaice landed. In many cases a great number of small plaice unfit for market were caught in the trawl and afterwards thrown overboard. The amounts of these were sometimes given, but the information supplied about the unmarketable fish was too uncertain and indefinite for any numerical measure of the proportion they formed of the catch to be obtained. In what follows, marketable plaice alone are discussed.

### *Reduction of Data to a Uniform Standard.*

The amounts of plaice are given in one of the three following ways :—(i) Number of boxes or trunks, (ii) Number of baskets, and (iii) Number of fish.

The measuring of the fish in trunks was carried out only in 1903 and the early part of 1904, when the Record Books were of a slightly different form. It was given up in April 1904 owing to the confusion caused by the fishermen using this term in different senses.

The 'baskets' were adopted as the unit in 1904. The numbers of the fish are only given when they are too few to be measured by a basket. To obtain an average it is necessary to reduce these measurements to one and the same unit. Enquiries were made at the fishmarket, and from information supplied by the salesmen, the following were taken as the average equivalents of the different measures :—

2 Baskets = 1 Market Trunk or Box.
1 Trunk of Plaice weighs 1 cwt.

The average numbers of large, medium and small plaice which go to fill a trunk were also found, but as all sizes were being put together, the simplest method of reduction was to give the total estimated weight in cwts., taking 1 basket = ·5 cwt.

When the numbers of the fish were given they were reduced to weight by the following approximate scale, which has been calculated from the curve showing the weight of plaice according to size obtained from tables prepared by the Board of Agriculture and Fisheries* :—

| Size of Plaice. | Length. | Weight. |
|---|---|---|
| Large ... ... ... ... | $17\frac{3}{4}$ inches. | ·02 cwts. = 35 ozs. |
| Medium ... ... ... | 13 „ | ·007 „ = $12\frac{1}{2}$ „ |
| Small ... ... ... ... | $9\frac{3}{4}$ „ | ·003 „ = 5 „ |

The proportion of fish recorded in numbers is very small, so that the error introduced by using the weights on the fishermen's somewhat unreliable classification will not be serious.

The records for 1903 had to be treated differently from the other years owing to the different interpretations of the 'trunk' unit employed by the fishermen.

* Report of the Select Committee of the House of Lords on the Sea Fisheries Bill, London, 1904, p. 80.

One skipper (No. ii) informed us that he measured his fish in baskets and estimated the equivalent number of market trunks to put down in his records, so that in converting his amounts we have taken 1 *trunk* = 1 cwt. But the other fishermen stated that they had recorded their catches in 'level' trunks, so that six trunks or boxes in their records are equivalent to four market trunks. Adopting this explanation, the weight of one of these trunks was taken as 2/3 = ·67 cwt.

That these corrections are in the right direction will be seen in Table 5, where in 1903 the average for the year in the case of fisherman (No. ii) is less than those of the other two, so that there has been clearly no over-estimation in taking his 'trunks' to be heavier than those of the others.

On the other hand it is improbable that the records of the other two fishermen have been under-estimated, not only because their own estimate of the relation between 'market' and 'level' trunks has been adopted, but also because, if one neglects their explanations and treats their 'trunks' as market trunks, the resultant average catches for 1903 become raised to amounts which are extraordinarily higher than those for the other years, a fact which points at once to the existence of some biased error.

### *Measure of Bias.*

Since April 1904 there has been included in each Record Book a page for the summary of the voyage. On this the skipper records the total quantity of fish landed as it is packed ready for market. This is a fairly accurate measure and affords a valuable test of the accuracy of the estimates made for each individual haul. By adding up the total number of baskets of plaice caught in all the hauls of a voyage, and making an estimate for the baskets equivalent to the number of fish caught when these are given, we can compare these totals with the summaries by taking two baskets = 1 trunk.

This has been done for each skipper and the results are somewhat interesting. There are a few instances where these totals of individual records are twice or one and half times the amounts given in the summary of the voyages, thus showing a great over-estimation. Many of the totals slightly exceed the summary totals by one or two boxes on totals of from 12 to 20 boxes in the voyage, while others are just as much in defect. The following are a few instances taken at random and they will illustrate the nature of the correspondence between the two :—

| Number of boxes given in the Summary of each voyage. | | Total number of boxes estimated from the Separate Records. |
|---|---|---|
| 16 | ... | 17 |
| 23 | ... | $25\frac{1}{4}$ |
| 20 | ... | $25\frac{1}{4}$ |
| $20\frac{1}{2}$ | ... | $23\frac{1}{4}$ |
| 8 | ... | $7\frac{3}{4}$ |
| $6\frac{1}{2}$ | ... | $5\frac{1}{4}$ |
| $10\frac{1}{2}$ | ... | 11 |
| 4 | ... | 3 |
| 11 | ... | $15\frac{1}{2}$ |
| 13 | ... | $19\frac{1}{2}$ |

In order to see whether in the long run the tendency is to over- or under-estimate, the average ratios of the totals to the summaries have been calculated for each year and for each fisherman. They are given by the following table with their probable errors :—

TABLE IV.—Showing the relation between the Totals and Summaries for each Skipper, throughout the period.

| Skipper. | 1904. | 1905. | 1906. | Average ratio. |
|---|---|---|---|---|
| (i) ... ... | 1·17±·01 | 1·04±·01 | 1·01±·02 | 1·07 |
| (ii) ... ... | 0·92±·01 | 0·87±·01 | 0·88±·01 | 0·89 |
| (iii) ... ... | 1·24±·03 | 1·18±·04 | 1·07±·02 | 1·16 |
| All ... ... | 1·11±·01 | 1·03±·01 | 0·99±·01 | 1·04 |

From this table we gather that Skipper (i) has a tendency to over-estimate his amounts to the extent of about 7 per cent. on the average per voyage. Skipper (ii) under-estimates by a little over 10 per cent. on the average, while Skipper (iii) has by far the largest bias, as much as 24 per cent. in 1904, and as 16 per cent. when the three years are taken together. The probable errors given in the table show that this man has a greater variation in his ratios than the others. Taking the average of the ratios of the three men we see that there is a slight over-estimation in the long run, the totals of the individual records exceeding the amounts given in the summaries by about 4 per cent.

It has been impossible to apply corrections for this bias in the monthly averages for each area, owing to the fact that the hauls in one voyage may be distributed over several areas and their error may diverge to a considerable extent from the average ratio given in the table. But in the long run when we have averages based on a considerable number of hours fishing, these tendencies to excess or defect will nearly balance one another. The apparent irregularity in some of the monthly averages can be accounted for to some extent by the presence of these biased errors especially in cases where there is little fishing, and where one man's returns preponderate over the others.

### *Yearly Variations in the Amount of Plaice.*

Before dealing with the monthly averages for each separate area we can treat the fishing grounds as one whole area representing the Southern part of the North Sea and find how the amounts fluctuate from year to year by working out the average per six hours fishing for each year. In such averages as these, based on a whole year's fishing over approximately the same ground, which too is a comparatively small region and does not show a very large range of difference between its several parts, we do not expect to find much difference in the average figures of the three fishermen unless they are influenced by biased errors.

The following Table shows in cwts. year by year, for each fisherman, the total catch of plaice, the average per haul, and the average per six hours fishing. It will be noticed that the latter averages are far more uniform than the former :—

TABLE V.—Showing in each year the total weight of Plaice in cwts., the average weight per haul and the average weight per 6 hours fishing taken by each skipper.

| —— | Skipper. | April-Dec., 1903. | 1904. | 1905. | 1906. |
|---|---|---|---|---|---|
| Total weight of Plaice in cwts. | i | 342·6 | 432·07 | 440·01 | 460·28 |
| | ii | 401·85 | 559·30 | 509·09 | 456·41 |
| | iii | 432·50 | 659·14 | 437·05 | 413·24 |
| | **All** | **1176·91** | **1650·51** | **1386·15** | **1329·93** |
| Average weight of Plaice per haul ... ... ... ... | i | 1·10 | 1·15 | 1·04 | 0·99 |
| | ii | 1·59 | 1·45 | 1·35 | 1·18 |
| | iii | 1·31 | 1·36 | 0·91 | 0·79 |
| | **All** | **1·32** | **1·32** | **1·08** | **0·97** |
| Average weight of Plaice per 6 hours fishing ... ... | i | 1·16 | 1·10 | 1·02 | 0·95 |
| | ii | 1·08 | 1·04 | 1·03 | 0·97 |
| | iii | 1·32 | 1·26 | 0·94 | 0·83 |
| | **All** | **1·18** | **1·14** | **1·00** | **0·91** |

This is a very instructive table. The averages per haul show the great excess in the catches of fisherman ii. over those of the others, owing to the lengthy duration of his hauls. This difference is corrected in the six-hourly averages, but we notice here that fisherman ii's. averages in 1903 and 1904 are below those of i. and iii. Probably this is due to the fact that he underestimates his amounts as a rule, while the others have the opposite tendency.

One of the most striking features of the table is the continued decline evidenced in the figures throughout the four years, and this is shown, not only by the averages of all

the fishing but by each man separately. The following diagram shows this decline graphically.

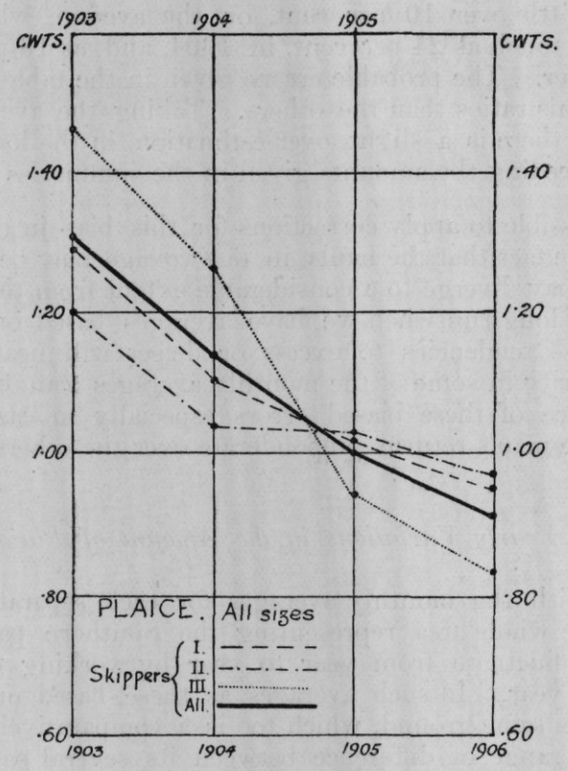



FIG. 1.—Curves showing the annual average catch of plaice in cwts. per 6 hours fishing by each of the three skippers and by all together.

We notice that the values for 1903 on this curve are different from those in the table which do not show any marked excess over the figures for 1904. This difference is due to the fact that 1·31 cwts. is the value estimated for the whole of 1903, whereas the value in the table, 1·18, is the average of the records from April, 1903, when they were started, to December. The average for the first three months of the year is higher than for the remaining months, and the omission of these in our yearly average considerably lowers the resulting figure. A correction was obtained as follows :—Taking the years 1904, 1905 and 1906 together, the average for the first three months is 1·31 cwts., for the last nine months it is 0·92 cwts., and for the year it is 1·02. Multiplying 1·18, the average for the nine months of 1903 by the factor $\frac{1{\cdot}02}{0{\cdot}92}$ we obtain 1·31 cwts. as the probable average for the whole of 1903. The figures 1·29, 1·20 and 1·46 the corrected averages for the individual fishermen were obtained in a similar way.

In order to test this decline still further, the 'probable difference' between the averages for any two years, that is, the amount of difference which is expected to come by chance, has been determined. This has been done by the formula $r = r_1 \sqrt{\frac{1}{N_1} + \frac{1}{N_2}}$, where $r_1$ is the probable error of the whole group and $N_1$ and $N_2$ the numbers which enter into the averages to be compared. These probable differences are :—

| | | |
|---|---|---|
| Between 1903 and 1904 | ... ... ... ... | ·024 cwts. |
| „ 1904 and 1905 | ... ... ... ... | ·022 „ |
| „ 1905 and 1906 | ... ... ... ... | ·021 „ |

These differences are as likely to occur as not ; a difference of greater than 2r. would arise once in 6 times and of 4r. once only in 160 times. Taking the estimated figures for 1903 the differences are ·17, ·14 and ·09 respectively, all of which are real differences and very significant. Even if these averages were reduced by the measure of bias given in Table IV. on page 96, when they would become the following :—1904, 1·03 ; 1905, 0·97 ; 1906, 0·92, the differences are still significant although their magnitude is less. With reference to the table on page 94, Table II., we see that J and M have a slightly increasing amount of fishing from 1903–1906. These will later be shown to be the best stocked areas. On the other hand, E and F, which have a smaller stock of plaice, become less and less fished throughout the period. The effect therefore of this

difference of distribution of the fishing is to have *raised* the true values in the later years, so that the decline in the later years cannot be shown to be due to the fact that more of the fishing has taken place in naturally less populated areas.

We have thus established the fact that there has been a marked and steady decline in the average amount of fish taken during the period. Unfortunately these statistics do not enable us to determine what is the cause of this apparent decline—whether it arises from a real decrease in the stock of plaice in the sea—or from some some other causes. Nor, if the former is the case, can we tell whether the decline is a permanent one and will continue, or whether in the later years of this period we have simply evidenced one or two slack seasons after a period of great abundance. Further observations over a considerable number of years will be necessary to establish these points. In the meantime these figures may be valuable in corroborating or otherwise the evidence gathered from similar statistics.

*Distribution and Seasonal Variations.*

The following table (Table VI.) gives for each of the nine areas the average catch of plaice per six hours fishing month by month throughout the period 1903–1906. To show the seasonal fluctuations, the averages of the catches of all the Januaries, all the Februaries, &c., have been calculated and shown in thick type. As the reliability of an average is proportional to the number of hours fishing on which it is based, it was thought best to use weighted averages. The method of procedure was as follows:—The total catches of all the Januaries were added together, and the sum divided by the number of six-hours periods in the total number of hours fishing in all the Januaries, and so for the other months. This method gives a 'weighted' average, most weight being placed on the catch of that year in which there is most fishing in this month. These figures are plotted out as continuous curves and give a graphic representation of the seasonal variations (Fig. 2).*

The table shows that the records are in many places incomplete, and for this reason it is not possible to represent the seasonal variations by plotting out the monthly averages for each year separately. In studying the figures and in making deductions from them, it will be necessary to bear this fact in mind and not to put too much reliance on them if, as is several times the case, the general average is not fairly representative of at least three years' fishing, or is perhaps based on the total catch of a very few hauls. The probable error of any average varies inversely as the square root of the number of 6 hours hauls in that average, so that the greater the number of hauls the greater is the reliability of the average. The probable error of any one haul of 6 hours' duration is approximately ·5 cwt. These probable errors of the averages have been calculated in several cases, and the general averages which, for any of the reasons mentioned above, are found to be obviously unreliable are put in square brackets in the table.

In comparing one month with another we must be careful to note whether an increase in the general average is also shown in the averages for all the years separately or whether it is mainly due to an excessively high average in any one particular year. In area H. the average for August is 0·73, a large increase on 0·49 cwts. in July. This is due to the high average 1·39 in 1903. The averages for 1904, 1905, and 1906 do not show any significant increase on those of July for the same years. We conclude therefore that the apparent increase in August is misleading.

Looking now at the diagrams (Fig. 2) we see several general facts brought out very clearly. There is no fishing during the winter on the Northern areas A, B, C, apparently because at this time the fish are more plentiful further south. A small amount is caught in spring and this increases rapidly, maintaining a fairly high level throughout the summer and early autumn when the quantity suddenly falls. From the diagrams it is evident that the greatest average weight of plaice comes from area M, the Hinder and Schouwen grounds. This is probably due to the large number of small plaice which form a great portion of the catch. The next in total amount seems to be J, the Brown Ridges, the area immediately north of M. The next northerly area F, has a little less.

Of the deep areas, H the most southerly has the greater amount of fish, especially from December to February. On E, about Smith's Knoll, few fish are caught, but these are mostly large and medium plaice, and for this reason the catches from this area are more valuble in proportion to their bulk than are those from some of the more southerly areas.

* Broken lines are used in the diagrams to join two alternate months' averages, when there is no record in the intermediate month. Thin lines are used to join up averages of months, which are considered unreliable.

TABLE VI.—Showing for each area the monthly average catch of Plaice in cwts by an index

| Area. | Year. | January. | February. | March. | April. | May. | June. |
|---|---|---|---|---|---|---|---|
| A ... ... ... | 1903 | — | — | — | — | — | $0\cdot25^{17}$ |
| | 1904 | — | — | — | — | — | — |
| | 1905 | — | — | $0\cdot08^{25\frac{1}{2}}$ | $0\cdot26^{44}$ | — | $0\cdot10^{55\frac{1}{2}}$ |
| | 1906 | — | — | — | $0\cdot03^{16}$ | $0\cdot03^{63}$ | — |
| | **1903–6** | — | — | $[0\cdot08]^{25\frac{1}{2}}$ | $[0\cdot20]^{60}$ | $[0\cdot03]^{63}$ | $[0\cdot13]^{72\frac{1}{2}}$ |
| B ... ... ... | 1903 | — | — | — | $0\cdot78^{36\frac{1}{2}}$ | $0\cdot98^{135}$ | $1\cdot02^{138}$ |
| | 1904 | — | — | — | — | — | $0\cdot94^{234\frac{1}{2}}$ |
| | 1905 | — | — | $0\cdot09^{4}$ | — | — | $0\cdot46^{98}$ |
| | 1906 | — | — | — | — | — | — |
| | **1903–6** | — | — | $[0\cdot09]^{4}$ | $[0\cdot78]^{36\frac{1}{2}}$ | $[0\cdot98]^{135}$ | $[0\cdot86]^{470\frac{1}{2}}$ |
| C ... ... ... | 1903 | — | — | — | — | $0\cdot34^{7}$ | $1\cdot51^{25\frac{1}{2}}$ |
| | 1904 | — | — | — | — | — | $1\cdot25^{42}$ |
| | 1905 | — | — | — | — | — | $0\cdot67^{18}$ |
| | 1906 | — | — | — | — | — | — |
| | **1903–6** | — | — | — | — | $[0\cdot34]^{7}$ | $[1\cdot21]^{85\frac{1}{2}}$ |
| D ... ... ... | 1903 | — | — | — | — | $0\cdot20^{46}$ | $0\cdot37^{6}$ |
| | 1904 | — | — | — | — | — | $0\cdot11^{12}$ |
| | 1905 | — | — | $0\cdot27^{12\frac{1}{2}}$ | — | $+^{57\frac{1}{2}}$ | $0\cdot05^{3\frac{1}{2}}$ |
| | 1906 | $0\cdot24^{30}$ | — | — | $0\cdot02^{12}$ | $0\cdot01^{5\frac{1}{2}}$ | — |
| | **1903–6** | $[0\cdot24]^{30}$ | — | $[0\cdot27]^{12\frac{1}{2}}$ | $[0\cdot02]^{12}$ | $[0\cdot09]^{109}$ | $[0\cdot17]^{21\frac{1}{2}}$ |
| E ... ... ... | 1903 | — | — | — | — | $0\cdot25^{46}$ | $0\cdot90^{183\frac{1}{2}}$ |
| | 1904 | $2\cdot09^{6}$ | $0\cdot80^{65}$ | — | — | — | $0\cdot85^{245\frac{1}{2}}$ |
| | 1905 | $0\cdot73^{30}$ | $0\cdot63^{44}$ | $1\cdot09^{22}$ | $0\cdot35^{29}$ | $0\cdot51^{31\frac{1}{2}}$ | $0\cdot40^{182}$ |
| | 1906 | — | $0\cdot54^{23}$ | $0\cdot08^{22}$ | $0\cdot08^{5\frac{1}{2}}$ | $0\cdot24^{18}$ | $0\cdot40^{6}$ |
| | **1903–6** | $[0\cdot95]^{35}$ | $0\cdot68^{132}$ | $0\cdot58^{44}$ | $0\cdot31^{34\frac{1}{2}}$ | $0\cdot33^{95\frac{1}{2}}$ | $0\cdot73^{616\frac{1}{2}}$ |
| F ... ... ... | 1903 | — | — | — | $1\cdot59^{96}$ | $1\cdot95^{166\frac{1}{2}}$ | $1\cdot45^{240\frac{1}{2}}$ |
| | 1904 | $1\cdot33^{96}$ | $0\cdot77^{77}$ | $1\cdot43^{10\frac{1}{2}}$ | — | $0\cdot95^{69}$ | $0\cdot91^{293\frac{1}{2}}$ |
| | 1905 | — | $0\cdot75^{12}$ | $0\cdot78^{78\frac{1}{2}}$ | $1\cdot06^{34\frac{1}{2}}$ | $0\cdot46^{63}$ | $0\cdot73^{305}$ |
| | 1906 | — | $0\cdot55^{22}$ | $0\cdot51^{50}$ | $0\cdot65^{175\frac{1}{2}}$ | $1\cdot04^{129}$ | $0\cdot55^{89}$ |
| | **1903–6** | $[1\cdot33]^{96}$ | $0\cdot72^{111}$ | $0\cdot74^{139}$ | $0\cdot99^{306}$ | $1\cdot29^{427\frac{1}{2}}$ | $0\cdot96^{928\frac{1}{2}}$ |
| H ... ... ... | 1903 | — | — | — | $0\cdot87^{20\frac{1}{2}}$ | $0\cdot79^{50\frac{1}{2}}$ | $1\cdot15^{70}$ |
| | 1904 | $1\cdot24^{579}$ | $1\cdot41^{256\frac{1}{2}}$ | $1\cdot17^{6}$ | — | $0\cdot17^{5}$ | $0\cdot35^{119}$ |
| | 1905 | $1\cdot45^{421\frac{1}{2}}$ | $1\cdot55^{444\frac{1}{2}}$ | — | $1\cdot00^{6}$ | $1\cdot70^{23\frac{1}{2}}$ | $0\cdot81^{12}$ |
| | 1906 | $1\cdot19^{316}$ | $0\cdot96^{399}$ | $0\cdot37^{42}$ | — | $0\cdot17^{10}$ | $0\cdot26^{19\frac{1}{2}}$ |
| | **1903–6** | $1\cdot30^{1316\frac{1}{2}}$ | $1\cdot30^{1099\frac{1}{2}}$ | $[0\cdot47]^{48}$ | $0\cdot90^{26\frac{1}{2}}$ | $0\cdot93^{89}$ | $0\cdot62^{220\frac{1}{2}}$ |
| J ... ... ... | 1903 | — | — | — | $1\cdot66^{162\frac{1}{2}}$ | $1\cdot61^{216\frac{1}{2}}$ | $1\cdot49^{76\frac{1}{2}}$ |
| | 1904 | $1\cdot08^{247\frac{1}{2}}$ | $1\cdot42^{279}$ | $1\cdot84^{93\frac{1}{2}}$ | $1\cdot70^{393}$ | $1\cdot02^{293\frac{1}{2}}$ | $1\cdot04^{49}$ |
| | 1905 | $1\cdot57^{60}$ | $1\cdot30^{118\frac{1}{2}}$ | $1\cdot34^{55}$ | $1\cdot79^{231\frac{1}{2}}$ | $1\cdot33^{381\frac{1}{2}}$ | $1\cdot15^{91}$ |
| | 1906 | $1\cdot37^{18}$ | $1\cdot04^{97\frac{1}{2}}$ | $1\cdot00^{138}$ | $1\cdot08^{327}$ | $0\cdot90^{307}$ | $0\cdot66^{335}$ |
| | **1903–6** | $1\cdot19^{325\frac{1}{2}}$ | $1\cdot32^{495}$ | $1\cdot34^{286\frac{1}{2}}$ | $1\cdot52^{1114}$ | $1\cdot19^{1198\frac{1}{2}}$ | $0\cdot89^{551\frac{1}{2}}$ |
| M ... ... ... | 1903 | — | — | — | $1\cdot13^{42\frac{1}{2}}$ | $2\cdot53^{19}$ | $1\cdot42^{29\frac{1}{2}}$ |
| | 1904 | $1\cdot57^{196\frac{1}{2}}$ | $1\cdot20^{164\frac{1}{2}}$ | $1\cdot71^{166}$ | $1\cdot67^{236\frac{1}{2}}$ | $1\cdot43^{455\frac{1}{2}}$ | $0\cdot78^{40\frac{1}{2}}$ |
| | 1905 | $1\cdot69^{209\frac{1}{2}}$ | $1\cdot06^{31}$ | $1\cdot71^{222}$ | $1\cdot44^{318}$ | $1\cdot13^{198\frac{1}{2}}$ | $0\cdot98^{51}$ |
| | 1906 | $1\cdot37^{383\frac{1}{2}}$ | $1\cdot28^{231}$ | $1\cdot54^{589}$ | $1\cdot33^{248\frac{1}{2}}$ | $1\cdot06^{197}$ | $0\cdot99^{133}$ |
| | **1903–6** | $1\cdot52^{849\frac{1}{2}}$ | $1\cdot23^{426\frac{1}{2}}$ | $1\cdot61^{977}$ | $1\cdot46^{845\frac{1}{2}}$ | $1\cdot30^{870}$ | $1\cdot00^{254}$ |

per six hours fishing. The number of hours fishing in each average is represented number.

| July. | August. | September. | October. | November. | December. | Area. |
|---|---|---|---|---|---|---|
| — | $0\cdot93^{38}$ | — | — | — | — | A. |
| — | $0\cdot56^{6}$ | $0\cdot43^{60}$ | — | — | — | |
| — | — | — | — | — | — | |
| — | — | — | — | — | — | |
| — | [0·88]$^{44}$ | [0·43]$^{60}$ | — | — | — | |
| $1\cdot73^{28\frac{1}{2}}$ | $1\cdot07^{60}$ | $1\cdot82^{11}$ | $0\cdot55^{5\frac{1}{2}}$ | — | — | B. |
| $0\cdot75^{7}$ | — | $1\cdot05^{156}$ | $0\cdot67^{63\frac{1}{2}}$ | $0\cdot59^{46\frac{1}{2}}$ | — | |
| — | $0\cdot77^{52\frac{1}{2}}$ | $1\cdot31^{45}$ | $0\cdot83^{23}$ | $0\cdot60^{34}$ | — | |
| $0\cdot46^{68}$ | — | — | $0\cdot19^{5}$ | $0\cdot62^{12}$ | — | |
| $0\cdot83^{103\frac{1}{2}}$ | $0\cdot93^{112\frac{1}{2}}$ | $1\cdot15^{212}$ | $0\cdot68^{97}$ | $0\cdot60^{92\frac{1}{2}}$ | — | |
| $0\cdot87^{18\frac{1}{2}}$ | $1\cdot46^{29\frac{1}{2}}$ | $1\cdot37^{10\frac{1}{2}}$ | $0\cdot47^{55}$ | — | — | C. |
| — | — | — | $2\cdot22^{23}$ | $1\cdot30^{101}$ | — | |
| — | — | — | $1\cdot09^{11}$ | $1\cdot37^{6}$ | — | |
| — | — | $0\cdot64^{15}$ | — | — | — | |
| [0·87]$^{18\frac{1}{2}}$ | [1·46]$^{29\frac{1}{2}}$ | [0·94]$^{25\frac{1}{2}}$ | $1\cdot00^{89}$ | $1\cdot30^{107}$ | — | |
| $0\cdot51^{19\frac{1}{2}}$ | — | — | $0\cdot31^{38\frac{1}{4}}$ | $0\cdot31^{44}$ | — | D. |
| — | —$^{5}$ | $0\cdot03^{6}$ | — | —$^{11}$ | $0\cdot48^{3}$ | |
| $0\cdot09^{160\frac{1}{2}}$ | — | $0\cdot05^{11\frac{1}{2}}$ | — | $0\cdot10^{23}$ | — | |
| $0\cdot12^{35}$ | $0\cdot39^{9}$ | $0\cdot02^{3}$ | $0\cdot08^{86}$ | $0\cdot14^{93\frac{1}{2}}$ | — | |
| $0\cdot13^{215\frac{1}{2}}$ | [0·25]$^{14}$ | [0·04]$^{20\frac{1}{2}}$ | $0\cdot15^{124\frac{1}{4}}$ | $0\cdot17^{171\frac{1}{2}}$ | [0·48]$^{3}$ | |
| $0\cdot70^{407}$ | $0\cdot92^{451\frac{1}{2}}$ | $1\cdot00^{436\frac{1}{2}}$ | $1\cdot42^{116\frac{1}{2}}$ | $1\cdot17^{61}$ | $1\cdot33^{6}$ | E. |
| $0\cdot49^{619\frac{1}{2}}$ | $0\cdot82^{454\frac{1}{2}}$ | $0\cdot91^{275\frac{1}{2}}$ | $1\cdot42^{26\frac{1}{2}}$ | — | $0\cdot58^{18\frac{1}{2}}$ | |
| $0\cdot33^{399}$ | $0\cdot52^{511\frac{1}{4}}$ | $0\cdot59^{242\frac{1}{4}}$ | $0\cdot50^{6}$ | $0\cdot36^{10}$ | $0\cdot41^{72}$ | |
| $0\cdot33^{466\frac{1}{2}}$ | $0\cdot56^{467}$ | $0\cdot49^{312\frac{1}{2}}$ | $0\cdot63^{30}$ | $0\cdot48^{53}$ | — | |
| $0\cdot46^{1892}$ | $0\cdot70^{1884\frac{1}{2}}$ | $0\cdot78^{1266\frac{3}{4}}$ | $1\cdot26^{179}$ | $0\cdot81^{124}$ | [0·50]$^{90\frac{1}{2}}$ | |
| $1\cdot12^{194\frac{3}{4}}$ | $1\cdot15^{165\frac{1}{4}}$ | $1\cdot41^{226\frac{1}{4}}$ | $1\cdot33^{245\frac{1}{2}}$ | $1\cdot80^{191\frac{3}{4}}$ | $3\cdot36^{6}$ | F |
| $0\cdot82^{156}$ | $1\cdot11^{276}$ | $1\cdot34^{230}$ | $1\cdot33^{280}$ | $1\cdot30^{271}$ | $1\cdot06^{29\frac{1}{2}}$ | |
| $0\cdot48^{109\frac{1}{2}}$ | $0\cdot71^{249\frac{1}{2}}$ | $0\cdot90^{159}$ | $1\cdot13^{166\frac{1}{2}}$ | $1\cdot19^{150}$ | $0\cdot71^{32}$ | |
| $0\cdot73^{71}$ | $0\cdot91^{83}$ | $1\cdot04^{182}$ | $1\cdot31^{195\frac{1}{2}}$ | $1\cdot62^{67\frac{1}{2}}$ | $1\cdot00^{6}$ | |
| $0\cdot85^{531\frac{1}{2}}$ | $0\cdot97^{773\frac{3}{4}}$ | $1\cdot20^{797\frac{1}{4}}$ | $1\cdot29^{887\frac{1}{2}}$ | $1\cdot45^{680\frac{1}{4}}$ | $1\cdot09^{73\frac{1}{2}}$ | |
| $0\cdot49^{26}$ | $1\cdot39^{24\frac{1}{2}}$ | $1\cdot02^{31}$ | $1\cdot20^{139\frac{1}{2}}$ | $0\cdot93^{206\frac{1}{4}}$ | $1\cdot06^{474}$ | H. |
| $0\cdot22^{87}$ | $0\cdot25^{6}$ | $0\cdot38^{33}$ | $0\cdot12^{4\frac{1}{2}}$ | $0\cdot62^{66}$ | $0\cdot92^{552\frac{3}{4}}$ | |
| $0\cdot90^{10}$ | $1\cdot00^{6}$ | $0\cdot09^{4}$ | $0\cdot68^{12}$ | $0\cdot52^{309\frac{1}{2}}$ | $0\cdot82^{221\frac{1}{4}}$ | |
| $0\cdot72^{81\frac{1}{2}}$ | $0\cdot46^{55}$ | $0\cdot11^{33}$ | $0\cdot43^{96\frac{1}{2}}$ | $0\cdot55^{245}$ | $1\cdot04^{324\frac{3}{4}}$ | |
| $0\cdot49^{204\frac{1}{2}}$ | [0·73]$^{91\frac{1}{2}}$ | $0\cdot48^{101}$ | $0\cdot86^{252\frac{1}{2}}$ | $0\cdot64^{826\frac{3}{4}}$ | $0\cdot97^{1573}$ | |
| $1\cdot33^{6}$ | — | $1\cdot20^{36}$ | $1\cdot18^{102\frac{1}{2}}$ | $1\cdot42^{215}$ | $2\cdot31^{19}$ | J. |
| — | — | $1\cdot36^{44}$ | $1\cdot17^{162\frac{1}{4}}$ | $1\cdot34^{268\frac{1}{2}}$ | $0\cdot87^{52}$ | |
| $0\cdot77^{123}$ | — | $1\cdot25^{185}$ | $1\cdot72^{276\frac{1}{2}}$ | $1\cdot15^{185}$ | $0\cdot47^{42}$ | |
| — | $0\cdot97^{172\frac{1}{2}}$ | $0\cdot57^{59}$ | $1\cdot30^{357\frac{1}{2}}$ | $1\cdot00^{202}$ | $0\cdot89^{32}$ | |
| $0\cdot80^{129}$ | $0\cdot97^{172\frac{1}{2}}$ | $1\cdot14^{324}$ | $1\cdot39^{899}$ | $1\cdot24^{870\frac{1}{2}}$ | $0\cdot95^{145}$ | |
| — | $1\cdot77^{24}$ | — | — | $2\cdot10^{107}$ | $1\cdot13^{63\frac{3}{4}}$ | M. |
| — | — | $1\cdot42^{18}$ | $1\cdot71^{28}$ | $1\cdot91^{141\frac{1}{2}}$ | $1\cdot02^{73}$ | |
| $0\cdot40^{24\frac{1}{2}}$ | — | $1\cdot07^{14}$ | $1\cdot60^{128\frac{1}{2}}$ | $1\cdot64^{79}$ | $0\cdot80^{157\frac{1}{2}}$ | |
| — | — | — | $1\cdot36^{75}$ | $1\cdot20^{84\frac{1}{2}}$ | $1\cdot29^{189}$ | |
| [0·40]$^{24\frac{1}{2}}$ | [1·77]$^{24}$ | [1·27]$^{32}$ | $1\cdot53^{231\frac{1}{2}}$ | $1\cdot76^{412}$ | $1\cdot07^{483\frac{1}{4}}$ | |

The western area D, the Flats outside Lowestoft and Yarmouth, produces very little plaice, and is frequented by the fishermen mainly for soles. The fluctuations in this area are very irregular. In fact there is not enough fishing done here to give fair representative averages which make the months comparable with one another, and the only fact of importance shown by this curve is that of the scarcity of plaice.

Turning to the Knoll Deep area E, we find a well defined maximum in October which is significantly higher than September and November. The figures for December and January are incomplete and we cannot say that there is another maximum in January. There is probably a gradual fall from October continuing through the winter to a minimum in the spring months when the curve commences to rise again. This October maximum coming as it does a month or two later than the maximum period in the Northern areas is probably to be accounted for by a southward migration of fish from the Leman Banks and the adjacent grounds. There is evidence of a minor maximum in June as the fall of ·27 cwts. to July is significant, being more than 5 times the probable difference ·05.

The second of the Deep Water areas H, exhibits somewhat similar features, but the phenomena shown on the curve for area E take place at a later season in area H. The maximum period of abundance is apparently in January or February after which there is a falling off to a minimum in the summer and then a gradual rise.

The great fluctuations shown on the curve giving cusps in March, September and October are almost wholly due to the absence of sufficient records. The value 0·47 for March is evidently erroneous. Each of the September averages represents the catch of very few hauls, which fact probably accounts for the small value for that month.

There is not enough evidence to establish a maximum in October as the high value for that month is mainly due to the value 1·20 for the year 1903 which contributes the greatest share of the hauls in the general average. Two of the years show a decline from October to November and two a rise.

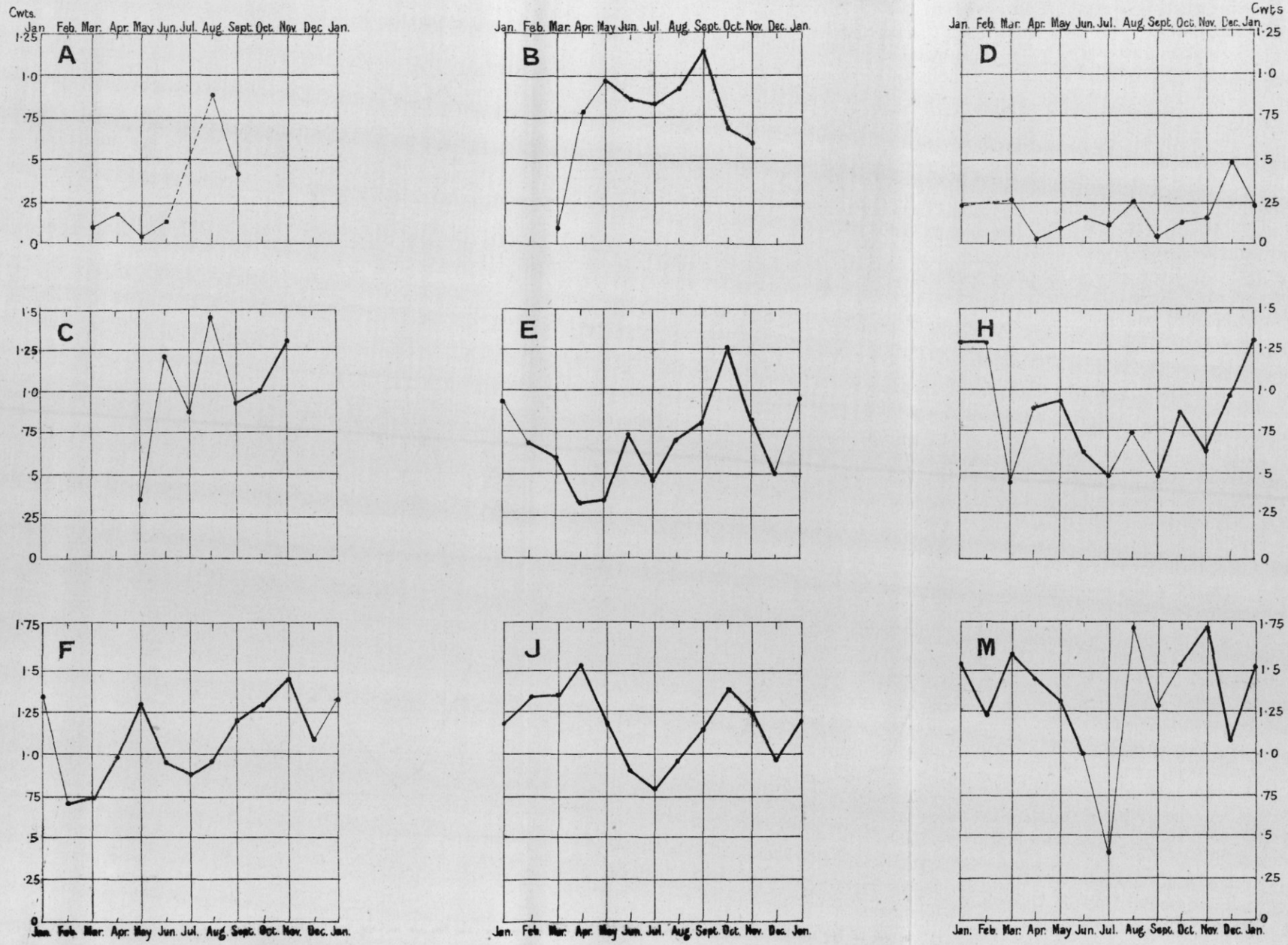
In the fishing grounds to the east of the Deep Water there is a great amount of fishing, as a considerable quantity of plaice can always be found ; so that the records for F and J, the northern and middle areas, are almost complete and give continuous curves showing two periods of maximum amount and two of minimum, in spring and autumn respectively. It is interesting to compare these two with respect to the seasonal changes. The amounts for the first three months are higher in J than in F, and the spring maximum arrives a month earlier in this, the more southerly area. There is not so large a fall in the summer months in F as in J, but the fall from the autumn maximum to the winter minimum is much greater. It is ·73 cwts. in F and ·44 in J. In F the autumn maximum is greater than the spring maximum (the difference ·16 is more than twice the probable difference ·068). In J the reverse is the case. In F the January average is based on only one year's catch and is clearly unrepresentative. The fall from November is probably continuous till February or March. In J October and November are months of maximum, as the October averages are twice greater than the November ones, and twice less than these. The explanation of these differences between F and J probably lies in the fact that J lies nearer to the southern spawning grounds and is itself somewhat more of a spawning area than F (*see* Table VII.).

The curve for area M exhibits many irregularities. The main features shown by this curve are that the averages for the winter months are very high and that there is apparently a great scarcity of fish in this region in the months July, August and September. This latter fact is borne out more by the downward trend of the curve from March onwards and by the almost total absence of fishing in these three months than by the averages themselves, which are rendered quite invalid owing to the lack of a sufficient number of records. There is an increase in the amounts till November and then the curve fluctuates considerably. This may be due to the fact that this area covers a large extent of ground of which the northern portion has different characteristics from the southern, while the fishing was not distributed evenly over the two parts.

## *The Spawning of Plaice.*

The information given by the fishermen in the small table of "Spawning Fish" at the foot of the Record forms has been tabulated with regard to plaice and reduced to the totals and percentages given in the annexed table. The fishermen are required to state whether the spawning fish are few, many or none, and whether large or medium sized. The lack of consistency in their methods of doing this, and the numerous occasions on which the sizes were undistinguished or mixed, made it impossible to tabulate all this

FIG 2. DIAGRAMS SHOWING FOR EACH AREA THE AVERAGE MONTHLY CATCH OF PLAICE IN CWTS. PER 6 HRS. FISHING.




*Lee. Lowestoft Trawler Records. To face p. 102.*

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detail, so we were obliged to give merely the total number of hauls in which spawning plaice were recorded. It may be mentioned, however, that in by far the largest proportion of the hauls the spawning plaice were entered as 'Few,' simply, and sometimes as 'Few, Large and Medium.' Out of a total number of 907 records 58 had "Many spawning plaice." Of these 4 were entered in November, 7 in December, 24 in January, and 23 in February.

The records cover three seasons of maturation and spawning, *i.e.* the months September to March in the years 1903–4, 1904–5, 1905–6. They all showed the same phenomenon, *i.e.*, a gradual increase in the number of spawning records till January, followed by a sharp fall, while the relative proportion of spawning records to hauls in each area was approximatelv the same year by year. Thus all the records could be combined into one table, which shows the sum of all the spawning records in the three Octobers, Novembers, &c., from which we obtain a fair representation of the actual fluctuations.

TABLE VII.—Showing for the three spawning seasons 1903–6 the monthly total number of hauls in each area in which spawning plaice are recorded, and the percentage which these constitute of the total number of hauls in each area.

| Areas. | | B. | C. | E. | F. | H. | J. | M. | All areas. |
|---|---|---|---|---|---|---|---|---|---|
| September | No. ... | — | 1 | 4 | 2 | 1 | 2 | — | 10 |
| | Percentage | — | [50] | 2½ | 2 | 9 | 4½ | — | 3 |
| Octoer | No. ... | 1 | 9 | 1 | 33 | 2 | 27 | 2 | 75 |
| | Percentage | 6 | [61] | 4 | 29 | 8 | 30 | 8 | 24 |
| November | No. ... | — | 5 | 2 | 44 | 29 | 52 | 24 | 156* |
| | Percentage | — | 28 | 17 | 43 | 30 | 47 | 44 | 38 |
| December | No. ... | — | — | 4 | 8 | 125 | 11 | 32 | 180† |
| | Percentage | — | — | 25 | 71 | 60 | 58 | 65 | 59 |
| January | No. ... | — | — | 5 | 4 | 159 | 32 | 100 | 300‡ |
| | Percentage | — | — | 83 | 25 | 72½ | 59 | 71 | 66 |
| February | No. ... | — | — | 7 | 3 | 106 | 31 | 31 | 178 |
| | Percentage | — | — | 32 | 16 | 58 | 38 | 44 | 47 |
| March | No. ... | — | — | — | 3 | — | 1 | 4 | 8 |
| | Percentage | — | — | — | 13 | — | 2 | 2½ | 3 |

* Including 13 hauls in November in which plaice are recorded "with large roes."
† Including 26 hauls in December in which plaice are recorded "with large roes."
‡ Including 1 haul in January in which plaice are recorded "with large roes."

There are one or two sources of error, which need to be mentioned and borne in mind when studying the table. The first is that one of the men records a considerably fewer number of hauls than the others, and there is reason to believe that on occasions he omits to record the spawning fish. The September and March records are made by one man alone, the former in 1903, and too much reliance cannot be placed on them, as we have a tendency to error in another direction, which is caused by an ambiguity in the use of the term "spawning fish" and the consequent inclusion among the records of plaice that are not actually spawning, but whose roes are ripe, and which are more or less ready to spawn. This distinction between 'maturing' and 'spawning' fish was probably not always in the fishermen's minds, and although they have in certain cases explicitly noted the fact that their entries referred to ripening rather than to actually spawning fish, it is probable that these do not exhaust the list. The cases mentioned were of 13 hauls in November, 26 in December, with one in January, in which "plaice with large roes" were recorded. If these are omitted the percentages for all areas in the months November and December become lowered to 35 per cent. and 51 per cent. respectively. Spent fish appear to have been ignored altogether. It would be safer therefore to regard the table as a summary of observations concerning maturation than concerning spawning in the strict sense of the term.

The percentage values given in the table are calculated from the total number of six hour periods of fishing in each area. These give the proportion of hauls in which spawning plaice are found and therefore describe the relative abundance of these fish in the different areas. The high values given for area C should be neglected in comparison

with the other areas, as very few hauls were made here and they cannot be taken as representative. No instances of spawning plaice were found in D or A, and only one in the other Northern area B.

It will be seen from the table that the greatest number of spawning plaice comes from area H. 56 per cent. of the total number of hauls in this area during the spawning season yielded spawning plaice ; Area M comes next with a percentage of 38. Both these are Southern areas and thus we have confirmed the knowledge of the habits of spawning plaice which has been obtained from other sources,* viz., that they tend to congregate during the winter in the southern part of the Deep Water. The intermediate areas show spawning plaice in fair numbers and up to November these seem to exceed the amounts taken from H. After this the numbers of hauls in H and M are considerably above the others, which is probably due to the fact that the plaice have migrated further southwards.

Taking both the absolute number of spawning records (one record for each haul) and their percentage values as compared with the total amount of fishing, as a rough measure of the frequency of spawning fish, we see that in each of the chief spawning areas, F, H, J and M, and in all areas together the numbers increase gradually till January and then fall away rapidly till they practically cease at the end of February. January is apparently the height of the spawning season, and this is further confirmed by the fact that it is in this month that the hauls recording "many spawning fish" are found. These occur only in areas H and M which are the chief spawning grounds in this region.

## *General Conclusions.*

*A. Distribution.*—The region investigated by these statistics is essentially a fishing ground for plaice. This being so, we have a rough guide to the movements of the plaice, by the amount of fishing that takes place in the different areas—the men going to fish where they know they can get the best stock.

It is found that plaice are very scarce on the shallow grounds off the English coasts—that they increase as we move eastwards, and that they are most numerous on the grounds nearest the continental coasts, the quantities caught decreasing as we proceed northwards and away from the coast.

We have found the following seasonal variations in the abundance of plaice in the different parts of this region :—

A, B and C.—In the northern areas the maximum abundance is found in summer and the minimum in winter, when the catches of plaice are so small that fishing becomes unprofitable.

H and M.—In the southern areas the maximum abundance occurs in winter and the minimum in summer.

F and J.—In the intermediate grounds between these two groups, on the other hand, there are two well defined maxima, occurring in the spring and autumn, with a fair stock of fish on these grounds throughout the year.

*B. Migrations.*—The observed changes in the seasonal abundance admit of easy explanation in view of the seasonal migrations, which have elsewhere been shown by the marking experiments to take place in this area.† The spring and autumn maxima on the intermediate grounds are probably caused by the stocks of fish migrating across them to the north and south respectively at these seasons.

The summer maximum in the north is probably caused by the spring immigration, reinforced throughout the summer by direct migrations from the Dutch coast, and the winter minimum by the autumn exodus : the winter maximum on the southern grounds is probably due to the southward migration of plaice for the purposes of spawning.

*C. Spawning.*—Spawning plaice are found in large numbers during the early part of the year. January especially is the month in which their occurrence is most frequent, while plaice found to be maturing are frequently recorded during the winter months. As H and M, the most southerly parts of this region, are the most important spawning grounds, there is some evidence that the increased catches made here in winter are largely due to the presence of spawning fish.

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* Garstang. Trawling Investigations. *International Investigations, Mar. Biol. Assoc., Report I.*, 1905. *Cd.* 2670.

† *See* Garstang. Report on Experiments with Marked Fish, 1902–3. *International Investigations, Mar. Biol. Assoc., Report I.*, 1905. *Cd.* 2670.

## B.—Soles.

### *Introduction.*

The records of the number of soles caught have been tabulated in exactly the same way as the plaice records; that is to say, we have the average catch of soles, month by month, for the same period and for the same areas as in the case of plaice.

The way in which the catch of soles has been recorded, has been uniform throughout the period. The sizes are distinguished as large, medium and slips, and the numbers of *pairs* of soles of each kind are given. In the tables, however, all the averages are calculated as numbers of fish and not in pairs. The size distinctions are retained and the total number of fish at all sizes given, as well as those of the separate size groups. By "large" soles the fishermen mean those about 12 inches and over; "medium" those from 8 or 9 inches to 12 inches, while "slips" or small soles are 8 inches or less in length. We find that the total number of soles caught is very small compared with that of plaice—yet they suffice to show the quantitative distribution of these fish as well as some of the seasonal changes.

### *Yearly Variations.*

The first table (Table VIII) and the corresponding diagram (Fig. 3.) show the changes in the average catch per 6 hours' fishing for each year, when all the catches from the various areas are put together. The table gives, also, the total number caught by each fisherman and by all three together. As in the case of plaice, the records for 1903 being incomplete, figures for the whole year (January to December) have been estimated, and it is these estimated values that are plotted in the diagram. They are 10·5 large, 4·5 medium, 7·9 small and 22·9 all sizes. The best year for soles was 1903, in which year all sizes were considerably more numerous than in the other years, which do not fluctuate much. There is a small rise from 1904–5, followed by a slightly greater fall to 1906.

Table VIII.—Showing the total number of soles caught in each of the years 1903–6 and the yearly average catch per 6 hours' fishing taken by each skipper.

| — | Skipper. | Total number of Soles. | | | | Average number of Soles per 6 hours' fishing. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Large. | Medium. | Small. | All Sizes. | Large. | Medium. | Small. | All Sizes. |
| 1903—April–December . | i | 3533 | 1220 | 1914 | 6667 | 11·9 | 4·1 | 6·5 | 22·5 |
| | ii | 2778 | 1169 | 2622 | 6569 | 7·5 | 3·1 | 7·0 | 17·6 |
| | iii | 5318 | 2434 | 3518 | 11270 | 16·2 | 7·4 | 10·7 | 34·4 |
| | **All** | **11629** | **4823** | **8034** | **24486** | **11·7** | **4·8** | **8·1** | **24·6** |
| 1904 ... ... ... | i | 4131 | 1288 | 2502 | 7921 | 10·5 | 3·3 | 6·4 | 20·2 |
| | ii | 3225 | 1490 | 2103 | 6818 | 6·0 | 2·8 | 3·9 | 12·7 |
| | iii | 3859 | 2147 | 3784 | 9790 | 7·4 | 4·1 | 7·2 | 18·7 |
| | **All** | **11215** | **4925** | **8389** | **24529** | **7·7** | **3·4** | **5·8** | **16·9** |
| 1905 ... ... ... | i | 3912 | 994 | 1852 | 6758 | 9·1 | 2·3 | 4·3 | 15·7 |
| | ii | 3461 | 1421 | 1733 | 6615 | 7·0 | 2·9 | 3·5 | 13·4 |
| | iii | 4117 | 2330 | 3988 | 10435 | 8·9 | 5.0 | 8·6 | 22·5 |
| | **All** | **11490** | **4745** | **7573** | **23808** | **8·3** | **3·4** | **5·5** | **17·2** |
| 1906 ... ... ... | i | 4131 | 1084 | 2058 | 7273 | 8·6 | 2·2 | 4·3 | 15·1 |
| | ii | 3397 | 1144 | 1755 | 6296 | 7·2 | 2·4 | 3·7 | 13·3 |
| | iii | 3700 | 2398 | 3312 | 9410 | 7·4 | 4·8 | 6·6 | 18·9 |
| | **All** | **11228** | **4626** | **7125** | **22979** | **7·7** | **3·2** | **4·9** | **15·8** |

The numbers of large soles fluctuate the most—the greater part of the large fall in 1904 being due to a decrease in the number of large fish while the rise in 1905 is in large soles alone. The numbers of medium soles are practically stationary after 1904, and in the average for small soles or "slips," there is a continuous but very slight fall. When we compare one fisherman's averages with another's, we have no evidence of any real change in the stock of fish in this period except between the years 1903 and 1904, when there is apparently a decline.

It should be remembered, however (cf. Table II.), that in this year 1904, the areas D and A, which are known to be far the most productive, have the least representative number of hours' fishing, while the eastern areas J and M are more represented in the last

three years, and these are known to be poorly populated areas. On the other hand, F also is ill-populated and the fishing there decreases from 1903–1906, so that it is probable the distribution of fishing will not affect the averages very much—if at all, they would be made slightly more equal by the fishing being distributed equally in the different years.

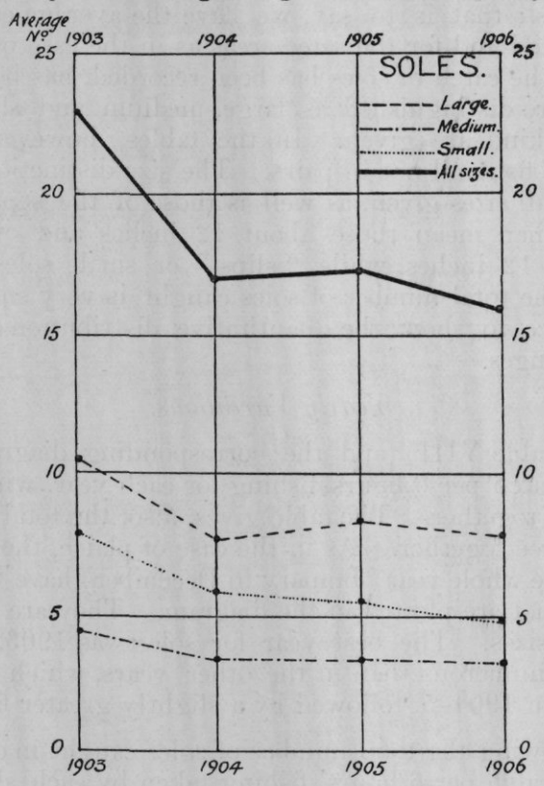



FIG. 3.—CURVES showing the annual average number of soles taken per 6 hours' fishing.

The diagram also shows the proportion of the catch formed by the large, medium and small groups. Large fish are the most abundant and medium-sized fish the least, while the number of small soles comes nearly half-way between the other groups. In almost all the areas we find that the large soles considerably exceed in numbers the small and medium-sized fish. They form from 45 per cent. to 49 per cent. of the total number caught.

*Distribution and Seasonal Variations.*

Table IX. and the diagrams illustrating the monthly abundance of soles in the several areas (Fig. 4)* need to be studied in the same way as the Plaice tables, care being taken to notice which averages are reliable and which, owing to a scarcity of the number of hauls, are not. As before, the curves represent the monthly averages formed by adding together the total catch of the four years in each month, and dividing by the corresponding number of hauls of 6 hours' duration.

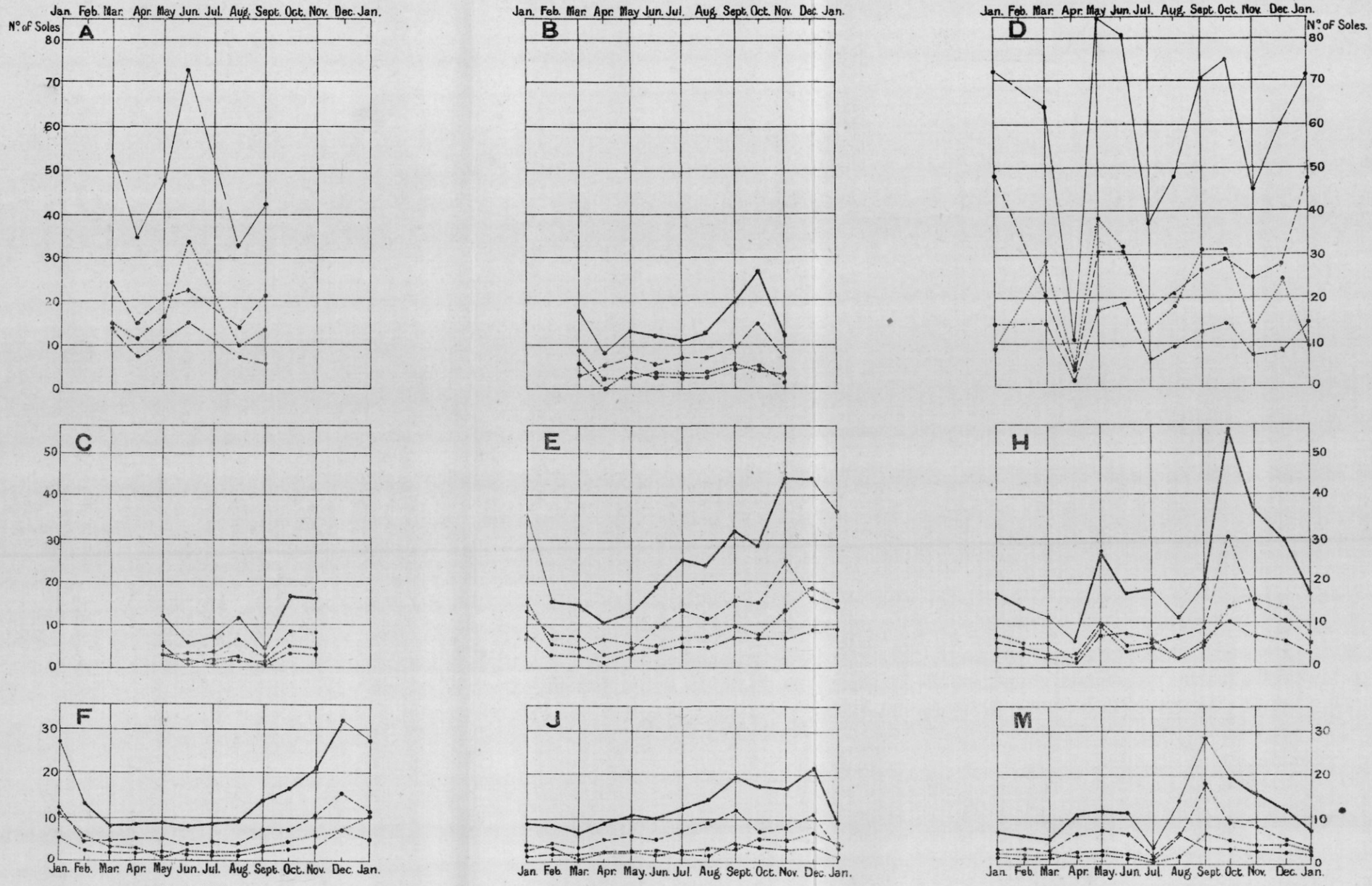
One of the most striking features of the diagrams is the fact that the curves for the different size groups move in nearly parallel directions, *i.e.*, their fluctuations are of the same nature and occur at the same time. The large, medium and small groups have their maxima and mimima at coincident periods, and rise and fall together between these.

The exceptions to this rule can easily be accounted for, since it will generally be found that these averages are the ones considered unreliable for the reasons mentioned above It is therefore evident that the main causes producing the migrations of soles affect al. sizes. The thick lines in the diagrams represent the average number of soles of all sizes and give a good idea of their general movement.

Comparing their numerical distribution in the various areas, we see that soles are by far the most abundant in area D, the Lowestoft Flats. They are also numerous on the grounds to the north of this (Cromer Knoll, area A), but the absence of fishing here in the autumn and winter months, on account of the scarcity of other species of fish (mainly plaice) leaves us without information as to the abundance of soles during these months. By contrast with these western grounds, the easterly areas C, F, J and M, all show a great scarcity of fish, the total of all sizes seldom exceeding 15 or 20 per haul. It is to be noticed too, in these areas that as we move further southwards the fish get scarcer. The

* On the curve representing catches of all sizes, broken lines are used to join two alternate month's averages, when there is no record in the intermediate month, and thin lines are used to join up the averages of months, which are considered unreliable.

FIG 4. DIAGRAMS SHOWING FOR EACH AERA THE AVERAGE MONTHLY CATCH OF SOLES, IN NUMBERS OF FISH PER 6 HOURS FISHING LARGE, MEDIUM AND SMALL-SIZED FISH BEING DISTINGUISHED.




*Lee. Lowestoft Trawler Records. To face p. 106*

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average of the 12 monthly averages for the areas F, J and M, are respectively 14·4, 13·2 and 12·2. In the case of plaice we found precisely the opposite condition. Indeed, it seems evident from a mere glance at the two sets of diagrams that where plaice are most abundant, the soles are least abundant (as in M), and *vice versa*, an abundance of soles, (as in D and A) is accompanied by a scarcity of plaice. The two deep water areas, H and E, exhibit the same phenomenon. E, the more northerly, has an average for the year of 25·3, and H of 19·8 soles per 6 hours' fishing. Of these 11·7 in area E, and 9·0 in area H, are large soles, both being about 45 per cent. of the total number. Compared with the other areas regularly fished by these men, these areas seem more productive of soles of a good marketable size.

In the northern areas, A, B, and C, the records are too few to give any certain information regarding periods of maximum and minimum abundance. The quantities of soles decrease considerably as we move eastwards, the average numbers caught in C being very small. There are indications of an increase in May and June in area A, and in October in B and C, the former increase being mostly due to a considerable influx of "slips."

The curve illustrating the abundance of soles in area D is of a very fluctuating character owing to the absence of a sufficient number of records. Neglecting the cusp in April, which is the average of only two hauls, we see that there is apparently an increase in the number of fish in the spring culminating in a high maximum in May and June. There is a big drop in the summer months, and then the curve rises again till October. The minimum periods are presumably in the summer and winter seasons.

Taking the average of the 12 months, we find that out of every 59 soles caught 25 are large and 22 small, so that the number of small soles is practically equal to that of the large soles in this area, whereas in the other cases, they are considerably exceeded by the large fish. In this respect we may compare area A, where the same preponderance of slips occurs, clearly indicating proximity of nursery grounds, which have been found by trawling experiments and distribution of eggs, to be on the English Coast.*

Illustrating the fluctuations of the catch in area E, we have a fairly smooth, continuous curve showing a scarcity in the total numbers caught in March, April and May, at the period when the numbers in the adjacent area D are rapidly increasing—after this, except for the slight fall from September to October, there is a *slow* and *steady* rise to a high maximum in November and December. The curve then falls sharply from this winter maximum to the spring minimum in April.

For the adjacent area H we have a curve with two apparently very sharp cusps in May and October; an examination of the table shows that the great excess of these months over the ones before and after them is due to the unusually high averages in the year 1903. Without these there is some slight evidence of a maximum in May, but an October maximum is not established. The November averages are all high, and this month is just as likely to be the maximum as October. December is significantly less than November, and so also is the fall to January a significant one. The minima appear to be in March or April and in August. We notice that in this ground as in the other deep water area E, the autumn averages are considerably higher than those of the rest of the year, while the spring values are very low. This great rise in these two curves in the autumn and the corresponding depression in spring shows that the tendency of soles of all sizes, but more especially of large soles, is to move into deep water as the cold weather comes on, and to leave it in early spring. Trawling investigations, later than those described by Garstang in his first Report, show that the larger soles congregate for spawning purposes in special localities in shallow water, especially in May. This probably accounts for the diminution observed in these deep water areas in the spring.

The fluctuations in area H are very similar to those in the adjacent area M, only in this latter area, which is shallower and more easterly, the quantities are very much smaller. There is the same fall from the autumn maximum to the spring minimum, both of which, however, occur a month earlier, *i.e.* if we are justified in assuming that September is the month of greatest abundance in this area, a fact which seems probable, but is not certain. It is noticeable that the maxima in M, H and E, occur in succession, being found later as we get further north. Similarly when we compare F and J with M, we have the same order. The spring and summer averages in M are low, and if we neglect the August average of only 4 hauls, there appears to be an increase after the spring till the autumn maximum, with no definite evidence of a second maximum period. The increase from March to April is sudden, and corresponds to the approach of the spawning season.

* Garstang. Trawling Investigations. *International Investigations, Mar, Biol. Assoc., Report I.* [1905]. *Cd.* 2670.

December appears to be the month of greatest abundance in both the eastern areas F and J, although in the latter each of the months September, October and November, have fairly high and nearly equal averages, so that the increase in the number of soles begins earlier and extends over a longer period in this area than in F. There is greater difference between the greatest and least averages in F than in J, in which area we notice that there is very little fluctuation in amount. Throughout the greater part of the year these areas seem to maintain a low but very regular stock of soles, which is augmented for a short time only in winter.

### *The Spawning of Soles.*

In the case of soles the information supplied by the fishermen of occurrences of spawning individuals was far less regular and complete than that for plaice, so that we are not able to glean much information from the table appended (Table X.). In fact,

TABLE X.—Showing the monthly total number of hauls in each area in which soles are recorded by skipper (ii.) as spawning, and the percentage which these constitute of the total number of his hauls in each area.

| Areas. | | A. | B. | D. | E. | F. | H. | J. | M. | All areas. |
|---|---|---|---|---|---|---|---|---|---|---|
| January ... | No. ... | — | — | — | — | — | 6 | 4 | 15 | 25 |
| | Percentage | — | — | — | — | — | 17 | 40 | 26 | 24 |
| February | No. ... | — | — | — | 0 | 2 | 7 | 3 | 15 | 27 |
| | Percentage | — | — | — | 0 | 100 | 18 | 11½ | 34 | 26 |
| March ... | No. ... | 5 | 0 | 2 | 1 | 2 | — | 6 | 17 | 33 |
| | Percentage | 83 | 0 | 67 | 25 | 33 | — | 46 | 39 | 43 |
| April ... | No. ... | 3 | — | — | 0 | 2 | 1 | 30 | 26 | 62 |
| | Percentage | 100 | — | — | 0 | 13 | 50 | 53 | 48 | 49 |
| May ... | No. ... | — | — | — | 0 | 3 | 1 | 24 | 17 | 45 |
| | Percentage | — | — | — | 0 | 43 | 25 | 41 | 33 | 36 |
| June ... | No. ... | — | — | — | 2 | 4 | 0 | 2 | 1 | 9 |
| | Percentage | — | — | — | 12½ | 11 | 0 | 7 | 6 | 9 |
| July ... | No. ... | — | 1 | 4 | 4 | 2 | 0 | 0 | 0 | 11 |
| | Percentage | — | 100 | 36 | 5 | 8 | 0 | 0 | 0 | 8½ |
| August ... | No. ... | — | 0 | — | 4 | 1 | 1 | 0 | 0 | 6 |
| | Percentage | — | 0 | — | 4½ | 2 | 20 | 0 | 0 | 4 |
| September | No. ... | — | — | 0 | 1 | 0 | 0 | 0 | — | 1 |
| | Percentage | — | — | 0 | 3 | 0 | 0 | 0 | — | 1 |
| November | No. ... | — | — | 0 | 0 | 3 | 0 | 3 | 3 | 9 |
| | Percentage | — | — | 0 | 0 | 11 | 0 | 9 | 12½ | 8 |
| December | No. ... | — | — | — | 1 | 3 | 12 | 5 | 9 | 30 |
| | Percentage | — | — | — | 33 | 37½ | 27 | 55½ | 16 | 25 |

there was only one fisherman who recorded the occurrences of spawning soles throughout the whole period. The others only mentioned them in 15 hauls altogether, and these were made in the first two years. For purpose of tabulation it was therefore necessary to take this fisherman's records alone, and to calculate the percentage number of occurrences on his total number of hauls in each area in each month. The totals are the combined totals in each month from all the years. In comparing the months, we must remember that only three years are represented in the January to March totals and four in the rest, so that the former are too low in comparison. The material is too scanty to permit any accurate interpolation to be made to correct this, but the percentage values will give a better indication of the comparative abundance. We can draw no definite conclusions as to the geographical distribution of spawning soles. They are found occurring in all areas and perhaps less often in the deep water than in the other areas. The table shows that of the areas F, J and M, in which spawning soles are constantly found, J has the greater share. It is unfortunate, for this inquiry, that this man has not had more fishing in areas A and D, for there are some indications in the table that these contain a large number of spawning soles. In April they were present in all three hauls he made in area A, and in March in five out of six hauls. In D, two out of three hauls contained spawning soles,

TABLE IX.—SHOWING for each area the Monthly Average Number of Soles caught per six hours' fishing; large (L.), medium (M.), and small fish (S.) being distinguished. The monthly total number of hours' fishing in each area is given as an index number.

| Area. | Year. | January. | | | | February. | | | | March. | | | | April. | | | | May. | | | | June. | | | | July. | | | | August. | | | | September. | | | | October. | | | | November. | | | | December. | | | | Area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | L. | M. | S. | All Sizes. | |
| A | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 16·2 | 8·5 | 9·2 | $33·9^{17}$ | ... | ... | ... | ... | 15·2 | 7·3 | 9·8 | $32·2^{38}$ | ... | ... | .... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | A |
| | 1904 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 14·0 | 8·0 | 12·0 | $34·0^{6}$ | 21·8 | 6·4 | 14·2 | $42·4^{60}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | 1905 | ... | ... | ... | ... | ... | ... | ... | ... | 24·2 | 14·5 | 14·9 | $53·6^{26}$ | 17·2 | 8·5 | 9·8 | $35·5^{44}$ | ... | ... | ... | ... | 25·1 | 18·2 | 41·1 | $84·3^{55}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | 1906 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 11·3 | 5·2 | 17·3 | $33·8^{16}$ | 20·1 | 11·2 | 16·8 | $48·1^{63}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | 1903–6 | ... | ... | ... | ... | ... | ... | ... | ... | 24·2 | 14·5 | 14·9 | $[53·6]^{26}$ | 15·6 | 7·6 | 11·8 | $[35·0]^{60}$ | 20·1 | 11·2 | 16·8 | $[48·1]^{63}$ | 23·0 | 15·9 | 33·6 | $[72·5]^{72}$ | ... | ... | ... | ... | 15·0 | 7·4 | 10·0 | $[32·5]^{44}$ | 21·8 | 6·4 | 14·2 | $[42·4]^{60}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| B | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5·6 | — | 2·6 | $8·2^{36}$ | 6·8 | 3·5 | 3·4 | $13·7^{135}$ | 7·4 | 3·2 | 2·5 | $13·1^{138}$ | 8·4 | 2·5 | 2·5 | $13·5^{78}$ | 6·6 | 2·6 | 5·0 | $14·2^{99}$ | 16·4 | 7·6 | 7·6 | $31·6^{11}$ | 4·4 | — | 2·2 | $6·5^{5}$ | ... | ... | ... | ... | ... | ... | ... | ... | B |
| | 1904 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4·9 | 3·2 | 4·9 | $13·0^{234}$ | 3·4 | 5·1 | 3·4 | $12·0^{7}$ | ... | ... | ... | ... | 9·6 | 4·2 | 6·2 | $20·0^{156}$ | 11·6 | 6·0 | 4·7 | $22·4^{63}$ | 6·2 | 1·9 | 4·1 | $12·3^{46}$ | ... | ... | ... | ... | |
| | 1905 | ... | ... | ... | ... | ... | ... | ... | ... | 3·0 | 6·0 | 9·0 | $18·0^{4}$ | ... | ... | ... | ... | ... | ... | ... | ... | 4·1 | 1·8 | 2·8 | $8·7^{98}$ | ... | ... | ... | ... | 7·5 | 2·1 | 2·5 | $12·1^{52}$ | 9·3 | 4·5 | 2·3 | $16·1^{45}$ | 28·7 | 7·8 | 7·8 | $44·3^{23}$ | 6·4 | 1·4 | 3·2 | $10·9^{24}$ | ... | ... | ... | ... | |
| | 1906 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6·9 | 1·6 | 2·6 | $11·1^{68}$ | ... | ... | ... | ... | ... | ... | ... | ... | 7·2 | 2·4 | 4·8 | $14·4^{5}$ | 13·0 | 2·0 | 4·0 | $19·0^{12}$ | ... | ... | ... | ... | |
| | 1903–6 | ... | ... | ... | ... | ... | ... | ... | ... | 3·0 | 6·0 | 9·0 | $[18·0]^{4}$ | 5·6 | — | 2·6 | $[8·2]^{36}$ | 6·8 | 3·5 | 3·4 | $13·7^{135}$ | 5·4 | 2·9 | 3·8 | $12·2^{479}$ | 7·0 | 2·1 | 2·7 | $11·7^{103}$ | 7·0 | 2·3 | 3·8 | $13·2^{112}$ | 9·9 | 4·5 | 5·4 | $19·8^{312}$ | 15·0 | 5·9 | 5·3 | $26·3^{97}$ | 7·1 | 1·8 | 3·8 | $12·6^{22}$ | ... | ... | ... | ... | |
| C | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3·4 | 5·1 | 3·4 | $12·0^{7}$ | 3·3 | 1·4 | 3·3 | $7·9^{26}$ | 3·9 | 1·9 | 1·5 | $7·1^{18}$ | 6·9 | 2·8 | 2·0 | $11·7^{30}$ | 4·6 | 2·3 | 2·3 | $9·1^{10}$ | 9·8 | 4·4 | 6·3 | $20·5^{55}$ | ... | ... | ... | ... | ... | ... | ... | ... | C |
| | 1904 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4·0 | 0·3 | 1·1 | $5·4^{42}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 7·3 | 3·1 | 4·7 | $15·1^{23}$ | 8·4 | 3·8 | 5·2 | $17·5^{101}$ | ... | ... | ... | ... | |
| | 1905 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2·7 | 1·3 | 0·7 | $4·7^{18}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3·3 | 1·1 | 2·2 | $6·5^{11}$ | 2·0 | — | — | $2·0^{6}$ | ... | ... | ... | ... | |
| | 1906 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1·2 | — | 0·8 | $2·0^{15}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| | 1903–6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3·4 | 5·1 | 3·4 | $[12·0]^{7}$ | 3·5 | 0·8 | 1·7 | $6·0^{86}$ | 3·9 | 1·9 | 1·3 | $[7·1]^{18}$ | 6·9 | 2·8 | 2·0 | $[11·7]^{30}$ | 2·6 | 0·9 | 1·4 | $[4·9]^{25}$ | 8·4 | 3·6 | 5·4 | $17·4^{80}$ | 8·1 | 3·6 | 4·9 | $16·6^{107}$ | ... | ... | ... | ... | |
| D | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 36·0 | 28·7 | 55·6 | $120·5^{46}$ | 36·0 | 20·0 | 32·0 | $88·0^{6}$ | 15·8 | 9·1 | 14·0 | $38·9^{20}$ | ... | ... | ... | ... | ... | ... | ... | ... | 33·2 | 9·1 | 20·1 | $62·3^{38}$ | 35·7 | 7·9 | 15·5 | $59·2^{44}$ | ... | ... | ... | ... | D |
| | 1904 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 26·0 | 8·0 | 11·0 | $45·0^{12}$ | ... | ... | ... | ... | 24·0 | 7·2 | 24·0 | $55·2^{5}$ | 16·0 | 20·0 | 60·0 | $96·0^{6}$ | ... | ... | ... | ... | 17·5 | 8·7 | 15·3 | $41·5^{31}$ | 28·0 | 8·0 | 24·0 | $60·0^{3}$ | |
| | 1905 | ... | ... | ... | ... | ... | ... | ... | ... | 20·2 | 14·4 | 28·8 | $63·4^{12}$ | ... | ... | ... | ... | 27·5 | 8·8 | 27·1 | $63·4^{37}$ | 34·3 | 51·4 | 102·9 | $188·6^{3}$ | 17·2 | 5·8 | 13·9 | $36·9^{160}$ | ... | ... | ... | ... | 36·5 | 12·5 | 21·9 | $71·0^{11}$ | ... | ... | ... | ... | 17·2 | 5·2 | 8·9 | $31·3^{32}$ | ... | ... | ... | ... | |
| | 1906 | 48·0 | 14·4 | 9·2 | $71·6^{30}$ | ... | ... | ... | ... | ... | ... | ... | ... | 4·0 | 1·5 | 5·0 | $10·5^{12}$ | 10·9 | 4·4 | 10·9 | $26·2^{5}$ | ... | ... | ... | ... | 19·2 | 6·2 | 11·0 | $36·4^{35}$ | 18·7 | 10·7 | 14·7 | $44·0^{9}$ | 12·0 | — | 8·0 | $20·0^{3}$ | 26·5 | 16·7 | 36·3 | $79·5^{86}$ | 20·9 | 6·8 | 14·1 | $41·8^{93}$ | ... | ... | ... | ... | |
| | 1903–6 | 48·0 | 14·4 | 9·2 | $[71·6]^{30}$ | ... | ... | ... | .. | 20·2 | 14·4 | 28·8 | $[63·4]^{12}$ | 4·0 | 1·5 | 5·0 | $[10·5]^{12}$ | 30·3 | 17·0 | 38·4 | $85·7^{109}$ | 30·1 | 18·4 | 31·8 | $[80·4]^{21}$ | 17·4 | 6·2 | 13·5 | $37·0^{215}$ | 20·6 | 9·4 | 18·0 | $[48·0]^{14}$ | 26·9 | 12·9 | 31·0 | $[70·8]^{20}$ | 28·6 | 14·4 | 31·3 | $74·2^{124}$ | 24·0 | 7·0 | 13·9 | $44·9^{171}$ | 28·0 | 8·0 | 24·0 | $[60·0]^{3}$ | |
| E | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3·7 | 3·0 | 3·7 | $10·3^{46}$ | 6·9 | 4·9 | 4·3 | $16·2^{183}$ | 16·0 | 7·3 | 8·3 | $31·6^{107}$ | 13·0 | 6·6 | 11·6 | $31·3^{152}$ | 18·4 | 6·6 | 9·4 | $34·4^{136}$ | 18·9 | 8·4 | 7·6 | $34·9^{116}$ | 24·0 | 8·7 | 15·7 | $48·4^{61}$ | 24·0 | 6·0 | 10·0 | $40·0^{6}$ | E |
| | 1904 | 12·0 | 6·0 | 4·0 | $22·0^{6}$ | 9·0 | 4·2 | 6·5 | $19·8^{65}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 11·0 | 3·5 | 6·6 | $21·1^{245}$ | 9·9 | 3·2 | 6·0 | $19·0^{219}$ | 7·2 | 3·0 | 6·3 | $16·4^{154}$ | 10·0 | 4·6 | 7·6 | $22·3^{75}$ | 6·9 | 3·2 | 5·9 | $15·8^{26}$ | ... | ... | ... | ... | 15·6 | 9·1 | 14·9 | $39·6^{18}$ | |
| | 1905 | 13·2 | 8·4 | 17·2 | $38·8^{30}$ | 6·5 | 2·2 | 3·3 | $12·0^{44}$ | 8·2 | 2·2 | 3·3 | $13·6^{22}$ | 2·5 | 1·2 | 6·2 | $9·9^{29}$ | 3·4 | 4·0 | 3·4 | $10·9^{21}$ | 10·5 | 3·7 | 4·4 | $18·5^{152}$ | 8·9 | 3·7 | 7·0 | $19·6^{209}$ | 15·5 | 5·8 | 8·0 | $29·3^{211}$ | 20·3 | 7·8 | 14·8 | $42·9^{242}$ | 10·0 | 4·0 | 2·0 | $16·0^{6}$ | 18·0 | 6·0 | 8·4 | $32·4^{19}$ | 15·8 | 8·3 | 20·8 | $45·0^{72}$ | |
| | 1906 | .. | ... | ... | ... | 3·7 | 1·0 | 7·8 | $12·5^{23}$ | 7·1 | 2·7 | 4·9 | $14·7^{22}$ | 6·5 | — | 6·5 | $13·1^{5}$ | 7·3 | 5·3 | 11·3 | $24·0^{13}$ | 8·0 | 2·0 | 4·0 | $14·0^{6}$ | 16·7 | 5·6 | 6·9 | $29·2^{466}$ | 9·7 | 3·7 | 4·5 | $17·9^{467}$ | 11·9 | 5·4 | 8·2 | $25·3^{312}$ | 6·8 | 3·2 | 4·8 | $14·8^{30}$ | 26·3 | 4·3 | 10·0 | $40·6^{53}$ | ... | ... | ... | ... | |
| | 1903–6 | 13·0 | 8·0 | 15·0 | $[36·0]^{36}$ | 7·3 | 3·0 | 5·6 | $15·9^{132}$ | 7·6 | 2·5 | 4·1 | $14·2^{44}$ | 3·1 | 1·0 | 6·3 | $10·4^{24}$ | 4·3 | 3·8 | 5·0 | $13·1^{95}$ | 9·6 | 3·9 | 5·2 | $18·8^{617}$ | 12·7 | 4·7 | 6·9 | $24·4^{1892}$ | 11·5 | 4·8 | 7·6 | $23·8^{1854}$ | 15·3 | 6·1 | 9·8 | $31·2^{1267}$ | 14·7 | 6·6 | 6·7 | $28·1^{179}$ | 24·5 | 6·6 | 12·7 | $43·7^{124}$ | 16·3 | 8·3 | 19·0 | $[43·6]^{36}$ | |
| F | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4·2 | 0·9 | 3·0 | $8·1^{26}$ | 4·3 | 2·0 | 2·0 | $8·4^{166}$ | 5·1 | 2·3 | 1·9 | $9·3^{241}$ | 5·3 | 2·9 | 2·1 | $10·3^{195}$ | 4·6 | 2·5 | 2·0 | $9·2^{165}$ | 9·1 | 3·0 | 4·9 | $17·0^{226}$ | 11·9 | 5·5 | 9·8 | $27·2^{245}$ | 18·0 | 6·2 | 11·5 | $35·7^{192}$ | 26·0 | 8·0 | 12·0 | $46·0^{6}$ | F |
| | 1904 | 11·9 | 5·2 | 10·5 | $27·6^{96}$ | 4·5 | 2·0 | 6·5 | $13·1^{77}$ | 11·4 | 3·5 | 6·9 | $21·7^{19}$ | ... | ... | ... | ... | 6·1 | 2·1 | 1·9 | $10·1^{69}$ | 4·2 | 1·8 | 3·1 | $9·1^{293}$ | 3·9 | 1·3 | 2·4 | $7·6^{156}$ | 2·8 | 1·6 | 2·2 | $6·7^{276}$ | 7·4 | 3·2 | 3·8 | $14·4^{230}$ | 5·8 | 3·1 | 3·8 | $12·7^{230}$ | 7·8 | 3·3 | 3·9 | $14·9^{271}$ | 11·6 | 7·9 | 7·7 | $27·3^{29}$ | |
| | 1905 | ... | ... | ... | ... | 2·0 | 3·0 | 4·0 | $9·0^{12}$ | 4·3 | 1·7 | 3·1 | $9·0^{78}$ | 3·8 | 2·1 | 1·7 | $7·7^{34}$ | 3·1 | 2·2 | 1·0 | $6·3^{63}$ | 3·7 | 1·5 | 1·5 | $6·7^{305}$ | 4·1 | 1·3 | 1·2 | $6·6^{109}$ | 6·2 | 2·0 | 2·2 | $10·5^{249}$ | 8·5 | 3·1 | 2·1 | $13·7^{159}$ | 9·4 | 2·8 | 2·9 | $15·1^{166}$ | 7·0 | 2·9 | 3·4 | $13·2^{150}$ | 21·4 | 8·6 | 7·5 | $37·5^{32}$ | |
| | 1906 | ... | ... | ... | ... | 6·5 | 1·6 | 2·7 | $10·9^{22}$ | 2·5 | 2·0 | 0·5 | $5·0^{59}$ | 4·6 | 1·6 | 1·8 | $8·1^{175}$ | 6·4 | 1·5 | 1·7 | $9·6^{129}$ | 3·0 | 1·1 | 1·2 | $5·3^{89}$ | 5·1 | 1·2 | 2·0 | $8·3^{71}$ | 5·2 | 1·4 | 1·4 | $8·0^{93}$ | 5·0 | 1·9 | 2·3 | $9·2^{152}$ | 3·6 | 2·5 | 2·5 | $8·6^{195}$ | 10·0 | 4·4 | 8·2 | $22·6^{67}$ | 4·0 | 2·0 | 6·0 | $12·0^{6}$ | |
| | 1903–6 | 11·9 | 5·2 | 10·5 | $[27·6]^{96}$ | 4·6 | 2·1 | 5·5 | $12·2^{111}$ | 4·2 | 1·9 | 2·4 | $8·5^{139}$ | 4·4 | 1·4 | 2·2 | $8·0^{306}$ | 5·1 | 1·9 | 1·7 | $8·6^{497}$ | 4·1 | 1·8 | 2·1 | $8·0^{923}$ | 4·6 | 1·9 | 2·0 | $8·5^{531}$ | 4·6 | 1·9 | 2·1 | $8·6^{774}$ | 7·5 | 2·8 | 3·4 | $13·8^{797}$ | 7·7 | 3·6 | 5·0 | $16·2^{887}$ | 10·7 | 4·1 | 6·3 | $21·2^{680}$ | 16·4 | 7·8 | 7·8 | $32·0^{73}$ | |
| H | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2·9 | 0·6 | 1·2 | $4·6^{21}$ | 12·4 | 12·2 | 18·4 | $43·0^{56}$ | 8·2 | 2·9 | 3·1 | $14·2^{70}$ | 3·2 | 1·4 | 3·2 | $7·8^{26}$ | 9·3 | 2·4 | 2·9 | $14·6^{74}$ | 8·9 | 3·5 | 3·5 | $15·9^{31}$ | 41·0 | 14·5 | 18·0 | $73·5^{139}$ | 18·9 | 7·9 | 20·7 | $47·5^{206}$ | 10·0 | 5·1 | 19·3 | $34·3^{474}$ | H |
| | 1904 | 5·5 | 3·6 | 10·8 | $19·9^{579}$ | 6·1 | 3·7 | 7·3 | $17·2^{256}$ | 4·0 | 8·0 | 8·0 | $20·0^{6}$ | ... | ... | ... | ... | 1·2 | — | — | $1·2^{5}$ | 1·7 | 12·3 | 4·0 | $18·1^{119}$ | — | 12·3 | 7·1 | $19·3^{57}$ | 6·0 | 2·0 | 4·0 | $12·0^{6}$ | 8·4 | 3·6 | 3·6 | $15·6^{33}$ | 2·7 | — | 5·3 | $8·0^{4}$ | 18·7 | 8·9 | 15·8 | $43·5^{66}$ | 14·4 | 6·7 | 14·6 | $35·8^{553}$ | |
| | 1905 | 5·8 | 3·4 | 6·3 | $15·5^{421}$ | 3·1 | 2·3 | 3·6 | $9·0^{444}$ | ... | ... | ... | ... | 2·0 | 2·0 | 4·0 | $8·0^{6}$ | 12·8 | 5·1 | 3·6 | $21·4^{23}$ | 10·0 | 4·0 | 4·0 | $18·0^{12}$ | 4·8 | — | 1·2 | $6·0^{10}$ | 12·0 | 2·0 | 4·0 | $18·0^{6}$ | 21·0 | 3·0 | 6·0 | $30·0^{4}$ | 12·0 | 3·0 | 10·0 | $25·0^{12}$ | 11·4 | 6·1 | 12·9 | $30·4^{309}$ | 6·5 | 3·8 | 8·9 | $19·2^{221}$ | |
| | 1906 | 5·1 | 2·4 | 4·4 | $11·9^{316}$ | 5·5 | 3·9 | 7·2 | $16·7^{399}$ | 3·3 | 2·0 | 5·1 | $10·4^{42}$ | ... | ... | ... | ... | 8·4 | 1·2 | 2·4 | $12·0^{19}$ | 8·6 | 1·8 | 3·4 | $13·8^{19}$ | 12·8 | 2·5 | 4·6 | $19·9^{31}$ | 6·1 | 1·5 | 0·9 | $8·5^{55}$ | 8·0 | 8·7 | 7·3 | $24·0^{33}$ | 17·9 | 6·2 | 8·6 | $32·7^{96}$ | 13·4 | 4·5 | 13·8 | $31·7^{245}$ | 5·5 | 4·0 | 7·1 | $16·6^{325}$ | |
| | 1903–6 | 5·5 | 3·3 | 7·8 | $16·6^{1316}$ | 4·7 | 3·2 | 5·8 | $13·7^{1100}$ | 3·4 | 2·7 | 5·5 | $[11·6]^{48}$ | 2·7 | 0·9 | 1·8 | $5·4^{97}$ | 10·0 | 7·0 | 9·6 | $26·6^{89}$ | 4·8 | 7·9 | 3·7 | $16·5^{279}$ | 5·8 | 6·4 | 5·3 | $17·4^{704}$ | 7·3 | 1·8 | 1·8 | $[11·0]^{91}$ | 8·9 | 5·2 | 4·9 | $19·0^{101}$ | 30·1 | 10·5 | 13·8 | $54·4^{232}$ | 14·4 | 6·3 | 15·4 | $36·1^{827}$ | 10·1 | 5·3 | 13·7 | $29·1^{1573}$ | |
| J | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4·2 | 1·1 | 0·8 | $6·2^{162}$ | 6·9 | 1·8 | 1·6 | $10·3^{216}$ | 5·5 | 1·4 | 2·2 | $9·1^{77}$ | 8·0 | 2·0 | 6·0 | $16·0^{6}$ | ... | ... | .. | ... | 5·3 | 2·0 | 2·7 | $10·0^{36}$ | 8·1 | 4·6 | 10·5 | $23·2^{102}$ | 8·9 | 3·1 | 6·2 | $18·3^{215}$ | 12·0 | 5·1 | 13·3 | $30·4^{19}$ | J |
| | 1904 | 3·7 | 1·7 | 4·7 | $10·1^{248}$ | 5·0 | 2·6 | 3·5 | $11·2^{279}$ | 5·5 | 2·4 | 2·4 | $10·4^{24}$ | 5·5 | 2·7 | 3·0 | $11·3^{393}$ | 7·8 | 2·8 | 3·4 | $14·0^{293}$ | 4·7 | 1·7 | 1·7 | $8·1^{49}$ | ... | ... | ... | ... | ... | ... | ... | ... | 19·1 | 12·3 | 9·3 | $40·6^{44}$ | 6·2 | 3·0 | 3·7 | $12·9^{162}$ | 6·7 | 2·7 | 3·2 | $12·6^{268}$ | 11·8 | 4·2 | 7·6 | $23·5^{52}$ | |
| | 1905 | 3·2 | 1·4 | 2·4 | $7·0^{60}$ | 3·5 | 1·4 | 2·9 | $7·7^{118}$ | 3·1 | 1·5 | 1·1 | $5·7^{55}$ | 4·8 | 2·1 | 1·6 | $8·5^{231}$ | 5·7 | 2·2 | 2·0 | $9·9^{281}$ | 6·5 | 2·2 | 2·0 | $10·7^{91}$ | 7·8 | 1·9 | 2·1 | $11·8^{123}$ | ... | ... | ... | ... | 11·7 | 3·8 | 2·7 | $18·1^{183}$ | 8·2 | 4·1 | 5·4 | $17·7^{276}$ | 10·2 | 2·7 | 5·3 | $18·3^{185}$ | 11·7 | 2·6 | 4·3 | $18·6^{42}$ | |
| | 1906 | 4·0 | 1·3 | 3·3 | $8·7^{18}$ | 3·0 | 1·0 | 1·8 | $5·8^{97}$ | 3·0 | 1·4 | 1·0 | $5·4^{138}$ | 5·6 | 2·3 | 2·3 | $10·2^{327}$ | 4·1 | 2·2 | 2·1 | $8·4^{307}$ | 5·5 | 2·8 | 2·2 | $10·5^{333}$ | ... | ... | ... | ... | 9·3 | 1·8 | 3·1 | $14·2^{112}$ | 11·0 | 1·8 | 3·5 | $16·3^{59}$ | 7·8 | 3·4 | 6·0 | $17·2^{357}$ | 8·4 | 4·5 | 6·4 | $19·3^{202}$ | 9·0 | 3·4 | 6·0 | $18·4^{32}$ | |
| | 1903–6 | 3·6 | 1·6 | 4·2 | $9·5^{326}$ | 4·3 | 2·0 | 3·0 | $9·3^{495}$ | 3·8 | 1·8 | 1·5 | $7·1^{287}$ | 5·2 | 2·2 | 2·2 | $9·7^{1114}$ | 6·0 | 2·3 | 2·3 | $10·6^{1198}$ | 5·6 | 2·4 | 2·1 | $10·1^{553}$ | 7·8 | 1·9 | 2·3 | $12·0^{129}$ | 9·3 | 1·8 | 3·1 | $14·2^{172}$ | 11·8 | 4·4 | 3·7 | $19·9^{324}$ | 7·7 | 3·7 | 5·9 | $17·2^{909}$ | 8·4 | 3·2 | 5·1 | $16·7^{870}$ | 11·2 | 3·6 | 7·0 | $21·8^{145}$ | |
| M | 1903 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6·5 | 2·3 | 0·6 | $9·4^{42}$ | 11·4 | 5·7 | 1·9 | $19·0^{19}$ | 6·5 | 2·0 | 0·8 | $9·4^{29}$ | ... | ... | ... | ... | 6·5 | 6·5 | 1·5 | $14·5^{24}$ | ... | ... | ... | ... | ... | ... | ... | ... | 10·9 | 3·9 | 5·6 | $20·4^{107}$ | 3·2 | 0·2 | 3·6 | $7·0^{64}$ | M |
| | 1904 | 2·4 | 1·2 | 4·5 | $8·1^{196}$ | 5·0 | 1·9 | 2·0 | $9·0^{164}$ | 3·6 | 1·7 | 2·0 | $7·3^{166}$ | 7·7 | 3·7 | 3·0 | $14·5^{236}$ | 7·2 | 2·9 | 2·5 | $12·7^{455}$ | 7·1 | 2·7 | 3·6 | $13·3^{49}$ | ... | ... | ... | ... | ... | ... | ... | ... | 28·0 | 5·3 | 9·3 | $42·7^{18}$ | 10·7 | 2·6 | 3·9 | $17·1^{28}$ | 9·0 | 2·5 | 3·3 | $14·8^{141}$ | 4·1 | 2·3 | 3·1 | $9·5^{73}$ | |
| | 1905 | 3·7 | 1·4 | 2·0 | $7·1^{269}$ | 1·0 | 0·8 | 1·2 | $2·9^{31}$ | 2·7 | 1·4 | 1·7 | $5·8^{222}$ | 6·8 | 1·8 | 2·0 | $10·6^{318}$ | 4·7 | 1·7 | 1·7 | $8·1^{198}$ | 5·2 | 3·1 | 1·9 | $10·1^{51}$ | 2·0 | 1·0 | 0·5 | $3·4^{24}$ | ... | ... | ... | ... | 6·0 | 0·9 | 3·4 | $10·3^{14}$ | 8·9 | 2·9 | 4·7 | $16·4^{128}$ | 5·9 | 1·8 | 4·9 | $12·6^{79}$ | 4·0 | 1·6 | 3·5 | $9·1^{157}$ | |
| | 1906 | 3·4 | 1·8 | 2·9 | $8·1^{283}$ | 2·3 | 1·2 | 1·6 | $5·1^{231}$ | 2·6 | 1·3 | 1·3 | $5·2^{289}$ | 4·6 | 1·4 | 1·7 | $7·8^{248}$ | 8·9 | 2·1 | 1·8 | $12·8^{197}$ | 7·8 | 2·0 | 1·6 | $11·4^{133}$ | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9·9 | 4·8 | 8·6 | $23·4^{75}$ | 6·1 | 3·0 | 5·4 | $14·5^{84}$ | 6·9 | 3·0 | 6·4 | $16·3^{189}$ | |
| | 1903–6 | 3·2 | 1·5 | 3·0 | $7·8^{849}$ | 3·2 | 1·5 | 1·7 | $6·4^{426}$ | 2·8 | 1·4 | 1·5 | $5·7^{977}$ | 6·4 | 2·3 | 2·2 | $10·9^{545}$ | 7·1 | 2·5 | 2·2 | $11·8^{670}$ | 7·0 | 2·3 | 1·9 | $11·2^{254}$ | 2·0 | 1·0 | 0·5 | $[3·4]^{24}$ | 6·5 | 6·5 | 1·5 | $[14·5]^{24}$ | 18·4 | 3·4 | 6·7 | $[28·5]^{32}$ | 9·4 | 3·5 | 5·9 | $18·8^{231}$ | 8·3 | 2·8 | 4·6 | $15·8^{412}$ | 5·1 | 2·1 | 4·6 | $11·7^{483}$ | |

N.B.—In this table all fractions of an hour in the index numbers have been omitted, the unit figure being raised by 1 when the fraction was ¾. The total number of hours in the last line of each group is the correct total and not the total of the figures printed.

but we have no information as to the proportion in April, as this particular fisherman was not fishing here during this month; but one of the other skippers, by whom was made a record of one voyage in the northern part of this area in May, 1903, records a considerable number of spawning soles. The evidence therefore suggests the conclusion that these two shallow areas are amongst the best spawning grounds for soles in this region. The percentage values given in the last column affords a rough means of comparing the abundance in each month. April has considerably higher values than the months preceding and following it, and as the values fall away on each side of this month it may be taken as the height of the spawning season in this region.

The skipper whose records these are, informs us that "spawning" meant "with roe in" and not necessarily in the condition of actually spawning, and in 1906 several instances occur in the months preceding April, in which they are recorded as such, and we may take it that he means "maturing" in most cases. Owing to this, the numbers of really spawning soles recorded from November to March are considerably augmented, and we may gather that they are not nearly so frequently found in the winter months as one would be led to believe from a first glance at the table.

The quantities of soles found spawning are generally entered in the records as "few," sometimes the numbers are given. In such cases there are from 1–5 spawning soles in each haul. In April the numbers rise considerably to as many as from 10–14 in each haul, which further confirms the fact that they are most frequent in this month.

## *General Conclusions.*

*A. Distribution.*—The number of soles caught in the Flemish Bight is not very great. They show the following seasonal and geographical distribution. They are far more numerous on the English than on the continental side, and increase in numbers from east to west. The maximum catch is over 80 (per six hours' fishing) on the western side, and only 30 on the eastern side of the deep water. Moreover, they also become numerically greater as we move northwards.

As a rule large soles predominate in the catches; over the whole area they form nearly one half of the total number caught. Slips, however, form a large proportion of the catch in A and D, the two grounds nearest the English coast, where the sole nursery grounds are to be found. Their maximum abundance is found in spring in these two coastal grounds. In all other areas their period of maximum abundance is found in autumn and winter, and their minimum abundance in spring.*

*B. Migrations.*—The evidence on this point is by no means conclusive, and we can only offer suggestions. These, gathered as they are from figures which, in several instances are unsatisfactory, yet are put forward as an attempt to offer some hypothetical explanation of the movements of soles, to be corroborated or laid aside by the evidence of further statistics.

There is probably a movement northwards through this region from September and throughout the colder months, for we have seen that in area M the soles are most abundant in September, in H and J in October, while in E and F November and December seem to be the best months. Perhaps, too, there is a movement between the deep water and the shallow flats off the English coast, the numbers in the latter area being augmented in early spring by a migration from the deeper water. In the cold months the eastern and middle areas all show an increase which would point to an augmentation in the stock from some grounds lying outside the regions investigated, perhaps from the shallower coastal waters where they have been residing during the earlier part of the year for the purpose of spawning.

It should be noticed too that these increases, though participated in by all three sizes of soles, yet are much more marked among the large soles, showing that a larger proportion of these migrate and cause the greater part of the increase in any ground. The exceptions to this rule are those areas A and D, which, being in close proximity to the English nursery grounds, are more affected by the immigration of slips.

*C. Spawning.*—As far as one can conclude from the scanty figures at our disposal, spawning fish are found frequently in March, April, and May, with a few occurrences in the months preceding. The shallower grounds, perhaps especially those on the English coast, have a larger frequency of spawning fish than the deeper water.

In conclusion, it is evident that there is room for far more investigation into the habits and movements of this species, and especially into the causes of their movements, which knowledge is necessary to fully explain the phenomena shown by these records.

* Garstang. Trawling Investigations.—Area V. Flemish Bight.—*International Investigations. Mar. Biol. Assoc. Report I.* 1905, *Cd.* 2760.

# APPENDIX.

## FORMS ON WHICH THE RECORDS WERE COLLECTED.

*A.—Forms used by Skippers in recording single hauls up to April 1904.*

MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM, SURVEY OF TRAWLING GROUNDS.

Date Vessel of

Name of Ground

Position or bearings

Depth Nature of bottom

Hour when shot How long towed Hours.

| Fish. | Number of | Fish. | Number of. |
|---|---|---|---|
| Plaice ... { Large ... ... / Medium ... / Small ... ... | Fish. / Trunks. / Do. | Cod ... { Large ... ... / Medium ... / Codling ... | Fish. / Trunks. / Do. |
| Flounders ... ... ... / Dabs ... ... ... ... / Lemons ... ... ... ... | Trunks. / Do. | Gurnard ... ... ... / Latchets (Tubs) ... ... / Ling ... ... ... ... | Trunks. |
| Turbot ... { Large ... ... / Small ... ... | Fish. / Do. | Haddock { Large ... ... / Small ... ... | Trunks. / Do. |
| Brill ... ... ... ... | Fish. | Whiting ... ... ... | Trunks. |
| Soles ... { Large ... ... / Medium ... / Slips ... ... | Pairs. / Do. / Do. | Skate ... ... ... ... / Roker ... ... ... ... | |

### REFUSE AND SUNDRIES.

| Kind. | Quantity. | Kind. | Quantity. |
|---|---|---|---|
| Dog Fish .. ... ... / Star Fish ... ... ... | | Squid ... ... ... ... / Whelks ... ... ... | |

### SPAWNING FISH.

| | | |
|---|---|---|
| Plaice / Cod | Turbot / Whiting | Sole / Haddock |

Signed Master. Date

*B.—Forms used by Skippers in recording single hauls, since April, 1904.*

MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM, SURVEY OF TRAWLING GROUNDS.

Date Vessel of

Name of Ground

Position when trawl shot

Depth Soil

Hour when shot How long towed Hours.

Course

Wind Sea

| Fish. | Number of. | Fish. | Number of. |
|---|---|---|---|
| Plaice ... Large ... ... | Baskets. | Cod ... Large ... ... | Score. |
| Medium ... | Do. | Medium ... | Do. |
| Small ... ... | Do. | Codling ... | Baskets. |
| Witches ... ... ... ... | Baskets. | Gurnard ... ... ... | Baskets. |
| Dabs ... ... ... ... | Do. | Latchets (Tubs) ... ... | Do. |
| Lemons ... ... ... ... | Do. | Ling ... ... ... ... | Score. |
| Turbot ... Large ... ... | Fish. | Haddock Large ... ... | Baskets. |
| Small ... ... | Do. | Small ... ... | Do. |
| Brill ... ... ... ... | Fish. | Whiting ... ... ... | Baskets. |
| Soles ... Large ... ... | Pairs. | Skate ... ... ... ... | Score. |
| Medium ... | Do. | Roker ... ... ... ... | Do. |
| Slips ... ... | Do. | Dog Fish ... ... ... (*State which kind*) | Do. |

NOTE.—In cases when the fish are less than a basket-full state whether $\frac{1}{4}$, $\frac{1}{2}$, or $\frac{3}{4}$ basket. If less than $\frac{1}{4}$ basket (or Score), state the actual number, *and cross out the word "basket" (or "score").*

SPAWNING FISH.

State whether few, many or none, and whether large or medium-sized.

| | | |
|---|---|---|
| Plaice | Turbot | Sole |
| Cod | Whiting | Haddock |

Signed Master. Date

*C.—Forms used by Skippers in recording result of whole voyage.*

MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM, SURVEY OF TRAWLING GROUNDS.

SUMMARY OF VOYAGE.

Port of Departure Date

„ Arrival Date

Number of hauls omitted (if any)

General result of voyage (Good, Moderate, or Bad).

TOTAL FISH LANDED.

(State number of boxes, scores, &c., in each case.)

| Fish. | Quantity. | Fish. | Quantity. |
|---|---|---|---|
| Plaice ... { Large ... ... Medium ... Small ... ... | | Cod ... { Large ... ... Medium ... Codling .. | |
| Witches ... ... ... ... Dabs ... ... ... ... Lemons ... ... ... ... | | Gurnard ... ... ... Latchets (Tubs) ... ... Ling ... ... ... ... | |
| Turbot ... { Large ... ... Small ... ... | | Haddock { Large ... ... Small ... ... | |
| Brill ... ... ... ... | | Whiting ... ... ... | |
| Soles ... { Large ... ... Medium ... Slips ... ... | | Skate ... ... ... ... Roker ... ... ... ... | |

Date Vessel Signed Master.

# South Part of North Sea

Scale 1 : 1,200,000

# LOWESTOFT TRAWLING SMACKS.

# CHART OF FISHING GROUNDS.

Declination at 53° 20′ N. 3° 20′ E. (1895)

**Contour Lines**

| | |
|---|---|
| 10 | metre line |
| 20 | ,, ,, |
| 40 | ,, ,, |
| 50 | ,, ,, |

**Equivalent Depths**

| | | | |
|---|---|---|---|
| 1 | metre = | 0·5 | fathom |
| 10 | metres = | 5·4 | fathoms |
| 20 | ,, = | 10·9 | ,, |
| 40 | ,, = | 21·8 | ,, |
| 50 | ,, = | 32·8 | ,, |
| 1 | fathom = | 1·8 | metres |
| 5 | fathoms = | 9·1 | ,, |
| 10 | ,, = | 18·2 | ,, |
| 20 | ,, = | 38·6 | ,, |
| 30 | ,, = | 55·0 | ,, |

**Lights**

Houses ▲ Vessels ⚓

The position of the light is indicated by the black spot.

Weller & Graham, Ltd Litho. London. 2204. 1. 08.

# TRAWLING INVESTIGATIONS, 1904-5.

I.—PARTICULARS OF TRAWLING STATIONS OF S.S. *HUXLEY*.

II.—DETAILED MEASUREMENTS OF PLAICE CAUGHT AT EACH HAUL OF THE COMMERCIAL TRAWLS. S.S. *HUXLEY*.

III.—SUMMARIES OF HAULS MADE BY S.S. *HUXLEY*, DISTINGUISHING THE SIZES OF FISH IN 10 CM. GROUPS.

With Charts 1–4 at the End.

# I.—PARTICULARS OF TRAWLING

## Explanations of Abbreviations

gvl. or grv. = gravel.
m. = mud.
ooze = fine mud of little tenacity.
ross = sand-tubes of **Sabellaria spinulosa,** aggregated in rough masses.
s. = sand.
sh. = shells.
br. = brown.

*Came fast.*—The trawl was stopped by some part of it encountering an obstacle (*e.g.*, wrecks, ross-banks, boulders).
*Foul haul.*—A haul in which normal fishing was prevented by accident to some part of the trawl or warps

| Voyage. | Station | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XXV | 1 | 1904. Jan. | 2 | O 146 | Lower Scruff .. | 54° 53½′ N., 4° 48½′ E. | N.E. ½ E. 2 miles<br>N. by E. ½ E. 10 miles. | 55° 5½′ N., 4° 53½′ E. | 21½ | 22 | 21½ | f.l.s. | .. | f.l.s. |
| „ | 2 | „ | „ | O 147 | „ „ .. | 55° 5½′ N., 4° 53½′ E. | N.N.W. ¾ mile<br>N.E. ½ E. 12 miles. | 55° 15½′ N., 5° 6′ E. | 21½ | 22½ | 24½ | f.l.s. | .. | f.g.s. |
| „ | 3 | „ | 5 | O 148 | South East of Tail End of Dogger. | 55° 31½′ N., 4° 45′ E. | S.S.E. 15 miles | 55° 19½′ N., 4° 59′ E. | 17 | 19–21 | 23 | spk.s. | .. | f.sharp.s. |
| „ | 4 | „ | „ | O 149 | East of Tail End of Dogger. | 55° 18′ N., 5° 12′ E. | N.W. 3 miles<br>E.S.E. 14 miles. | 55° 17′ N., 5° 33¾′ E. | 23 | .. | 24 | f.s. | .. | s. & o. |
| „ | 5 | „ | „ | O 150 | West of Horn Reef Outer. | 55° 17′ N., 5° 33¾′ E. | E. by N. 15 miles | 55° 24′ N., 5° 59′ E. | 24 | .. | 26 | s. & o. | .. | s. & o. |
| „ | 6 | „ | 6 | O 151 | West part of Horn Reef Outer. | 55° 24½′ N., 6° 6½′ E. | E. by N. ⅜ N. 15 miles | 55° 31′ N., 6° 30′ E. | 26 | 23 | 21 | s. & o. | s. & o. | s. & o. |
| „ | 7 | „ | „ | O 152 | Horn Reef Outer .. | 55° 31′ N., 6° 30′ E. | S. 2 miles<br>N. 6¾ miles.<br>S.S.E. 4 miles. | 55° 32¼ N., 6° 33′ E. | 21 | 22 | 22 | s. & o. | .. | s. & o. |
| „ | 8 | „ | „ | O 153 | „ „ „ .. | 55° 32¼′ N., 6° 33′ E. | E.S.E. 1 mile<br>N. by E. 5 miles.<br>S. 5 miles.<br>N. by W. 3¾ miles. | 55° 35½′ N., 6° 34½′ E. | 22 | 22 | 22 | s. & o. | .. | s. & o. |
| „ | 9 | „ | 6-7 | O 154 | „ „ „ .. | 55° 35½′ N., 6° 34½′ E. | S. ½ W. 2½ miles<br>N. by E. 7 miles.<br>S. ½ W. 3 miles. | 55° 37′ N., 6° 35′ E. | 22 | 22 | 22 | s. & o. | .. | s. & o. |
| „ | 10 | „ | 7 | O 155 | „ „ „ .. | 55° 37′ N., 6° 35′ E. | S. 2 miles<br>N. ½ E. 7 miles.<br>S. 5 miles. | 55° 38′ N., 6° 37½′ E. | 22 | 22 | 20 | s. & o. | .. | f.s. & o. |
| „ | 11 | „ | 8 | O 156 | Borkum Outer .. | 54° 21′ N., 5° 59′ E. | S.E. by S. ½ S. 9½ miles | 54° 14′ N., 6° 9⅓′ E. | 22 | 22 | 20½ | f.d.s. | .. | f.s. & o. |
| „ | 12 | „ | „ | O 157 | „ „ .. | 54° 14′ N., 6° 9½′ E. | N.E. by E. ¾ E. 3¼ miles<br>W. by N. 10 miles. | 54° 16′ N., 5° 53′ E. | 20½ | 21 | 22 | f.s. & o. | .. | f s. & m. |
| „ | 13 | „ | „ | O 158 | „ „ .. | 54° 16′ N., 5° 53′ E. | .. .. .. .. | 54° 16′ N., 5° 53′ E. | 22 | .. | 22 | s m. | .. | s.m. |
| „ | 14 | „ | 9 | B 100 | „ „ .. | 54° 17′ N., 6° 14′ E. | W. ⅞ N. 14 miles | 54° 16½′ N., 5° 49′ E. | 21 | 21 | 21 | f.s. & o. | .. | f.s. & m. |
| XXVI | 2 | „ | 19 | B 101 | North East of Blakeney Overfall. | 53° 4⅛′ N., 1° 3¾′ E. | N.W. by N. ¼ N. 5 miles<br>N.E. by N. ¼ N. 1½ miles. | 53° 9′ N., 0° 58′ E. | 10 | .. | 10 | c.s. & sh. | .. | c.s. |
| „ | 3 | „ | 20 | B 102 | Lynn Deep .. .. | 52° 57¼′ N., 0° 17½′ E. | N.E. by E. 1½ miles | 52° 59′ N., 0° 20′ E. | 12 | .. | 10 | c.s. | .. | c.s. & m. |
| XXVII | 1 | Feb. | 26 | B (c) 103 | Teignmouth Bay .. | 50° 29¼′ N., 3° 29¼′ W. | E. by S. 1½ miles<br>W.N.W. 1½ miles.<br>E. 1½ miles. | 50° 30½′ N., 3° 29¼′ W. | 6 | 8 | 10 | s. & m. | s. & m. | s. |
| „ | 2 | „ | „ | B 104 | Off the Ledge .. | 50° 29¼′ N., 3° 21′ W. | E. by N. 2 miles | 50° 30½′ N., 3° 18½′ W. | 14 | 14 | 14 | s. & sh. | .. | s & sh. |
| „ | 3 | „ | 27 | B 105 | Inside Eastern Scruff | 50° 31′ N., 2° 58′ W. | N.E. ¾ N. 5 miles<br>E. 4 miles. | 50° 36′ N., 2° 47⅝′ W. | 22 | 19 | 17 | blk. spk.s. | .. | f.s. |

# STATIONS OF S.S. "*Huxley*."

## AND PHRASES.

O. = Otter Trawl.
B. = Beam Trawl.
O. (c.) = Otter Trawl covered with fine meshed netting.
B. (c.) = Beam Trawl covered with fine meshed netting.

c. = coarse (Bottom Deposits.)
d. = dark.
f. = fine.
g. = grey.
l. = light.
r. = ross.
spk. = speckled.

c. = common (Bottom Fauna).
fc. = fairly common
vc. = very common

*Had a pull out*, or *Pulled out*.—The trawl came fast temporarily, but resumed its course.

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks. Trawlers Working, &c. Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 8 a.m. | 1 p.m. | 5 | Nil | Moderate | S.E. 4 | Overcast | Net slightly torn | Not recorded; no Naturalists on board .. | C. W. Dance. Passed several "fleeting" steamers and S.S. Hornsea, cutter, of Hull. Spoke the S.S. Ely, of Hull. |
| 2 p.m. | 7 p.m. | 5 | Nil | Rough | S.E. by S. 6. | Cloudy | — | " " " .. | Several steam trawlers passed us. |
| 12.15 a.m. | 7 a.m. | 6¾ | Nil | Moderate | S. by E. 4. | Overcast | Net very badly torn. | " " " .. | Spoke S.S. Topaz, of Hull. |
| Noon | 6 p.m. | 6 | Nil | Moderate | S.E. | Overcast | — | " " " .. | 4 steam trawlers with us. |
| 6.30 p.m. | Midnight | 5½ | Nil | Moderate | E. by S. 3. | Overcast | Net slightly torn | " " " .. | 2 steam trawlers with us. |
| 1 a.m. | 7 a.m. | 6 | Ni | Smooth | E. by S. 3. | Overcast | — | " " " .. | 1 steam trawler with us; several steamers passed south westwards. |
| 7.30 a.m. | 1 p.m. | 5½ | Ni | Moderate | S.E. 3 | Overcast | — | " " " .. | 3 steam trawlers with us. |
| 1.30 p.m. | 7.30 p.m. | 6 | Nil | Smooth | S. 2 | Overcast | — | " " " .. | 2 steam trawlers with us. |
| (6th) 8 p.m. | (7th) 1.30 a.m. | 5½ | Nil | Smooth | S.W. 3 | Overcast and cloudy. | — | " " " .. | 2 steam trawlers with us. |
| 2 a.m. | 7.30 a.m. | 5½ | Nil | Rough | S.W. by S. 5. | Overcast, dull. | — | " " " .. | 2 steam trawlers with us. |
| 11.45 a.m. | 3.45 p.m. | 4 | 1 hour ebb; 3 hours flood. | Moderate | S.W. by S. 3. | Overcast and thick fog. | — | " " " .. | SS. Garnet of Yarmouth, S.S. Agami of Grimsby with us. |
| p.m. | 9 p.m. | 5 | 2 hours flood; 3 hours ebb. | Smooth | S. 2 | Dull, overcast, rainy. | — | " " " .. | 4 steam trawlers with us. |
| 9.30 p.m. | .. | .. | Third hour ebb. | .. | .. | .. | Net "all to pieces" | " " " .. | Came fast immediately; hove up again. |
| 7 a.m. | 11.45 a.m. | 4¾ | Last 4½ hours flood. | Smooth | Variable 2. | Cloudy | — | " " " .. | S.S. Majestic and S.S. Gardenia of Grimsby and several other steam trawlers with us. |
| 3 p.m. | 5 p.m. | 2 | From 3 to 5 hours ebb. | Smooth | S.E. by E. 2. | Cloudy, hazy. | — | *Flustra foliacea* .. .. .. .. .. *Sabellaria spinulosa.* *Hyas araneus.* *Cottus sp.* | J. O. Borley, G. T. Atkinson. |
| 9 a.m | 9.30 a.m. | ½ | From 1½ to 2 hours ebb. | Smooth | S.S.W. 2. | Fine, hazy | Net very badly torn. | Practically nothing caught .. .. .. | 9.30 a.m. came fast to wreck, hauled, broke brass socket of port brake of winch. |
| 9.15 a.m. | 12.15 p.m. | 3 | First 3 hours flood. | Moderate | S.E. by S. 4-6. | Dull, rainy | Small hole in square and in small-meshed net over cod-end. | **Hydrallmania falcata** v.c., **Sertularia abietina** v.c., **Actinoloba dianthus** v.c. *Buccinum undatum* spawn v.c. *Asterias rubens* f.c. *Solea lutea* f.c. | W. Wallace, D. J. Matthews. Cod end covered above with small-meshed net. |
| 1.45 p.m. | 2.45 p.m. | 1 | Third to fourth hours flood. | Rough | S.E. 6 | Dull, rainy | Trawl very badly torn. | **Hydrallmania falcata** v.c., **Sertularia abietina** v.c., *Actinoloba dianthus* c. *Lepralia foliacea* c. *Buccinum undatum* and spawn f.c. *Asterias rubens* f.c., *Echinus esculentus* f.c. | Had a pull out hauled. |
| 11.30 a.m. | 3.30 p.m. | 4 | 1 hour before low water at Dover, and 3 hours before high water at Dover. | Smooth | Calm | Overcast | Net parted when hoisting on board; lost cod end. | Nothing reached the deck, but **Asterias rubens** appeared very common. | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XXVII | 4 | Feb. | 27 | O 159 | Inside Eastern Scruff | 50° 36′ N., 2° 47⅝′ W. | S.W. ⅜ S. 2⅜ miles S.W. by W. ¾ W. 4½ miles. | 50° 30¼° N., 2° 53¼′ W. | 17 | 20 | 23 | f.s. | .. | spk.s. |
| ,, | 6 | Mar. | 1 | B 106 | North Hinder .. | 51° 46′ N., 2° 43⅜′ E. | S. by E. ¾ E. 2¼ miles | 51° 44¼′ N., 2° 45′ E. | 21 | .. | 20 | f.s. | .. | f.s. |
| XXVIII | 2 | ,, | 10 | B (c) 107 | Lynn Deep .. .. | 52° 59¾′ N., 0° 21′ E. | W.S.W. 2½ miles | 52° 58¼′ N., 0° 19′ E. | 16 | .. | 12 | m. & ross. | .. | m. & ross. |
| ,, | 4 | ,, | ,, | B 108 | ,, ,, .. .. | 52° 57¾′ N., 0° 18½′ E. | S.W. by W. ½ W. 2 miles | 52° 56⅝′ N., 0° 16¼′ E. | 12 | .. | 10 | s. | .. | m. |
| ,, | 5 | ,, | 11 | O 160 | East part of South West Patch of Dogger. | 54° 26⅛′ N., 2° 25¼′ E. | N.E. ⅞ N. 6½ miles E. 6½ miles. | 54° 33¼′ N., 2° 40′ E. | 9 | 10 | 13 | f.s. | f.s. | f.s. |
| ,, | 7 | ,, | ,, | O 161 | Dogger, East of South West Patch. | 54° 32½′ N., 2° 40½′ E. | E.S.E. 5½ miles N.E. 6 miles. S.W. by S. 5½ miles. | 54° 32¼′ N., 2° 53′ E. | 14 | 16 | 17 | f.s. & sh. | f.s. | f.s. |
| ,, | 9 | ,, | 11-12 | O 162 | ,, ,, | 54° 32¼′ N., 2° 53′ E. | S.W. 5 miles E.S.E. 5 miles. N. 5 miles. | 54° 32′ N., 2° 55¼′ E. | 17 | 16 | 16½ | f.s. | f.s. | f.s. |
| ,, | 10 | ,, | 12 | O 163 | ,, ,, | 54° 32′ N., 2° 55¼′ E. | N.W. by W. 6 miles | 54° 33′ N., 2° 44½′ E. | 16½ | .. | 12½ | f.s. | .. | f.s. |
| ,, | 11 | ,, | ,, | O 164 | Eastern Shoal of Dogger Bank. | 54° 33′ N., 2° 44¼′ E. | N.W. ⅞ W. 9¾ miles | 54° 39′ N., 2° 20′ E. | 13 | 11 | 10½ | f.s. | f.s. | f.s. |
| ,, | 12 | ,, | ,, | O 165 | West of Eastern Shoal of Dogger Bank. | 54° 39′ N., 2° 20′ E. | N.W. by N. ¾ N. 5¼ miles | 54° 42½′ N., 2° 14½′ E. | 10½ | .. | 10½ | f.l.s. | .. | f.l.s. |
| ,, | 14 | ,, | ,, | O 166 | North West of Eastern Shoal of Dogger Bank. | 54° 42½′ N., 2° 14½′ E. | E.N.E. 10 miles N. by E. 6 miles. | 54° 55⅞′ N., 2° 29¾′ E. | 10½ | 12 | 13½ | f.l.s. | f.s. | f s. |
| ,, | 15 | ,, | 14 | B 109 | Leman Ground .. | 53° 19′ N., 2° 42¾′ E. | W. ⅝ N. 9¾ miles | 53° 17⅜′ N., 2° 26¾′ E. | 16 | 16 | 14½ | f.d.s. | f.d.s. | f.s. |
| ,, | 17 | ,, | ,, | B 110 | ,, ,, .. | 53° 17¾′ N., 2° 26′ E. | N.E. ⅝ E. 13½ miles | 53° 28¾′ N., 2° 40′ E. | 14½ | 15 | 16 | f.s. | f.d.s. | f.d.s. |
| ,, | 18 | ,, | ,, | B 111 | ,, ,, .. | 53° 28¾′ N., 2° 40′ E. | S.E. by S. ½ S. 11¾ miles | 53° 20¼′ N., 2° 53¾′ E. | 16 | .. | 16 | f.d.s. | .. | f.d.s. |
| ,, | 19 | ,, | 15 | B 112 | East of Leman .. | 53° 20⅜′ N., 3° 2′ E. | S. by E. ⅞ E. 8 miles | 53° 14⅛′ N., 3° 10′ E. | 16 | .. | 16 | f.d.s. | .. | f.d.s. |
| ,, | 21 | ,, | ,, | B 113 | Broad Fourteens .. | 52° 45¼′ N., 3° 48½′ E. | S.E. ⅝ S. 15½ miles | 52° 36′ N., 4° 8¾′ E. | 16 | .. | 12½ | f.g.s. | .. | f.g.s. |
| ,, | 23 | ,, | 15-16 | B 114 | West of Ymuiden .. | 52° 35¾′ N., 4° 8¾′ E. | S. by W. ⅞ W. 9¼ miles. E. ¼ N. 8½ miles. | 52° 29′ N., 4° 20½′ E. | 12½ | 11 | 10 | f.g.s. | f.g.s. | f.g.s. |
| ,, | 24 | ,, | 16 | B 115 | Off Ymuiden .. .. | 52° 29′ N., 4° 20½′ E. | E. ⅛ S. 4 miles. S. by W. ¾ W. 2½ miles N.W. ⅛ W. 2⅜ miles. | 52° 29′ N., 4° 22¾′ E. | 10 | 9½ | 8½ | f.s. | f.s. | f.s. |
| ,, | 26 | | ,, | B 116 | ,, ,, .. .. | 52° 28¾′ N., 4° 22¾′ E. | N.E. ⅜ N. 7½ miles | 52° 35½′ N., 4° 28′ E. | 8½ | .. | 9 | f.s. | .. | f.s. |
| | 27 | ,, | ,, | B 117 | Broad Fourteens .. | 52° 35¾′ N., 4° 3½′ E | N. ⅜ E. 5⅜ miles | 52° 41½′ N., 4° 1¾′ E. | 14 | .. | 14 | f.s. | .. | f.s. |
| XXIX | 1 | ,, | 22 | O 167 | Off Ymuiden .. .. | 52° 30′ N., 4° 17′ E. | S.E. by E. ¼ E. 3½ miles | 52° 29′ N., 4° 22½′ E. | 10½ | .. | 9½ | f.g.s. | .. | f.g.s. |
| | 2 | | , | O 168 | Off Egmond .. .. | 52° 29′ N., 4° 22½′ E. | N.E. by N. ⅜ N. 6⅞ miles | 52° 36′ N., 4° 25′ E. | 9½ | .. | 9 | f.g.s. | .. | f.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 5 p.m. | 7.30 p.m. | 2½ | 2½ hours before high water, to high water at Dover. | Smooth | W. 1-2 | Overcast | — | *Actinoloba dianthus* f.c.<br>*Aphrodite aculeata.*<br>**Pecten opercularis** v.c, *Maia squinado* f.c,<br>**Asterias rubens** v.c. | |
| 9.15 p.m. | 11.15 p.m. | 2 | From 4 to 6 hours flood. | Rough | E.N.E. 6. | Overcast | Net very badly torn. | Nothing taken | |
| 7.15. a.m. | 8.15 a.m. | 1 | First hours flood. | Rough | N.E. by N. 5. | Cloudy, with showers. | Small meshed net over cod-end torn to pieces. | *Hydrallmania falcata* f.c., *Sertularia abietina* f.c., *Antennularia antennina.*<br>*Flustra foliacea* f.c.<br>*Sabellaria spinulosa* f.c.<br>*Modiola modiolus* f.c.<br>*Hyas araneus* c.<br>*Asterias rubens.*<br>*Cottus scorpius.* | W. Wallace, R. A. Todd, G. T. Atkinson. |
| 8.45. a.m | 9.45 a.m. | 1 | Third hours flood. | Moderate | N.E. by N. 5. | Cloudy, fine. | — | As last station. | |
| 7.30 a.m. | 1.30 p.m. | 6 | Nil | Moderate | N.N.E. 3-4. | Cloudy | Belly slightly torn. | **Obelia longissima** v.c. *Halecium halecinum.*<br>*Alcyonidium gelatinosum* c.<br>*Buccinum undatum* spawn c.<br>*Eupagurus bernhardus.*<br>*Asterias rubens* f.c., *Echinocardium cordatum.* | |
| 2.45 p.m. | 9.45 p.m. | 7 | Nil | Smooth | N. 1-2 | Light Clouds. | — | **Obelia longissima** v. abundant .. ..<br>*Asterias rubens* c. | 1 steam trawler with us. |
| (11th) 11 p.m. | (12th) 5.15 a.m. | 6¼ | Nil | Smooth | W. 1-2 | Cloudy | — | **Obelia longissima** v.c. .. .. ..<br>*Alcyonidium gelatinosum* c.<br>*Buccinum undatum* spawn c. | 1 steam trawler with us. |
| 6 a.m. | 8.30 a.m. | 2½ | Nil | Smooth | W.S.W. 2 | Overcast | Net slightly torn. | **Alcyonidium gelatinosum** v.c. ..<br>*Buccinum undatum* spawn f.c.<br>*Asterias rubens* c. | 2 steam trawlers with us. |
| 9.20 a.m. | 3 p.m. | 5¾ | Nil | Moderate | S.W. 4 | Overcast | Trawl slightly torn. | **Obelia longissima** v. abundant, *Coppinia arcta.*<br>**Alcyonidium gelatinosum** v.c.<br>*Buccinum undatum* and spawn c., *Natica catena* spawn c., *Lacuna crassior* and spawn.<br>*Asterias rubens* c. | |
| 3.35p.m. | 5.35 p.m. | 2 | Nil | Moderate | S.W. 4 | Overcast | — | *Alcyonidium gelatinosum* c. .. .. ..<br>*Buccinum undatum* spawn. | 1 steam trawler with us. |
| 6 p.m. | Midnight | 6 | Nil | Rough | S.S.W. 7 | Overcast | Net badly torn. | *Obelia longissima*, dead f.c.. .. .. ..<br>**Alcyonidium gelatinosum,** v. abundant, drifted.<br>*Fusus antiquus, Buccinum undatum* and spawn. | 2 steam trawlers with us. |
| 7 a.m. | Noon | 5 | Last hours flood ; 4 hours ebb. | Smooth | S.W. 4 | Overcast, dull, hazy. | — | *Asterias rubens* f.c., *Echinocardium* sp.<br>*Solea lutea* c. | |
| 1 p.m. | 6 p.m. | 5 | 3 hours ebb ; 2 hours flood. | Smooth | Variable 4-1. | Dull, thick, rainy. | — | *Actinoloba dianthus* on oyster shell.<br>*Asterias rubens.*<br>*Solea lutea* c. | |
| 6.30 p.m. | 10.30 p.m. | 4 | 3 hours flood ; 1 hours ebb. | Rough | N.N.E. 7 | Dull, heavy rain. | — | *Eupagurus bernhardus.*<br>*Asterias rubens.* | |
| 6.45 a.m. | 9 a.m. | 2¼ | Last 2 hours flood. | Moderate | N.N.E. 4 | Fine, cloudy. | — | *Asterias rubens* f.c., *Ophiura ciliaris.* | 2 Dutch sailing trawlers with us. |
| 3 p.m. | 9 p.m. | 6 | 3 hours ebb ; 3 hours flood. | Moderate | N.N.E. 1 | Fine, cloudy. | — | *Eupagurus bernhardus* .. .. .. .. | "Moorlog" present. Several Dutch fishing craft about us. |
| (15th) 9.30 p.m. | (16th) 4.30 a m. | 7 | 2 hours flood ; 5 hours ebb. | Moderate swell. | Calm | Fine, light clouds. | — | *Eupagurus bernhardus.*<br>*Asterias rubens* f.c. | |
| 5 a.m | 10.45 a.m. | 5¾ | Last hours ebb ; 5 hours flood. | Smooth | Variable. 1 | Fine, cloudy, hazy. | — | *Portunus holsatus.*<br>*Asterias rubens, Echinocardium cordatum.*<br>*Cottus scorpius* c. | |
| 11 a.m. | 2 p.m. | 3 | 3 hours ebb. | Smooth | Variable. 1 | Fine, hazy | — | *Crangon vulgaris, Eupagurus bernhardus.*<br>*Echinocardium cordatum.*<br>*Cottus scorpius* f.c. | |
| 4 p.m. | 6.15 p.m. | 2¼ | 2 last hours ebb. | Smooth | E. 3 | Fine, hazy | — | *Eupagurus bernhardus* .. .. .. .. | "Moorlog" present. |
| 6 a.m. | 7.30 a.m. | 1½ | 4½ hours ebb. | Smooth | NN.W. 2 | Fine, hazy | — | Not recorded .. .. .. .. .. .. | R. A. Todd, G. T. Atkinson, C. W. Dance. |
| 8 a.m. | 10 a.m. | 2 | 2 last hours ebb. | Smooth | W.N.W. 2 | Fine, hazy | — | Not recorded. | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shoot-ing. | Towing. | Haul-ing. | Shoot-ing. | Towing. | Haul-ing. |
| XXIX | 3 | Mar. | 22 | O 169 | Off Egmond .. .. | 52° 36′ N., 4° 25′ E. | S.W. ⅛ W. 6⅜ miles | 52° 30½′ N., 4° 19⅜′ E. | 9 | .. | 9 | f.s. | .. | f.s. |
| ,, | 4 | ,, | ,, | O 170 | West of Ymuiden .. | 52° 30½′ N., 4° 19⅜′ E. | W. by S. ⅝ S. 5½ miles | 52° 27½′ N., 4° 11¾′ E. | 9 | .. | 11 | f.s. | .. | f.s. |
| ,, | 5 | ,, | ,, | O 171 | ,, ,, .. | 52° 27½′ N., 4° 11¾′ E. | W. by N. ¼ N. 4⅛ miles | 52° 27⅛′ N., 4° 5¼′ E. | 11 | .. | 11½ | f.s. | .. | f.s. |
| ,, | 7 | ,, | 24 | O 172 | North East of South West Patch of Dogger. | 54° 33′ N., 2° 37′ E. | W. 5 miles<br>N.E. 7½ miles. | 54° 38¼′ N., 2° 35½′ E. | 11 | 9 | 11 | f.s. & sh. | f.s. | f.s. & sh. |
| ,, | 8 | ,, | ,, | O 173 | Eastern Shoal of Dogger Bank. | 54° 38¼′ N., 2° 35½′ E. | E. ¼ S. 7¼ miles<br>S.S.E. 6¼ miles. | 54° 35′ N. 2° 53½′ E. | 11 | .. | 14½ | f.s. & sh. | .. | f.s. |
| ,, | 9 | ,, | ,, | O 174 | South West of East Shoal of Dogger. | 54° 35′ N., 2° 53½′ E. | S.E. by S. 4 miles<br>S.W. 3½ miles. | 54° 29⅜′ N., 2° 55½′ E. | 14½ | .. | 15 | f.s. | .. | f.s. |
| ,, | 10 | ,, | 26 | O 175 | Lower Scruff .. | 55° 13½′ N., 4° 31′ E. | S.S.W. 5 miles<br>N.N.W. 7½ miles. | 55° 14′ N., 4° 21¼′ E. | 24 | .. | 24 | f.s. | .. | f.s. |
| ,, | 12 | ,, | 26-27 | O 176 | West part of Horn Reef Outer. | 55° 31½ N., 6° 9½′ E. | S. by E. 6¼ miles<br>N. by E. 2½ miles.<br>S.E. by S. 6 miles. | 55° 24½′ N., 6° 26′ E. | 24 | 23 | 22 | f.s. | f.s. | f.s. |
| ,, | 13 | ,, | 27 | O 177 | Horn Reef Outer .. | 55° 24½′ N., 6° 26′ E. | N. by E. 7½ miles<br>N.E. 6 miles.<br>S.W. 3⅜ miles. | 55° 33¼′ N., 6° 28′ E. | 22 | 23 | 23 | f.s. | f.s. | f.s. |
| ,, | 14 | ,, | ,, | O 178 | ,, ,, .. | 55° 33¼′ N., 6° 28′ E. | N.E. by E. ½ E. 6½ miles<br>S. 12½ miles. | 55° 26′ N., 6° 40′ E. | 23 | 22 | 22 | f.s. | f.s. | f.s. & ooze. |
| ,, | 15 | ,, | ,, | O 179 | ,, ,, .. | 55° 26′ N., 6° 40′ E. | N. ½ W. 15 miles<br>S. by W. 3⅜ miles. | 55° 36¼′ N., 6° 31½′ E. | 22 | 23 | 23 | f.s. & ooze. | f.s. | f.s. |
| ,, | 16 | ,, | 28 | O 180 | ,, ,, .. | 55° 36½′ N., 6° 31½′ E. | S. 2 miles<br>N. by E. ⅜ E. 5 miles.<br>S. ½ W. 10 miles. | 55° 30½′ N., 6° 35′ E. | 23 | 23 | 22 | f.s. | f.s. | f.s. |
| ,, | 17 | ,, | ,, | O 181 | ,, ,, .. | 55° 30½′ N., 6° 35′ E. | N. ⅜ E. 11½ miles<br>N.E. 1¼ miles.<br>N. by E. ½ E. 5 miles. | 55° 48′ N., 6° 34′ E. | 22 | 22 | 22½ | f.s. | f.s. & ooze. | f.s. & ooze. |
| ,, | 18 | ,, | ,, | O 182 | North West of Horn Reef. | 55° 48′ N., 6° 34′ E. | S. by E. 5 miles<br>N. by E. 5 miles.<br>S. by W. 5 miles. | 55° 43½′ N., 6° 37½′ E. | 22½ | 22 | 21 | f.s. & ooze. | f.s. & ooze. | f.s. & ooze. |
| ,, | 19 | ,, | 29-30 | O 183 | Dogger Bank, East of South West Patch. | 54° 39′ N., 2° 40′ E. | S.S.W. 12½ miles | 54° 27¼′ N., 2° 35′ E. | 10½ | 10 | 11 | f.s. | f.s. | f.s. |
| ,, | 20 | ,, | 30 | O 184 | Dogger Bank, East of South West Patch. | 54° 27¼′ N., 2° 35′ E. | S. by W. 2½ miles<br>S.E. by E. 1½ miles.<br>N.E. by N. 2½ miles.<br>S. by W. 5 miles.<br>N.E. by N. 2½ miles. | 54° 24′ N., 2° 41½′ E. | 11 | 12 | 14 | f.s. | f.s. | f.s. |
| ,, | 21 | ,, | ,, | O 185 | Dogger Bank, South East of South West Patch. | 54° 24′ N., 2° 41½′ E. | N. by W. 6¼ miles<br>S.W. by W. ½ W. 1¼ miles.<br>S.W. ½ S. 5 miles. | 54° 25′ N., 2° 31½′ E. | 14 | 10 | 10 | f.s. | f.s. | f.s. |
| XXX | 1 | Apr. | 8 | B 118 | Inside Protector Overfall. | 53° 21′ N., 0° 23½′ E. | N. by E. 2 miles<br>S.S.W. ½ mile. | 53° 22⅜′ N., 0° 23½′ E. | 8½ | .. | 7½ | spk.s. | .. | c.s. |
| ,, | | ,, | 9 | B 119 | Off Trusthorpe .. | 53° 19⅜′ N., 0° 24½′ E. | N. ¼ W. 2½ miles<br>S. 2½ miles. | 53° 20′ N., 0° 24′ E. | 7½ | .. | 7½ | f.s. | .. | c.s. |
| ,, | 4 | ,, | ,, | B 120 | Off Mablethorpe .. | 53° 19½′ N., 0° 24′ E. | N. by W. 3 miles | 53° 22⅝′ N., 0° 21½′ E. | 7½ | .. | 8 | grv. | .. | d.s. |
| ,, | 6 | ,, | ,, | B 121 | ,, ,, .. | 53° 21¾′ N., 0° 21½′ E. | S. 3 miles<br>N. 3½ miles.<br>S. 1¼ miles. | 53° 22¼′ N., 0° 23⅞′ E. | 8 | 8 | 8½ | d.s. & sh. | .. | d.s. & sh. |
| ,, | 10 | ,, | 11 | B 122 | Bridlington Bay .. | 54° 0½′ N., 0° 8′ W. | S.S.W. 3 miles | 53° 57′ N., 0° 8′ W. | 5½ | .. | 7½ | f.g.s. | .. | grv. |
| ,, | 11 | ,, | ,, | B 123 | ,, ,, .. | 54° 1¼′ N., 0° 9′ W. | S. by W. ¼ W 2⅜ miles | 53° 58¼′ N., 0° 9¼′ W. | 5½ | .. | 7½ | d.s. | .. | d.s. & grv. |
| ,, | 16 | ,, | 12 | B 124 | ,, ,, .. | 54° 2′ N., 0° 10¼ W. | S.S.W. 1¼ miles<br>N. by E. 1¼ miles. | 54° 1¾′ N., 0° 10¾′ W. | 5 | 5½ | 5 | f.g.s. | .. | f.g.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 10.15 a.m. | 12.15 p.m. | 2 | 2 hours flood. | Smooth | W.S.W. 4 | Overcast, hazy | — | Not recorded. | |
| 12 30 p.m. | 2.30 p.m. | 2 | From 2½ hours flood to 4½ hours flood. | Smooth | W.S.W. 4 | Overcast, hazy. | — | Not recorded. | |
| 2.45 p.m. | 4.30 p m. | 1¾ | Last 1½ hours flood. | Moderate | W.S.W. 5 | Overcast, dull. | — | Not recorded. | |
| 4 a.m. | 9 a.m. | 5 | Nil | Moderate | N.E. 4 | Fine | Had turn in fore quarter. | *Obelia longissima* c., *Sertularia abietina* .. .. *Buccinum undatum* spawn c., *Natica catena* spawn c. *Cyclopterus lumpus.* | 6 steam trawlers working with us. |
| 9.30 a.m. | 2.30 p.m. | 5 | Nil | Moderate | N.E. by E. 5. | Cloudy | — | **Alcyonidium gelatinosum** v.c. .. | 4 steam trawlers working with us. |
| 3 p.m. | 6 p.m. | 3 | Nil | Rough | E. by S. | Heavy clouds and showers. | — | *Obelia longissima* dead c. .. .. .. .. **Alcyonidium gelatinosum** v.c. *Buccinum undatum* spawn c. | 2 steam trawlers with us. |
| 4 a.m. | 9 a.m. | 5 | Nil | Moderate | E. by S. 4 | Overcast | — | *Alcyonium digitatum* c. *Buccinum undatum.* *Ascidiella virginea* c. | |
| (26th) 7 a.m. | (27th) 1 a.m. | 6 | Nil | Moderate | E. 5 | Cloudy | — | *Actinoloba dianthus*, *Alcyonium digitatum* .. *Eupagurus bernhardus.* *Fusus antiquus.* | With Red Cross fleet. |
| 1.30 a.m. | 7.30 a.m. | 6 | Nil | Moderate | E. 5 | Cloudy | — | *Alcyonium digitatum* on *Fusus* c., *Actinoloba dianthus.* *Fusus antiquus*, *Ostrea edulis.* *Eupagurus bernhardus* c *Asterias rubens.* | With Red Cross fleet. |
| 8 a.m. | 3.30 p.m | 7½ | Nil | Moderate | E. by N. 3 | Fine, cloudy. | — | *Actinoloba dianthus*, large on oyster shell .. *Ostrea edulis*, *Fusus antiquus.* *Eupagurus bernhardus.* *Asterias rubens.* | 2 steam trawlers with us. |
| 4 p.m. | 11.30 p.m. | 7½ | Nil | Moderate swell. | E.S.E. 3 | Fine, cloudy. | — | **Alcyonium digitatum** v.c. .. .. *Fusus antiquus* f.c. *Eupagurus bernhardus.* *Asterias rubens*, small, c. | With Red Cross fleet. |
| 12.5 a.m. | 7 a.m. | 6½ | Nil | Moderate | S.E. 4 | Fine, cloudy. | — | *Alcyonium digitatum* c., *Gemellaria loricata* c.. *Fusus antiquus* c. *Eupagurus bernhardus.* *Asterias rubens*, small, c. | 4 steam trawlers with us. |
| 7.30 a.m. | 3 p.m | 7½ | Nil | Moderate | S.E. 3 | Cloudy, hazy. | — | *Alcyonium digitatum* c. .. .. .. .. *Dendronotus arborescens* c., *Buccinum undatum* *Fusus antiquus*, *Ostrea edulis.* *Asterias rubens.* | With Red Cross fleet. |
| 3.15 p.m. | 9.45 p.m. | 6½ | Nil | Rough | S. 6 | Cloudy | — | Not recorded .. .. .. .. .. .. | With Red Cross fleet. |
| (29th) 9 p.m. | (30th) 3 a.m. | 6 | 6 hours ebb. | Moderate | W. 4 | Cloudy, hazy. | — | Not recorded .. .. .. .. .. .. | 2 steam trawlers with us. |
| 3.45 a.m. | 9.30 a.m. | 5¾ | 6 hours flood. | Moderate | W. 4 | Cloudy. | — | *Obelia longissima* c., *Sertularia rosacea* f.c. .. **Alcyonidium gelatinosum** v.c. *Buccinum undatum*, *Lacuna crassior.* *Galathea intermedia* c., *Cancer pagurus.* *Asterias rubens*, large, c. | 3 steam trawlers with us. |
| 9.45 a.m. | 2.30 p.m. | 4¾ | 4½ hours ebb. | Moderate | W. 4 | Cloudy. | — | Not recorded .. .. .. .. .. . | 4 steam trawlers with us. |
| 4.30 p.m. | 5.30 p.m. | 1 | Fourth hour ebb. | Smooth | W. 3 | Overcast, very hazy. | Square torn .. | **Flustra foliacea,** masses .. .. .. *Buccinum undatum* spawn. *Asterias rubens.* | J. O. Borley, J. Potter, G. T. Atkinson. 1 steam trawler with us. |
| 6.45 a.m. | 8.45 a.m. | 2 | 2 last hours ebb. | Moderate | N.W. by W. 7. | Heavy clouds. | — | *Hydrallmania falcata* c. .. .. .. .. **Flustra foliacea**, masses. *Buccinum undatum* spawn. | 1 steam trawler (Fittonia G. Y.) with us. |
| 9.10 a.m. | 11.10 a.m. | 1 | Third to fourth hour flood. | Moderate | N.W. by W. 7. | Cloudy, hazy. | — | **Sertularia abietina** abundant .. .. *Flustra foliacea* c. *Buccinum undatum* spawn. *Solaster papposus.* | 1 steam trawler with us. |
| 11.45 a.m. | 3.45 p.m. | 4 | Last 1½ hours flood; first 2½ hours ebb. | Moderate | W.N.W. 6-9. | Heavy squalls. | — | **Hydrallmania falcata** and **sertularia abietina** f.c. *Flustra foliacea* c. *Buccinum undatum* spawn. *Solaster papposus.* | 2 steam trawlers with us. |
| 9.30 a.m. | 10.45 a.m. | 1¼ | 2 first hours flood. | Smooth | N.W. by N. 5. | Fine, cloudy. | Fore wing badly torn. | *Portunus holsatus.* | |
| 12.30 p.m. | 1.45 p.m. | 1¼ | 3½ to 4½ hours flood. | Swell from north-eastwards. | N.W. by N. 4. | Fine. cloudy. | Ground rope parted, and net badly torn. | *Ascidiella virginea* c. | |
| 6.45 a.m. | 7.45 a.m. | 1 | Second to third hour ebb. | Smooth | S.E. 2 | Overcast. | — | *Flustra foliacea* c. | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XXX | 19 | Apr. | 14 | O 186 | North of Terschelling, L.V. | 53° 43¼′ N., 4° 26½′ E. | W.S.W. 3½ miles N.E. by E. ¾ E 8⅛ miles. | 53° 47½′ N., 4° 58½′ E. | 21 | 20 | 20 | m. | m. | m. |
| ,, | 24 | ,, | ,, | O 187 | ,, ,, | 53° 46′ N., 4° 52¼′ E. | S.W. 11¼ miles | 53° 39¼′ N., 4° 38′ E. | 20 | .. | 19 | m. | .. | s. & m. |
| ,, | 31 | ,, | 15 | B 125 | Texel Ground .. | 53° 0′ N., 4° 18½′ E. | W. by S. ⅞ S. 7⅞ miles | 52° 55½′ N., 4° 7½′ E. | 15 | .. | 14 | f.s. | .. | f.s. |
| ,, | 39 | ,, | ,, | B 126 | North East part of Brown Ridges. | 52° 53¾′ N., 3° 45′ E. | N.N.E. 6⅛ miles | 52° 59½′ N., 3° 46′ E. | 15 | .. | 15 | f.s. | .. | f.s. |
| XXXI | 1 | May | 11 | B 127 | Off Norderney .. | 53° 50′ N., 7° 7′ E. | E. by N. 3½ miles W. by N. ½ N. 3 miles. | 53° 51⅝′ N., 7° 7′ E. | 11 | 12 | 12 | f.s. | .. | f.s. |
| ,, | 2 | ,, | 12 | B 128 | North of Norderney | 54° 0¾′ N., 7° 7¼′ E. | E. by S. ¼ S. 9¾ miles | 54° 0½′ N., 7° 24′ E. | 15½ | .. | 17 | f d.s. | .. | f.d.s. |
| ,, | 3 | ,, | ,, | B 129 | South West of Heligoland. | 54° 0⅞′ N., 7° 39½′ E. | S.E. ¾ E. 4¾ miles | 53° 58⅝′ N., 7° 46¼′ E. | 19 | .. | 18½ | s. & ooze. | .. | s. & ooze. |
| ,, | 4 | ,, | ,, | B 130 | Off Weser L.V. .. | 53° 58⅝′ N., 7° 46¼′ E. | S. by E. ¼ E. 2⅞ miles S.W. ¼ S. 2⅝ miles. | 53° 54¼′ N., 7° 46′ E. | 18½ | .. | 11 | s. & ooze. | .. | f.d.s. |
| ,, | 6 | ,, | ,, | B 131 | Between Heligoland and Amrum. | 54° 29′ N., 7° 50⅝′ E. | N.E. ¾ N. 3⅝ miles | 54° 31¾′ N., 7° 53′ E. | 11 | .. | 10 | f.s. & ooze. | .. | f.s. |
| ,, | 7 | ,, | 13 | O 188 | Sylt Inner .. .. | 54° 53¼′ N., 8° 7′ E. | N.E. ½ E. 4½ miles | 54° 56¾′ N., 8° 11′ E. | 7 | 7 | 7 | f.s. | .. | f.s. |
| ,, | 9 | ,, | ,, | B 132 | South West of Fanö | 55° 15½′ N., 8° 14½′ E. | N. by E. ⅜ E. 5¼ miles | 55° 20½′ N., 8° 15½′ E. | 7½ | .. | 7½ | f.s. & ooze. | .. | f.s. & ooze. |
| ,, | 10 | ,, | ,, | B 133 | South East of Vyl L.V. | 55° 19¾′ N., 7° 54′ E. | N.W. 3 miles N.N.E. 1 mile. | 55° 22½′ N., 7° 49¾′ E. | 11 | .. | 11 | f.s | .. | f.s. |
| ,, | 12 | ,, | 17 | B 134 | Norman's Deep .. | 55° 34′ N., 7° 49½′ E. | N.W. 4 miles | 55° 36½′ N., 7° 42′ E. | 11½ | .. | 7 | f.d.s. | .. | f.d.s. |
| ,, | 14 | ,, | ,, | B 135 | Horn Reef Outer .. | 55° 35′ N., 6° 42½′ E. | W. by N. ½ N. 3¼ miles | 55° 35½′ N., 6° 37′ E. | 19 | .. | 21 | f.l.s. | .. | f.l.s. |
| ,, | 16 | ,, | 18 | B 136 | West part of Horn Reef Outer. | 55° 33′ N., 6° 5¼′ E. | W. by S. 2¾ miles N.E. ¾ E. 2¼ miles. | 55° 33½′ N., 6° 4′ E. | 26½ | .. | 27 | f.s. & ooze. | .. | f.s. & m. |
| ,, | 18 | ,, | ,, | B 137 | ,, ,, | 55° 33½′ N., 6° 4′ E. | E. by S. 5½ miles | 55° 33½′ N., 6° 14½′ E. | 27 | .. | 26 | f.s. & m. | .. | f.s. & m. |
| ,, | 19 | ,, | 21-22 | B 138 | Sylt Inner .. .. | 55° 2¼′ N., 8° 6′ E. | S.S.W. 4 miles N.N.E. 2 miles. | 54° 59½′ N., 8° 5′ E. | 7½ | .. | 7½ | f.s. | .. | f.s. |
| ,, | 20 | ,, | 23 | B 139 | Sylt Outer .. .. | 54° 52′ N., 7° 46½′ E. | N.W. ¾ W. 4 miles | 54° 53′ N., 7° 40′ E. | 10 | 10½ | 11½ | f.s. | f.s. | f.s. |
| ,, | 22 | ,, | 24 | B 140 | Norman's Deep .. | 55° 32¼′ N., 7° 52′ E. | N.W. by N. 3 miles | 55° 34¼′ N., 7° 48¼′ E. | 12 | 15 | 13 | f.s. & m. | f.s. & m. | f.s. & m. |
| ,, | 23 | ,, | ,, | B 141 | ,, ,, .. | 55° 35⅜′ N., 7° 47′ E. | N.N.W. 3 miles | 55° 38′ N., 7° 43¾′ E. | 9 | .. | 6½ | f.s. & m. | .. | f.d.s. |
| ,, | 25 | ,, | 25 | B 142 | Dogger Bank, Northern slope of Swashway. | 55° 29′ N., 4° 23′ E. | S.W. 2 miles W. by S. ½ S. 12 miles. | 55° 23′ N., 4° 5½′ E. | 16½ | 18 | 21 | f.l.gr.s. | f.s. | f.g.s. |
| ,, | 30 | ,, | 26 | B 143 | Dogger Bank. East of South West Patch. | 54° 37½′ N., 2° 39½′ E. | S. ⅞ W. 11 miles | 54° 26½′ N., 2° 41½′ E. | 12 | 11 | 12 | f.g.s. | f.g.s. | f.d.s. |
| ,, | 42 | ,, | ,, | B 144 | Dogger Bank, South of South West Patch. | 54° 19½′ N., 2° 22¼′ E. | S.W. ⅞ S. 8 miles | 54° 11¾′ N., 2° 16½′ E. | 19½ | .. | 21½ | f.s. | .. | f.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 4.15 a.m. | 9.15 a.m. | 5 | 6 hours flood. | Smooth | S. 4 | Fine, hazy. | — | *Actinoloba dianthus*. .. .. .. .. .. **Asterias rubens** v.c., *Astropecten irregularis* c., *Echinocardium cordatum* c. *Ophiura ciliaris* c. | 1 steam trawler with us. |
| 11.20 a.m. | 4.20 p.m. | 5 | Last hour flood; 4 hours ebb. | Smooth | S.E. 4 | Cloudy | — | *Buccinum undatum* spawn.. .. .. .. **Asterias rubens** v.c., *Astropecten irregularis* c. | 2 steam trawlers with us. |
| 7 a.m. | 10 a.m. | 3 | First 3 hours flood. | Smooth | S. 3 | Fine, very hazy. | — | **Hydractinia echinatum** v.c. .. .. *Natica monilifera* spawn, *Buccinum undatum* spawn. *Eupagurus bernhardus* c. *Astropecten irregularis* f.c. | 5 steam trawlers and several Dutch fishing craft with us. |
| 5.15 p.m. | 8.15 p.m. | 3 | 2 last hours ebb: 1 hour flood. | Moderately rough. | W. 5 | Hazy, overcast, foggy. | — | *Alcyonium digitatum*, *Obelia* (dead). *Paratylus swammerdami* c. | |
| 8.15 p.m. | 11.15 p.m. | 3 | 1½ hours flood: 1½ hours ebb. | Very rough | N.N.W. 4-6. | Cloudy, showery. | — | Very little taken .. .. .. .. .. | W. Garstang, J. O. Borley, G. T. Atkinson. |
| 4.15 a.m. | 7.15 a.m. | 3 | 3 hours flood. | Rough | N.N.W. 5 | Cloudy | — | *Buccinum undatum* spawn .. .. .. *Cancer pagurus*. *Astropecten irregularis*, *Ophiura albida*. | "Moorlog" present. |
| 9 a.m. | Noon | 3 | First 3 hours ebb. | Moderate | N.N.W. 4 | Fine, cloudy. | — | **Actionoloba dianthus** filling cod-end, mostly on *Cyprina islandica*; some on *Ostrea edulis*. | Several German sailing trawlers southward of us. |
| 12.15 p.m. | 3.15 p.m. | 3 | Last 3 hours ebb. | Moderate | N.N.W. 3 | Fine, cloudy. | — | *Actinoloba dianthus* c. .. .. .. .. *Cyanea lamarcki*. *Buccinum undatum* spawn. | "Moorlog" present. Several German sailing trawlers about us. |
| 8.20 p.m. | 10.20 p.m. | 2 | 1 hour flood: 1 hour ebb. | Smooth | S. 2 | Overcast | — | *Cancer pagurus*. Very little else. | |
| 7 a.m. | 9 a.m. | 2 | Third and fourth hours flood. | Moderate | S. 5 | Overcast, dull. | — | *Buccinum undatum* spawn.. .. .. .. **Asterias rubens** v.c. | Passed two steam trawling fleets. Several Danish fishing craft about us. |
| Noon | 2 p.m. | 2 | Second and third hours ebb. | Moderate | S. by W. 4 | Overcast. dull, rain. | — | *Buccinum undatum* spawn c. .. .. .. *Portunus holsatus*, *Hyas araneus*, *Cancer pagurus*. *Asterias rubens* f.c. | |
| 4.30 p.m. | 6.30 p.m. | 2 | 1 hour ebb; 1 hour flood. | Moderate | S. 4 | Dull, thick | — | **Buccinum undatum spawn** abundant *Eupagurus bernhardus* c., *Cancer pagurus*. *Asterias rubens* c. | One steam trawler with us. |
| 7.20 a.m. | 9.20 p.m. | 2 | Last hour ebb; first hour flood. | Moderate | S.S.W. 5 | Overcast, cloudy. | — | **Buccinum undatum spawn** v.c. .. *Asterias rubens* f.c. | "Moorlog" present. |
| 5 p.m. | 7 p.m. | 2 | Fourth and fifth hours ebb. | Rough | W. by N. 4 | Overcast, hazy. | — | *Alcyonium digitatum*, *Cyanea lamarcki*. *Buccinum undatum* and spawn, *Fusus antiquus*. *Astropecten irregularis*, *Echinocardium cordatum*. | |
| 6 a.m. | 8 a.m. | 2 | Two last hours ebb. | Moderate | W. by S. 5 | Fine, cloudy, hazy. | — | *Actinoloba dianthus*, *Alcyonium digitatum*. *Fusus antiquus* f.c. *Eupagurus bernhardus*. | |
| 8.45 a.m. | 10.45 a.m. | 2 | First 2 hours flood. | Moderate | W.S.W. 4-6. | Fine, hazy | — | *Fusus antiquus* f.c. *Eupagurus bernhardus* f.c. | |
| (21st) 10.30 p.m. | (22nd) 1.30 a.m. | 3 | Last hour ebb; 2 hours flood. | Moderate | E.S.E. 5 | Cloudy | — | Not recorded .. .. .. .. .. | With Gamecock and Great Northern fleets. |
| Midnight | 2 a.m. | 2 | Two first hours flood. | Moderate | S.E. 5 | Dull, rainy. | — | Not recorded. | |
| 12.15 p.m. | 1.15 p.m. | 1 | Last hours ebb. | Moderate | S.E. by S. 5. | Overcast, cloudy. | — | *Buccinum undatum*, and spawn f.c. .. .. *Hyas aranews* **Asterias rubens** v. abundant. | Several Danish fishing boats and two steam trawlers about us. |
| 1.50 p.m. | 2.50 p.m. | 1 | Slack | Moderate | S.E. by S. 5. | Overcast, cloudy. | — | *Buccinum undatum* f.c. .. .. .. .. *Asterias rubens* c. | Several Danish fishing boats and two steam trawlers with us. |
| 6.50 a.m. | 12.50 p.m. | 6 | Nil | Moderate | S. 3 | Overcast, dull, thick rain. | — | *Obelia longissima*, dead, c. **Alcyonidium gelatinosum** v. abundant, **Flustra securifrons** v.c. *Paratylus swammerdami* c., *Melita obtusata* f.c. | |
| 1.15 p.m. | 7.15 a.m. | 6 | All flood | Smooth | E. by S. 1-2. | Fine, hazy | ..... | *Obelia longissima* c. .. .. .. .. .. **Alcyonidium gelatinosum** v. abundant. *Cancer pagurus*. | One steam trawler with us. |
| 5.5 p.m. | 8.5 p.m. | 3 | From 2 to 5 hours flood. | Smooth | S. 3 | Cloudy | Had a piece of wreck in trawl. Net torn badly. | **Actinoloba dianthus** v.c., **Alcyonium digitatum** v.c., *Obelia longissima* f.c. **Buccinum undatum** v.c. | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XXXI | 43 | May | 27 | B 145 | Flamborough Off .. | 54° 4′ N., 1° 5½′ E. | W. by S. 6 miles | 54° 1½′ N., 0° 56½′ E. | 31½ | .. | 26 | f.d.s. | .. | f.d.s. |
| „ | 46 | „ | „ | B 146 | Bridlington Bay .. | 54° 3½′ N., 0° 8¾′ W. | S.S.W. 3 miles | 54° 0½′ N., 0° 9¾′ W. | 4¾ | .. | 5½ | f.s. | .. | f.s. |
| „ | 47 | „ | „ | B(c)147 | „ „ .. | 54° 3½′ N., 0° 9′ W. | S. by W. ½ W. 2½ miles | 54° 0¾′ N., 0° 9½′ W. | 6 | .. | 7 | f.s. | .. | f.s. |
| XXXII | 3 | June | 1 | B 148 | N.N.W. of Schouwen L.V. | 51° 59½′ N., 3° 22′ E. | S.E. ½ E. 1⅝ miles W. ⅝ N. 3⅝ miles. | 51° 58¼′ N., 3° 18⅝′ E. | 17 | .. | 17 | f.s. | .. | f.s. |
| „ | 14 | „ | 2 | B 149 | Sunk .. .. .. | 51° 50′ N., 1° 31⅛ E. | S. ¾ W. 2 miles | 51° 48′ N., 1° 32′ E. | 9 | .. | 10 | c.s. & gvl. | .. | c.s. |
| „ | 20 | „ | 3 | B 150 | Off Southwold .. | 52° 16½′ N., 1° 45′ E. | E. by N. ⅛ N. 5⅝ miles | 52° 19¼′ N., 1° 54′ E. | 10½ | .. | 15 | gvl. | .. | gvl. |
| XXXIII | 25 | „ | 10 | B 151 | Lynn Deep .. .. | 53° 0⅛′ N., 0° 22′ E. | S.W. by W. ⅞ W. 3¼ miles | 52° 58′ N., 0° 18′ E. | 17 | .. | 12 | d.s. & gvl. | .. | c.s. & m. |
| „ | 44 | „ | 17 | B 152 | Off Mablethorpe .. | 53° 22½′ N., 0° 23½′ E. | S. by E. ¼ E. 4½ miles | 53° 19⅜′ N., 0° 26½′ E. | 10 | 9 | 8 | c.s. | c.s. | c.s. |
| „ | 51 | „ | 18 | B 153 | Lynn Deep .. .. | 52° 56′ N., 0° 14½′ E. | N.E. by E. ⅜ E. 2 miles | 52° 57′ N., 0° 17½′ E. | 7 | .. | 8 | m. | .. | m. |
| „ | 53 | „ | „ | B 154 | North of Blakeney Overfall. | 53° 6⅜′ N., 0° 52′ E. | S.E. ½ E. 5 miles | 53° 4¼′ N., 0° 59½′ E. | 9½ | .. | 9½ | c.s. & sh. | .. | c.s. & sh. |
| XXXIV | 1 | , | 28 | O 189 | Leman Ground .. | 53° 18¼′ N., 2° 45½′ E. | N.E. ⅜ E. 9½ miles W. by N. 2½ miles. | 53° 25⅜′ N., 2° 50′ E. | 16 | 16 | 16 | f.d.s. | f.d.s. | f.d.s. |
| „ | 2 | „ | „ | O 190 | East edge of Leman Ground. | 53° 25⅜′ N., 2° 50′ E. | N.E. ⅝ N. 5 miles S.E. ⅝ E. 5⅞ miles. | 53° 28′ N., 3° 1½′ E. | 16 | 16 | 16 | f.d.s. | f.d.s. | f.d.s. |
| „ | 3 | July | 2 | O 191 | Flamborough Off .. | 54° 2⅛′ N., 0° 45⅝′ E. | E. by N. ⅞ N. 7⅛ miles | 54° 7′ N., 0° 56′ E. | 26 | .. | 25 | s.m. | .. | s.m. |
| „ | 4 | „ | 2-3 | O 192 | „ .. | 54° 7′ N., 0° 56′ E. | W. 5 miles E. 10 miles. | 54° 7½′ N., 1° 9′ E. | 25 | 25 | 27 | s.m. | .. | f.s. & m. |
| „ | 5 | „ | 3 | O 193 | „ .. | 54° 7½′ N., 1° 9′ E. | E. ⅜ N. 3⅝ miles W. ⅛ S. 5 miles. E. by S. 4⅜ miles. | 54° 7¼′ N., 1° 14′ E. | 27 | 27 | 27 | f.s. & m. | .. | f.s. & m. |
| „ | 6 | „ | „ | O 194 | „ .. | 54° 7¼′ N., 1° 14′ E. | W. by S. ⅛ S. 5⅞ miles E. ⅛ N. 9⅝ miles. | 54° 7¼′ N., 1° 20½′ E. | 27 | 27 | 28 | f.s. & m. | .. | s. & m. |
| „ | 7 | „ | „ | O 195 | „ .. | 54° 7¼′ N., 1° 20½′ E. | W. 10⅜ miles E. by S. ⅜ S. 3 miles. | 54° 4¼′ N., 1° 8′ E. | 28 | .. | 25 | s.m. | .. | f.d.s. |
| „ | 8 | „ | 3-4 | O 196 | . .. | 54° 4¼′ N., 1° 8′ E. | E. by S. 5½ miles W. by N. ¼ N. 6½ miles. E.S.E. 3 miles. | 54° 3¾′ N., 1° 9′ E. | 25 | 25 | 25 | f.d.s. | .. | f.d.s. |
| „ | 9 | „ | 4 | O 197 | . .. | 54° 3¾′ N., 1° 9′ E. | N.E. by E. 4⅛ miles S.W. by W. ⅛ W. 10½ miles S. ½ E. 2 miles. | 53° 57′ N., 1° 3½′ E. | 25 | .. | 22½ | f.d.s. | .. | f.d.s. |
| „ | 10 | „ | „ | O 198 | . .. | 53° 57′ N., 1° 3½′ E. | by N. ⅝ N. 8½ miles W. ⅜ N. 4¾ miles. | 54° 1¼′ N., 1° 7¼′ E. | 22½ | 23 | 23 | f.d.s. | f.d.s | f.d.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 3.15 a.m. | 6.15 a.m. | 3 | From 3 to 6 hours flood. | Smooth | Variable 1-2. | Overcast, thick. | — | *Actinoloba dianthus* c., *Alcyonium digitatum*, *Obelia longissima*. *Alcyonidium gelatinosum* c., *Flustra securifrons*, *Cancer pagurus*. *Ophiothrix fragilis* f.c. *Ammodytes* sp. | |
| 11.50 a.m. | 12.50 p.m. | 1 | 2 hours flood. | Smooth | N.N.E. 4 | Dull, thick rain. | — | Very little taken. | |
| 1.50 p.m. | 2.50 p.m. | 1 | Fifth hour flood. | Moderate | N.N.E. 5 | Dull, thick rain. | — | *Loligo media* .. .. .. .. .. .. *Trachinus vipera* f.c., *Callionymus lyra*. | Trawl completely covered with small-meshed nets. (Experiment No. 1.) Small mesh over cod end torn away. |
| 7.30 a.m. | 10.30 a.m. | 3 | 3 hours flood. | Smooth | S.S.E. 3 | Cloudy, fine, hazy. | Net very badly torn. (No fish recorded.) | Not recorded .. .. .. .. .. .. | W. Wallace, R. A. Todd. Several Belgian sailing trawlers about us. |
| 6.15 a.m. | 7.30 a.m. | 1½ | Sixth hour ebb. | Moderate | N.W. by N. 5. | Overcast, rainy. | — | **Sabellaria spinulosa** v.c. *Echinus miliaris* f.c., *Asterias rubens*, *Solaster papposus*. | |
| 4 a.m. | 6 a.m. | 2 | 3 to 5 hours ebb. | Moderate | N.N.E. 5 | Overcast | Net torn .. .. | *Alcyonidium gelatinosum*, little .. .. .. *Echinus miliaris* f.c., *Asterias rubens*. | Several sailing trawlers with us. |
| 1.15 p.m. | 2.45 p.m. | 1½ | From 4 to 5½ hours flood. | Smooth | E. by N. 5 | Cloudy, overcast. | Small hole in batings. | *Alcyonium digitatum*, *Halecium halecinum*, *Hydrallmania falcata*, *Sertularia abietina*. *Flustra foliacea*. *Sabellaria spinulosa*. *Eupagurus bernhardus*. *Asterias rubens*. | W. Wallace, R. A. Todd, G. T. Atkinson. |
| 7 a.m. | 10 a.m. | 3 | Second to fifth hour flood. | Moderate | S.W. by W. 5. | Fine, cloudy, hazy. | — | *Sertularia abietina* f.c. .. .. .. .. *Flustra foliacea* c. *Cancer pagurus*. *Asterias rubens*. | Two steam trawlers with us. |
| 4.45 a.m. | 6.15 a.m. | 1½ | Last of ebb, and first of flood. | Smooth | W.N.W. 4-6. | Heavy Clouds, tempest. | Lost contents of bag, the cod line having been insecurely tied. | Not recorded. | |
| 11.40 a.m. | 1.40 p.m. | 2 | Two last hours flood. | Moderate | W. 4-6 | Cloudy, hazy, tempest. | Belly and cod end chafed to pieces. | *Modiola modiolus*, *Pecten opercularis*. *Buccinum undatum*. | |
| 4 a.m. | 9 a.m. | 5 | Two last hours ebb; three first hours flood. | Moderately rough. | N.W. by N. 5. | Cloudy, fine. | — | Not recorded; no Naturalists on board .. | J. Potter, C. E. Earl. |
| 9.30 a.m. | 3 p.m. | 5½ | 3 hours flood; 2½ hours ebb. | Heavy swell | N.N.W. 4 | Cloudy, fine. | Parted aft wire when hauling. | " " " .. | Some fish lost. 4 steam trawlers with us. |
| 4 p.m. | 8 p.m. | 4 | 4 hours flood. | Smooth | S.W. 4 | Cloudy, tempest. | — | " " " .. | Several steam trawlers with us. |
| (2nd) 8.30 p.m. | (3rd) 2.30 a.m. | 6 | Last 2 hours flood; first 4 hours ebb. | Smooth | S.W. by W. 3. | Cloudy, tempest, and fine. | — | " " " .. | Several steam trawlers with us. |
| 2.45 a.m. | 8.30 a.m. | 5¾ | Last 2 hours ebb; 4 hours flood. | Moderately smooth. | S W. by W 4. | Tempest, fine. | — | " " " .. | Several steam trawlers with us. |
| 8.45 a.m. | 2.15 p.m. | 5½ | Last 2 hours flood; 3 hours ebb. | Moderately smooth. | W. 5 | Cloudy, fine, tempest. | — | " " .. | Several steam trawlers with us. |
| 2.30 p.m. | 8 p.m. | 5½ | Last 2½ hours ebb; 3 hours flood. | Smooth | Variable, 1 to 3. | Cloudy, fine, empesty. | — | " " " .. | Several steam trawlers with us. |
| (3rd) 8.20 p.m. | (4th) 2.30 a.m. | 6⅛ | Last 3 hours flood: first 3 hours ebb. | Moderate | W. by N. 5. | Cloudy, tempesty. | — | " " " .. | Several steam trawlers with us. |
| 2.50 a.m. | 8.30 a.m. | 5⅔ | Last 3 hours ebb; 2½ hours flood. | Moderate | W. by N. 5. | Cloudy, tempesty, fine. | — | " " " .. | Several steam trawlers with us. |
| 9 a.m. | 2.30 p.m. | 5½ | Last 3 hours flood: 2½ hours ebb. | Moderately smooth. | Variable, 5 to 1. | Cloudy, fine. | — | " " " .. | Several steam trawlers with us. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XXXIV | 11 | July | 4 | O 199 | Flamborough Off .. | 54° 1⅛′ N., 1° 7¼′ E. | N.W. by N. ⅜ N. 8⅝ miles<br>E.N.E. 1⅜ miles. | 54° 8′ N., 0° 59½′ E. | 23 | 25 | 27 | f.d.s. | f.d.s. | f.d.s. |
| ,, | 12 | ,, | 4-5 | O 200 | ,, .. | 54° 8′ N., 0° 59½′ E. | E. by S. ¼ S. 9½ miles<br>N.W. ⅜ W. 4½ miles. | 54° 10′ N., 1° 9′ E. | 27 | 28 | 28 | f.d.s. | f.s. & m. | f.d.s. |
| ,, | 13 | ,, | 5 | O 201 | ,, .. | 54° 10′ N., 1° 9′ E. | N. by E. ½ E. 4⅜ miles<br>S.W. ½ S. 4⅛ miles.<br>N.E. by N. ¾ N. 2⅝ miles. | 54° 12¼′ N., 1° 6¼′ E. | 28 | .. | 29 | f.s. & m. | .. | f.d.s. |
| ,, | 14 | ,, | ,, | O 202 | ,, .. | 54° 12¼′ N., 1° 6¼′ E. | N.E. by N. 1½ miles<br>E. ⅝ S. 1¼ miles. | 54° 13¾′ N., 1° 9′ E. | 29 | .. | 30 | f.d.s. | .. | f.d.s. & sh. |
| ,, | 15 | ,, | ,, | O 203 | ,, .. | 54° 17½′ N., 1° 16¾′ E. | E. by N. ½ N. 2½ miles<br>W. 5½ miles.<br>E. by S. ⅝ S. 1½ miles. | 54° 17′ N., 1° 13½′ E. | 30 | .. | 30 | d.s. & sh. | .. | d.s. & sh. |
| ,, | 16 | ,, | 5-6 | O 204 | ,, .. | 54° 17′ N., 1° 13½′ E. | E. by S. ¼ S. 1⅜ miles<br>S.W. by S. ¼ S. 9½ miles. | 54° 7½′ N., 1° 12¼′ E. | 30 | .. | 25 | d.s. & sh. | .. | f.d.s. |
| ,, | 17 | ,, | 6 | O 205 | ,, .. | 54° 7½′ N., 1° 12¼′ E. | E.N.E. 5⅜ miles.<br>W. by N. ⅛ N. 6 miles.<br>E. ⅛ S. 3½ miles. | 54° 10⅜′ N., 1° 12⅜′ E. | 25 | .. | 28 | f.d.s | .. | f.d.s |
| ,, | 18 | ,, | ,, | O 206 | ,, .. | 54° 10⅜′ N., 1° 12⅜′ E. | W. by S. ⅝ S. 7½ miles<br>E. ¼ S. 9⅝ miles. | 54° 8⅜′ N., 1° 19′ E. | 28 | 25 | 27 | f.d.s. | f.d.s. | d.s. & sh. |
| ,, | 19 | ,, | ,, | O 207 | ,, .. | 54° 8¾′ N., 1° 19′ E. | W. by N. ⅛ N. 11 miles | 54° 7⅝′ N., 1° 0½′ E. | 27 | .. | 27 | d.s. & sh. | .. | f.d.s. |
| ,, | 20 | ,, | 6-7 | O 208 | ,, .. | 54° 7⅝′ N., 1° 0½′ E. | E. by S. ⅜ S. 2⅞ miles<br>W. by S. ¼ S. 7½ miles.<br>E. by N. 5 miles. | 54° 6′ N., 1° 1½′ E. | 27 | 27 | 27 | f.d.s. | .. | f.s. & m. |
| ,, | 21 | ,, | 7 | O 209 | ,, .. | 54° 6′ N., 1° 1½′ E. | W. by N. ⅝ N. 10 miles<br>E. by N. ⅜ N. 4⅜ miles. | 54° 8½′ N., 0° 50⅝′ E. | 27 | .. | 25 | f.s. & m. | .. | f.g.d. spk.s. |
| ,, | 22 | ,, | ,, | O 210 | ,, .. | 54° 8½′ N., 0° 50⅝′ E. | S.W. by S. ¼ S. 9½ miles<br>S.E. ⅛ E. 2 miles.<br>N.E. ¼ N. 5¼ miles. | 54° 3½′ N., 0° 54′ E. | 25 | 25 | 25 | f.g.d. spk.s. | .. | f.g.s. & sh. |
| ,, | 23 | ,, | ,, | O 211 | ,, .. | 54° 4′ N., 0° 53′ E. | E. ½ N. 4¼ miles<br>W. by N. ⅜ N. 3¾ miles.<br>E.N.E. 2⅜ miles. | 54° 7′ N., 0° 56½′ E. | 25 | .. | 28 | f.d.s. | .. | f.d.s. |
| ,, | 24 | ,, | 7-8 | O 212 | ,, .. | 54° 7′ N., 0° 56½′ E. | W. 10 miles<br>E. by S. ⅛ S. 4 miles. | 54° 4½′ N., 0° 48½′ E. | 28 | .. | 28½ | f.d.s. | .. | f.s. & m. |
| XXXV | 1 | ,, | 20 | B(c)155 | ,, .. | 54° 3′ N., 0° 58′ E. | N.N.E. 1½ miles | 54° 4¼′ N., 0° 58¾′ E. | 25 | .. | 25 | f.d.s. | .. | f.d.s. |
| ,, | 3 | ,, | ,, | O 213 | ,, .. | 54° 4¼′ N., 0° 58¾′ E. | N.E. ½ N. 6½ miles<br>S.W. by S. ¼ S. 6⅛ miles. | 54° 4⅜′ N., 1° 0¾′ E. | 25 | 27 | 25 | f.g.s | f.g.s. & m. | f.s. & m. |
| ,, | 4 | ,, | ,, | O 214 | ,, .. | 54° 4⅜′ N., 1° 0¾′ E. | N.E. ⅞ E. 3⅜ miles<br>N.W. by N. ⅛ N. 3½ miles.<br>E. by N. ½ N. 4⅜ miles.<br>W. by N. ½ N. 3¾ miles. | 54° 11½′ N., 1° 0⅜′ E. | 25 | 29 | 30 | f.s. & m. | f.d.s. | f.d.s. |
| ,, | 5 | ,, | 20-21 | O 215 | ,, .. | 54° 11½′ N., 1° 0⅜′ E. | N.W. by W. ⅜ W. 3⅜ miles<br>E. by S. ½ S. 6½ miles.<br>W. 5⅛ miles.<br>E. ⅝ N. 4⅛ miles. | 54° 12½′ N., 1° 3⅜′ E. | 30 | .. | 35 | f.d.s. & m. | .. | f.d.s. |
| | 6 | ,, | 21 | B(c)156 | ,, .. | 54° 12½′ N., 1° 3⅜′ E. | N.W. ⅝ W. 1 mile | 54° 12½′ N., 1° 2½′ E. | 35 | .. | 33 | f.d.s. | .. | f.d.s. |

| Duration of Haul. | | | Tide. | Sea | Weather | | Damage to Net, &c. | Bottom Fauna. | General Remarks. Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 3 p.m. | 8.30 p.m. | 5½ | Last 3½ hours ebb; first 1½ hours flood. | Smooth | Variable 3 to 1. | Dull, tempest. | Small hole in bosom. | Not recorded; no Naturalists on board .. | Several steam trawlers with us. |
| (4th) 9 p.m. | (5th) 2.45 a.m. | 5¾ | Last 4 hours flood; first 2 hours ebb. | Smooth | S.W. by W. 3. | Dull, rainy. | — | " " " .. | Several steam trawlers with us. |
| 3.15 a.m. | 8.30 a.m. | 5¼ | Last 3 hours ebb; first 3 hours flood. | Moderately smooth. | S.W. by W. 3 to 4. | Dull, rain. | — | " " " .. | Several steam trawlers with us. |
| 9 a.m. | 10 a.m. | 1 | Fourth hour flood. | Smooth | S.W. by W. 3. | Dull, overcast, hazy. | Came fast to wreck, parted ground rope and head line, had net very badly torn. | " " " .. | Several steam trawlers with us. |
| 6.30 p.m. | 10 p.m. | 3½ | Last hour ebb; 3½ hours flood. | Smooth | S.W. by W. 1 to 2. | Fine, cloudy. | — | " " " .. | Several steam trawlers with us. |
| (5th) 10.30 p.m. | (6th) 3 a.m. | 4½ | Last 2½ hours flood; first 2½ hours ebb. | Smooth | S.W. by W. 2. | Cloudy, fine, hazy. | — | " " " .. | Several steam trawlers with us. |
| 3.30 a.m. | 9 a.m. | 5½ | Last 4 hours ebb; first 1½ hours flood. | Smooth | S.W. by W. 1 to 3. | Fine, cloudy, hazy. | — | " " .. | Several steam trawlers with us. |
| 9.30 a.m. | 2.50 p.m. | 5⅓ | Last 4½ hours flood; first hour ebb. | Smooth | S.W. by W. 4. | Fine, hazy. | — | " " " .. | Several steam trawlers with us. |
| 3.20 p.m. | 8.15 p.m. | 4¹¹/₁₂ | Last 5 hours ebb. | Smooth | W.S.W. 2. | Fine, hazy. | — | " " " .. | Several steam trawlers with us. |
| (6th) 8.45 p.m. | (7th) 2.30 a.m. | 5¾ | Last 5 hours flood. | Smooth | N.W. by W. 2. | Fine, hazy. | — | " " " .. | 3 steam trawlers with us. |
| 3 a.m. | 8.30 a.m. | 5½ | Last 5½ hours ebb. | Smooth | Variable 1. | Fine, hazy. | — | " " " .. | 3 steam trawlers with us. |
| 9 a.m. | 2.30 p.m. | 5½ | 5½ hours flood. | Smooth | Variable 1 to 3. | Fine, cloudy, hazy. | Belly badly torn.. | " " " .. | 3 steam trawlers with us. |
| 5 p.m. | 9.30 p.m. | 4½ | Last 5½ hours ebb. | Smooth | S. 3 | Fine, hazy. | — | " " " .. | 2 steam trawlers with us. |
| (7th) 9.50 p.m. | (8th) 3.30 a.m. | 5⅔ | 6 hours flood. | Smooth | W. by N. 3. | Fine, hazy. | — | " " " | |
| 3.50 a.m. | 4.50 a.m. | 1 | Third hour ebb. | Smooth | E.N.E. 2. | Fine, cloudy. | — | **Callionymus lyra** abundant; **Trachinus vipera** abundant: *Solea lutea* f.c. Invertebrates not recorded. | G. T. Atkinson, C. W. Dance. Trawl covered with small meshed nets (Expt. No. 2). Several steam trawlers about us. |
| 6.15 a.m. | 11.15 a.m. | 5 | Last 2 hours ebb; first 3 hours flood. | Moderate swell. | S.E. 3 | Cloudy, tempest. | — | Not recorded .. .. .. .. .. .. | Several steam trawlers about us. |
| 11.50 a.m. | 6.20 p.m. | 6½ | Last 2 hours flood; 5 hours ebb. | Moderate swell. | E. 2 | Cloudy, fine. | — | " .. .. .. .. .. .. | Several steam trawlers about us. |
| (20th) 6.50 p.m. | (21st) 2 a.m. | 7⅙ | Last 2 hours ebb; 5 hours flood. | Moderate swell. | Variable 1 to 2. | Cloudy, fine. | — | " .. .. .. .. .. .. | Several steam trawlers about us. |
| a.m. | 4 a.m. | 1 | First hour ebb. | Smooth | Variable 1. | Fine, cloudy. | — | " .. .. .. .. .. .. | Small mesh nets round ordinary trawl. (Expt. No. 3). Several steam trawlers about us. |

| Voyage. | Station. | Month. | Day | Net and No. of Haul. | Name of Ground. | Position | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XXXV | 7 | July | 21 | O 216 | Botney Gut .. .. | 53° 51¾′ N., 3° 1½′ E. | N. by E. ⅜ E. 2⅜ miles<br>S. 3 miles.<br>N. ½ W. 5 miles.<br>S. 2 miles.<br>N.W. by W. ½ W. 1¼ miles. | 53° 54½′ N., 2° 59′ E. | 31 | 31 | 32 | m. | m. | m. |
| ,, | 9 | ,, | ,, | B 157 | Between Coal Pit and Broken Bank. | 53° 27¼′ N., 1° 54½′ E. | S.E. by S. ½ S. 7½ miles<br>E. ¾ S. 2½ miles.<br>N.W. ½ N. 1⅝ miles. | 53° 23⅜′ N., 2° 5½′ E. | 13 | 14 | 14 | s. & grv. | c.s. | f.g.s. |
| ,, | 11 | ,, | 22 | B 158 | Between Swarte Bank and Broken Bank. | 53° 25′ N., 2° 2′ E. | S.E. by S. ½ S. 13½ miles | 53° 16′ N., 2° 18⅞′ E. | 14 | 14 | 15 | f.g.s. | .. | f.g.s. |
| ,, | 12 | ,, | ,, | O 217 | East of South part of Swarte Bank. | 53° 16⅛′ N., 2° 21½′ E. | E. by S. 2 miles<br>N.E. ½ N. 6⅛ miles.<br>W. by N. ⅜ N. 5⅜ miles.<br>N. by E. ⅝ E. 2½ miles. | 53° 24⅜′ N., 2° 19⅜′ E. | 15 | 12 | 14 | f.g.s. | f.g.s. | f.g.s. |
| | 13 | ,, | 22–23 | O 218 | Leman Ground .. | 53° 24⅜′ N., 2° 19⅜′ E. | W. by N. ½ N. 3½ miles<br>E.N.E. 5 miles.<br>S.W. by W. 4½ miles.<br>E. by S. ¾ S. 3 miles. | 53° 24½′ N., 2° 26¾′ E. | 14 | 14 | 14 | f.g.s. | f.g.s. | f.g.s. |
| ,, | 14 | ,, | 23 | O 219 | ,, .. | 53° 25′ N., 2° 23¾′ E. | W. ½ N. 4½ miles<br>E. ⅝ N. 4⅜ miles.<br>E. by N. 3½ miles. | 53° 27½′ N., 2° 28½′ E. | 13 | 11 | 19 | f.g.s | f.g.s. | f.g.s. |
| ,, | 15 | ,, | ,, | O 220 | ,, .. | 53° 28½′ N., 2° 28½′ E. | S.E. ⅞ E. 14⅜ miles | 53° 23⅜′ N., 2° 51⅜′ E. | 16 | .. | 16 | f.g.s. | .. | f.g.s. |
| ,, | 16 | ,, | 23–24 | O 221 | ,, .. | 53° 28⅜′ N., 2° 51¾′ E. | S.E. by E. ⅜ E. 3 miles<br>S.W. ½ W. 4⅜ miles.<br>N. by E. ⅞ E. 7¼ miles. | 53° 26½′ N., 2° 54′ E. | 16 | 16 | 16½ | f.g.s. | .. | f.g.s. |
| ,, | 17 | ,, | 24 | O 222 | ,, .. | 53° 26½′ N., 2° 54′ E. | S.W. by S. ½ S. 8⅜ miles<br>N.E. ¾ N. 5⅜ miles.<br>E.S.E. 2 miles. | 53° 22′ N., 2° 56′ E. | 16½ | 16 | 16 | f.g.s. | f.g.s. | f.g.s. |
| ,, | 18 | ,, | ,, | O 223 | ,, .. | 53° 22′ N., 2° 56′ E. | W. ¾ S. 7⅜ miles<br>N.E. ½ N. 6½ miles.<br>S.E. ½ S. 4½ miles. | 53° 23⅜′ N., 2° 58′ E. | 16 | 16 | 16½ | f.d.s. | f.d.s. | f.d.s. |
| ,, | 19 | ,, | 24–25 | O 224 | ,, .. | 53° 23⅜′ N., 2° 58′ E. | W. 2⅜ miles<br>N.E. by E. ⅜ E. 3½ miles.<br>W. ⅜ N. 3⅜ miles.<br>N.E. by E. ¾ E. 3½ miles. | 53° 25½′ N., 2° 55⅜′ E. | 16½ | 16 | 16½ | f.d.s. | f.d.s. | f.d.s. |
| .. | 20 | ,, | 25 | O 225 | ,, .. | 53° 25½′ N., 2° 55⅜′ E. | S.S.E. 7½ miles | 53° 20¼′ N., 3° 3⅜′ E. | 16½ | 16 | 16 | f.d.s. | .. | f.d.s. |
| ,, | 21 | ,, | ,, | O 226 | South-east part of Leman Ground. | 53° 20¼′ N., 3° 3⅜′ E. | S.W. ⅝ S. 4½ miles<br>N.N.W. 2½ miles.<br>E. ¼ S. 5½ miles. | 53° 19¼′ N., 3° 5½′ E. | 16 | 16 | 16 | f.d.s. | .. | f.d.s. |
| ,, | 22 | ,, | ,, | O 227 | ,, ,, | 53° 19′ N., 3° 1⅞′ E. | S.E. ½ S. 2 miles<br>S.E. 3⅜ miles.<br>S. ½ mile. | 53° 16′ N., 3° 9′ E. | 16 | .. | 15 | f.d.s. | .. | f.d.s. |
| .. | 23 | ,, | 26 | O 228 | North part of Brown Bank. | 53° 15½′ N., 3° 38½′ E. | W.S.W. 10½ miles | 53° 9′ N., 3° 24′ E. | 14 | .. | 15 | f.d.s. | .. | f.d.s. |
| ,, | 25 | ,, | ,, | O 229 | ,, ,, | 53° 9′ N., 3° 24′ E. | E. ⅝ N. 2¼ miles<br>W. ¼ N. 7⅜ miles.<br>E.N.E. 3 miles. | 53° 10⅜′ N., 3° 19¾′ E. | 15 | .. | 14 | f.d.s. | .. | f.d.s. |
| ,, | 26 | ,, | 26–27 | O 230 | Brown Bank .. .. | 53° 10⅜′ N., 3° 19¾′ E. | S.E. by E. ⅝ E. 3¾ miles<br>N.E. ⅝ E. 6½ miles.<br>N.W. ½ N. 3 miles. | 53° 15¾′ N., 3° 28½′ E. | 14 | .. | 14 | f.d.s. | .. | f.d.s. |
| ,, | 27 | ,, | 27 | B 159 | North part of Brown Bank. | 53° 15¾′ N., 3° 28½′ E. | N.W. ¼ W. 2⅝ miles<br>E. by N. ½ N. 8½ miles.<br>W. by S. ½ S. 4 miles. | 53° 19¼′ N., 3° 31′ E. | 14 | .. | 14 | f.d.s. | .. | f.d.s. |
| ,, | 28 | ,, | ,, | B 160 | ,, ,, | 53° 19¼′ N., 3° 31′ E. | S.E. by S. 6½ miles<br>E. ½ S. 2 miles.<br>N.W. by W. ⅝ W. 4⅝ miles. | 53° 17′ N., 3° 34′ E. | 14 | .. | 14 | f.d.s. | .. | f.d.s. |
| ,, | 29 | ,, | ,, | B 161 | Brown Bank .. .. | 53° 17′ N., 3° 34′ E. | S.W. ⅜ W. 12¾ miles | 53° 6½′ N., 3° 22′ E. | 14 | .. | 14½ | f.d.s. | .. | f.g.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 2.30 p.m. | 8 p.m. | 5½ | Last hour flood; first 4½ hours ebb. | Moderate swell. | E. 1 | Fine, cloudy. | — | **Nephrops norvegicus** very abundant (c.a. 1300). *Lumpenus lampetriformis.* | 1 steam trawler with us. |
| 4.30 a.m. | 10 a.m. | 5½ | Last 2 hours flood; first 3½ hours ebb. | Smooth | S.E. 4 | Fine, hazy. | Belly torn .. | *Callionymus lyra* .. .. .. .. .. Invertebrates not recorded. | 5 steam trawlers outside Swarte Bank. 2 Lowestoft trawling smacks with us. |
| 12.15 p.m. | 4.30 p.m. | 4¼ | First 4 hours flood. | Smooth | S.E. 4 | Fine, hazy, foggy. | — | Not recorded .. .. .. .. .. .. | 2 Lowestoft trawling smacks with us. |
| 5.30 p.m. | 11 p.m. | 5½ | Last hour flood; 4½ hours ebb. | Smooth | S.E. 1 | Fine | — | „ .. .. .. .. .. .. | 4 steam trawlers with us. |
| (22nd) 11.30 p.m. | (23rd) 5 a.m. | 5½ | Last 1½ hours ebb; first 4 hours flood. | Smooth | S.E. 1 | Fine, cloudy. | Belly and fore wing torn. | „ .. .. .. .. .. .. | 4 steam trawlers about us. |
| 8 a.m. | 1.30 p.m. | 5½ | 5½ hours ebb. | Smooth | S. 3 | Fine, cloudy, hazy. | Belly split .. | „ .. .. .. .. .. .. | 2 steam trawlers, S.S. Restless and S.S. Grimsby, of Grimsby, with us. |
| 3.40 p.m. | 8 p.m. | 4½ | Last 4 hours flood. | Smooth | S. 2 | Cloudy, tempest. | — | „ .. .. .. .. .. .. | 7 steam trawlers about us. |
| (23rd) 8.30 p.m. | (24th) 2.30 a.m. | 6 | Whole ebb. | Smooth | Variable 1. | Cloudy, tempest. | — | „ .. .. .. .. .. .. | 5 steam trawlers and 1 Yarmouth trawling smack with us. |
| 3.45 a.m. | 10.30 a.m. | 6¾ | Last 4½ hours flood; first 2½ hours ebb. | Smooth | Variable 2. | Fine, cloudy, hazy. | — | „ .. .. .. .. .. .. | 5 steam trawlers and 1 Yarmouth trawling smack with us. |
| 11 a.m | 7 p.m. | 8 | 4½ hours ebb; 3½ hours flood. | Smooth | Variable 1. | Fine, hazy. | — | „ .. .. .. .. .. .. | 6 steam trawlers and 1 Yarmouth trawling smack with us. |
| (24th) 7.40 p.m. | (26th) 2.30 a.m. | 6⅝ | Last hour flood; 6 hours ebb. | Smooth | S.E. 3 | Cloudy, tempest. | Turn in aft wing | „ .. .. .. .. .. .. | 5 steam trawlers with us. |
| 3.30 a.m. | 9 a.m. | 5½ | 5½ hours flood. | Moderately smooth. | E.S.E. 4 | Fine, cloudy, hazy. | Aft wing torn .. | „ .. .. .. .. .. .. | 5 steam trawlers with us. |
| 10.15 a.m | 3.45 p.m. | 5½ | Last 4 hours ebb; first hour flood. | Moderately rough. | E.N.E. 6 | Overcast, cloudy. | Belly and fore-wing torn | „ .. .. .. .. .. .. | 3 steam trawlers with us. |
| 5 p.m. | 6.40 p.m. | 1⅔ | First of flood. | Very rough | E.N.E. 7 | Overcast, cloudy. | Parted headline and net very badly torn. | „ .. .. .. .. .. .. | 3 steam trawlers with us. |
| 8.30 a.m. | Noon | 3½ | Last hour flood; first 3 hours ebb. | Moderate swell. | S.W. 4 | Cloudy, fine. | — | „ .. .. .. .. .. .. | 3 steam trawlers and several Dutch craft with us. |
| 12.30 p.m. | 5.30 p.m. | 5 | Last 3½ hours ebb; first 1½ hours flood. | Moderate swell. | S. 2 | Fine, cloudy, tempest. | — | „ .. .. .. .. .. .. | 3 steam trawlers and several Dutch craft about us. |
| (26th) 8 p.m. | (27th) 2 a.m. | 6 | Last hour flood; first 5 hours ebb. | Moderate swell. | Variable 1. | Cloudy, tempest. | — | „ .. .. .. .. .. .. | 2 steam trawlers and several Dutch craft with us. |
| 3 a.m. | 9 a.m. | 6 | Last hour ebb; first 5 hours flood. | Moderately smooth. | Variable 1. | Cloudy, tempesty. | — | „ .. .. .. .. .. .. | 2 steam trawlers and several Dutch craft about us. |
| 9.45 a.m. | 3.30 p.m. | 5¾ | First 5½ hours ebb. | Smooth | N. 2 | Fine, cloudy. | — | „ .. .. .. .. .. .. | 2 steam trawlers and several Dutch craft with us. |
| 4 p.m. | 10 p.m. | 6 | All flood | Smooth | Variable 1. | Fine, cloudy, hazy. | — | „ .. .. .. .. .. .. | 2 steam trawlers with us. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shoot-ing. | Towing. | Haul-ing. | Shoot-ing | Towing | Haul-ing. |
| XXXVI | 1 | Aug. | 3 | B (c) 162 | Off Ymuiden .. | 52° 28¼′ N., 4° 28′ E. | N. 2 miles | 52° 30′ N., 4° 27¼′ E | 8½ | .. | 9 | f.g.s. | .. | f.g.s. |
| ,, | 2 | ,, | ,, | O 231 | Off Egmond .. .. | 52° 31⅜′ N., 4° 27′ E. | N.W. by W. 3⅜ miles<br>E. ¼ N. 4¼ miles.<br>N. ½ E. 1⅞ miles. | 52° 35⅜′ N., 4° 27′ E. | 9 | .. | 9 | f.g.s. | .. | f.g.s. |
| ,, | 3 | ,, | ,, | B (c) 163 | East part of Brown Bank. | 53° 2¾′ N., 3° 45⅝′ E. | E. by N. 2 miles | 53° 3⅝′ N., 3° 49′ E. | 15 | .. | 15 | f.g.s. | .. | f.d.g.s. |
| ,, | 4 | ,, | ,, | O 232 | ,, ,, | 53° 3⅜′ N., 3° 49′ E. | N.W. by N. ½ N. 3⅜ miles<br>E.S.E. 3½ miles.<br>N.W. ¼ W. 3½ miles.<br>S.E. by S. 3⅜ miles.<br>N.E. 2 miles. | 53° 6½′ N., 3° 52′ E. | 15 | 15 | 14½ | f.d.g.s. | .. | f.d.g.s. |
| ,, | 50 | ,, | 9 | B 164 | East of South end of Well Bank. | 53° 4′ N., 2° 21½′ E. | N.E. 5 miles | 53° 8′ N., 2° 25′ E. | 18 | 20 | 15 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 51 | ,, | ,, | B 165 | ,, ,, | 53° 8′ N., 2° 25′ E. | E.N.E. 4 miles | 53° 10⅝′ N., 2° 30⅝′ E. | 15 | .. | 18 | f.d.g.s. | .. | d.s., m., & gvl. |
| ,, | 52 | ,, | ,, | B 166 | Off Smith's Knoll Light-vessel. | 52° 53⅝′ N., 2° 16′ E. | E. by S. ⅛ S. 6 miles<br>S. ⅜ E. 3½ miles. | 52° 49½′ N., 2° 28½′ E. | 24 | .. | 21 | m. & s. | .. | d.s. |
| ,, | 53 | ,, | 9–10 | B 167 | Knoll Deep .. .. | 52° 49½′ N., 2° 28½′ E. | S. by W. ½ W. 4⅜ miles<br>N. ⅜ E. 6 miles.<br>W. by S. ¼ S. 2¼ miles. | 52° 51′ N., 2° 24¼′ E. | 21 | .. | 23 | d.s. | .. | m. & s. |
| XXXVII | 1 | ,, | 16 | B 168 | Edge of Lowestoft Deeps. | 52° 17½′ N., 2° 11⅜′ E. | N.E. ½ N. 1⅜ miles | 52° 19′ N., 2° 12¾′ E. | 21 | .. | 19 | c.s. & sh. | .. | c.s. & sh. |
| ,, | 2 | ,, | ,, | B 169 | Lowestoft Deeps .. | 52° 21′ N., 2° 14¼′ E. | N.E. ½ N. 7 miles | 52° 27¼′ N., 2° 19¼′ E. | 23 | .. | 25 | c.s. & sh. | .. | c.s. & sh. |
| ,, | 3 | ,, | ,, | B 170 | East of Lowestoft .. | 52° 27¼ N., 2° 19¼′ E. | E. ¾ N. 5¾ miles | 52° 29½′ N., 2° 27¾′ E. | 25 | .. | 26 | c.s. & sh. | .. | c.s. & sh. |
| ,, | 5 | ,, | 17 | B 171 | Off Smith's Knoll .. | 52° 55¼′ N., 2° 15′ E. | E. by N. ¼ N. 7⅜ miles | 52° 58¼′ N., 2° 24′ E. | 25 | .. | 19 | c.s. | .. | g.s. |
| ,, | 7 | ,, | ,, | B 172 | South-east of Well Bank. | 52° 58¼′ N., 2° 24′ E. | E. ⅜ N. 4½ miles | 53° 0⅜′ N., 2° 30¼′ E. | 19 | .. | 20 | g.s. | .. | g.s. |
| ,, | 9 | ,, | 20 | B 173 | E.N.E. of Outer Gabbard. | 52° 11¼′ N., 2° 33′ E. | E. ⅛ S. 4 miles | 52° 12⅜′ N., 2° 39′ E. | 23 | .. | 24 | g.br.s. | .. | g.br.s. |
| ,, | 11 | ,, | ,, | B 174 | Middle Ground .. | 52° 20′ N., 3° 6′ E. | E. ⅜ N. 3½ miles | 52° 21¼′ N., 3° 10¼′ E. | 20 | .. | 13 | g.s. | .. | d.g.s. |
| ,, | 13 | ,, | ,, | B 175 | Winterton Shoal .. | 52° 36′ N., 3° 2¾′ E. | N. ¼ E. 2⅜ miles<br>N.E. ¼ E. 1⅜ miles.<br>S.W. by W. ¼ W. 3 miles. | 52° 38′ N., 2° 59¾′ E. | 19 | .. | 20 | g.br.s. | .. | g.br.s. |
| ,, | 15 | ,, | 21 | B 176 | Brown Bank .. .. | 53° 1¼′ N., 2° 55′ E. | E. by S. ¾ S. 5¼ miles | 53° 1′ N., 3° 4′ E. | 17 | .. | 13 | g.br.s. | .. | g.br.s. |
| ,, | 17 | ,, | ,, | B 177 | ,, .. .. | 53° 3′ N., 3° 29¼′ E. | E. by S. ¼ S. 5½ miles<br>S.E. by E. ½ E. 8⅜ miles. | 53° 1¼′ N., 3° 52¼ E. | 15 | 16 | 13 | f.g.br.s. | .. | f.g.s. |
| ,, | 19 | ,, | ,, | B 178 | North-west of Haaks Light-vessel. | 53° 1¼′ N., 3° 52¼′ E. | S.E. by S. ⅜ S. 3½ miles | 52° 58⅜′ N., 3° 57¼′ E. | 13 | 16 | 13 | f.g.s. | f.g.s. | f.g.s. |
| ,, | 22 | ,, | 21–22 | B 179 | Broad Fourteens, North part. | 52° 58⅝′ N., 3° 57¼′ E. | S. ⅝ W. 13¼ miles | 52° 45⅜′ N., 3° 59½′ E. | 13 | .. | 14 | f.g.s. | .. | f.g.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c. Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 4 a.m. | 5 a.m. | 1 | Last ½ hour flood; first ½ hour ebb. | Smooth | S.E. 3 | Fine, hazy. | — | *Cyanea lamarcki* .. .. .. .. .. *Portunus holsatus.* | R. A. Todd and A. J. Arrowsmith. Small mesh nets round ordinary trawl. (Expt. No. 4.) Several Dutch craft about us. |
| 6 a.m. | 10 a.m. | 4 | Last 4 hours ebb. | Smooth | E.S.E. 2 | Fine, hazy. | — | *Cyanea lamarcki* c. .. .. .. .. .. *Portunus holsatus* c. | Several Dutch craft about us. |
| 4.15 p.m. | 5.15 p.m. | 1 | Last ½ hour flood; first ½ hour ebb. | Smooth | E.S.E. 2 | Fine, hazy. | — | *Loligo media* .. .. .. .. .. .. *Portunus holsatus* f.c. *Asterias rubens* f.c. **Solea lutea** f.c., *Arnoglossus* sp., f.c., *Trachinus vipera* c., *Callionymus lyra.* | Small mesh nets round ordinary trawl (Expt. No. 5.) 2 steam trawlers and several Dutch craft about us. |
| 6 p.m. | Midnight | 6 | Last 4 hours ebb; first 2 hours flood. | Smooth | S.E. 2 | Fine, hazy. | — | *Asterias rubens* c. .. .. .. .. .. *Solea lutea.* | 2 steam trawlers with us. |
| 7.40 a.m. | 9.40 a.m. | 2 | 2 hours ebb. | Smooth | N.W. 3 | Fine, cloudy. | Ground rope parted, and net torn. | Not recorded .. .. .. .. .. .. | Fish not measured. |
| 10.50 a.m. | 12.50 p.m. | 2 | Fourth and fifth hours ebb. | Smooth | N.W. 4 | Fine, cloudy, hazy. | — | " .. .. .. .. .. .. | "Absolutely nothing caught." R.A.T. |
| 3.40 p.m. | 7.30 p.m. | 3⅝ | Last 4 hours flood. | Moderately smooth. | W. 1 | Fine, cloudy. | — | *Loligo forbesi* c. .. .. .. .. .. *Eupagurus bernhardus*, f.c. | "Moorlog" present. Several trawling smacks around us. |
| (9th) 8 p.m. | (10th) 1.30 a.m. | 5½ | First 5½ hours ebb. | Moderately smooth. | S.W. by W. 1-2. | Fine, cloudy. | — | *Loligo forbesi* f.c. .. .. .. .. .. *Cancer pagurus.* | Several trawling smacks with us. |
| 2.45 p.m. | 3.30 p.m. | ¾ | First hour ebb. | Moderately smooth. | E. 3 | Overcast | Had a heavy "pull out," hauled, net slightly damaged. | *Alcyonium digitatum* .. .. .. .. *Portunus holsatus.* *Asterias rubens*, *Solaster papposus*, *Spatangus purpureus.* | G. T. Atkinson, O. W. Mackrill. 2 French trawling smacks with us. |
| 4.15 p.m. | 7.15 p.m. | 3 | From 2nd to 5th hours ebb. | Moderately smooth. | E. by S. 3. | Cloudy, overcast. | — | Very little taken. | |
| 7.40 p.m. | 11.40 p.m. | 4 | Last 2 hours ebb; first 2 hours flood. | Moderately smooth. | S. 1-4 | Overcast | Trawl very badly torn, lost part of belly. | Not recorded .. .. .. .. .. .. | No fish. Several trawling smacks about us. |
| 12.45 p.m. | 3.45 p.m. | 3 | Last 3 hours flood. | Moderate | S.E. 5 | Dull, thick, rainy. | — | Very little taken .. .. .. .. .. | Several trawling smacks about us. |
| 5 p.m. | 7 p.m. | 2 | Third and fourth hours flood. | Moderate | S.W. 5 | Heavy clouds. | — | " " .. .. .. .. .. | 2 steam trawlers about us. |
| 4 a.m. | 7 a.m. | 3 | Last 2 hours flood; first hour ebb. | Moderately smooth. | N. 3 | Overcast, cloudy. | Trawl very badly torn; lost belly. | Nothing taken .. .. .. .. .. | No fish. Several Dutch fishing craft about us. |
| 11.30 a.m. | 1.30 p.m. | 2 | First 2 hours flood. | Moderately smooth. | N. 2 | Cloudy, fine. | — | Very little taken. | |
| 4.30 p.m. | 8.30 p.m. | 4 | Last hour flood; 3 hours ebb. | Northerly swell. | Variable l. | Fine, cloudy. | — | *Portunus holsatus* .. .. .. .. .. | 2 steam trawlers with us. |
| 4 a.m. | 7 a.m. | 3 | Last 3 hours flood. | Northerly swell. | N. 2 | Fine, cloudy. | — | Very little taken .. .. .. .. .. | Passed several steam trawlers. |
| 9.30 a.m. | 4.30 p.m. | 7 | Last 4 hours ebb; first 3 hours flood. | Northerly swell. | Variable 2. | Fine, cloudy. | — | Not recorded .. .. .. .. .. .. | Several steam trawlers about us. |
| 4.45 p.m. | 6.45 p.m. | 2 | Fourth and fifth hours flood. | Northerly swell. | N.E. 2 | Fine, cloudy. | — | " | |
| (21st) 7 p.m. | (22nd) 3 a.m. | 8 | 2 hours flood; 6 hours ebb. | Northerly swell. | E.S.E. 3 | Fine, cloudy. | — | " .. .. .. .. .. .. | 2 steam trawlers and several Dutch fishing craft about us. |

| Voyages. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XXXVII | 23 | Aug. | 22 | B 180 | Broad Fourteens, middle part. | 52° 45⅝′ N., 3° 59½′ E. | S.W. by S. ⅞ S. 17 miles | 52° 29′ N., 3° 55¼′ E. | 14 | .. | 13½ | f.g.s. | .. | f.g.s. |
| „ | 25 | „ | „ | B 181 | Broad Fourteens, South part. | 52° 30½′ N., 3° 54⅜′ E. | E.S.E. 3½ miles | 52° 30′ N., 4° 1′ E. | 14 | .. | 13 | f.g.s. | .. | f.g.s. |
| „ | 26 | „ | „ | B 182 | „ „ | 52° 30′ N., 4° 1′ E. | N.W. by W. ⅝ W. 3⅝ miles | 52° 30⅝′ N., 3° 55¼′ E. | 13 | .. | 14 | f.g.s. | .. | f.g.s. |
| XXXVIII | 1 | „ | 28 | B 183 | Dogger Bank, South East of South West Patch. | 54° 15½′ N., 2° 44½′ E. | N.W. 10½ miles | 54° 21′ N., 2° 29½′ E. | 21 | 16 | 16½ | f.d.g.s. | f.d.g.s. | f.d.g.s. |
| „ | 2 | „ | „ | B 184 | Dogger Bank, East of South West Patch. | 54° 28′ N., 2° 45′ E. | N.E. ½ E. 8¾ miles | 54° 34¾′ N., 2° 54½′ E. | 12½ | 12½ | 13½ | f.d.g.s. & sh. | f.d.g.s. & sh. | f.d.g.s. & sh. |
| „ | 3 | „ | „ | B 185 | Dogger Bank, North East of Eastern Shoal. | 54° 46½′ N., 2° 58′ E. | N.E. by E. ⅜ E. 9 miles E. ¾ N. 4⅝ miles. | 54° 54¼′ N., 3° 18′ E. | 10½ | 17 | 17 | f.g.s. & sh. | f.g.s. & sh. | f.g.s. & sh. |
| „ | 4 | „ | 28-29 | B 186 | Dogger Bank, middle of South East slope. | 54° 54¼′ N., 3° 18′ E. | N.E. ⅜ E. 10½ miles | 55° 2½′ N., 3° 28¾′ E. | 17 | 18 | 19½ | f.g.s. & sh. | .. | f.g.s. |
| „ | 5 | „ | 29 | B 187 | „ „ | 55° 2½′ N., 3° 28¾′ E. | N.E. by E. ¼ E. 10¼ miles | 55° 9½′ N., 3° 40¾′ E. | 19½ | 20 | 19 | f.g.s. | .. | f.g.s. |
| „ | 6 | „ | „ | B (c) 188 | Swashway of Dogger | 55° 21⅜′ N., 4° 11¼′ E. | N.N.E. ¼ E. 3 miles | 55° 24′ N., 4° 12½′ E. | 21 | .. | 19 | f.g.s. | .. | f.g.s. |
| „ | 7 | „ | „ | B 189 | South part of Tail End of Dogger. | 52° 24′ N., 4° 12½′ E. | N.E. ¼ E. 4½ miles E. by N. ⅞ N. 6 miles. | 55° 31′ N., 4° 25½′ E. | 19 | 17 | 16½ | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 8 | „ | 29-30 | B 190 | On Tail End of Dogger Bank. | 55° 31′ N., 4° 25½′ E. | N. 10 miles | 55° 40½′ N., 4° 21½′ E. | 16½ | 17 | 18 | f.g.s. & sh. | .. | f.g.s. |
| „ | 10 | „ | 30 | B 191 | Dogger Bank, West of Swashway. | 55° 28′ N., 3° 53′ E. | W. by S. ½ S. 6 miles | 55° 24¼′ N., 3° 44′ E. | 16 | .. | 16 | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 12 | „ | „ | B 192 | Dogger Bank, North West of Swashway. | 55° 27′ N., 3° 42′ E. | N. by E. ⅛ E. 8 miles | 55° 35½′ N., 3° 41′ E. | 16 | 17 | 19 | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 14 | „ | „ | B 193 | North part of Dogger Bank. | 55° 25½′ N., 3° 30′ E. | W.S.W. 4 miles | 55° 23½′ N.. 3° 24′ E. | 17 | .. | 17 | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 15 | „ | 31 | B 194 | Below North edge of Dogger Bank. | 55° 30½′ N., 2° 28½′ E. | E. by S. 10 miles | 55° 30½′ N., 2° 46½′ E. | 25 | 24 | 23 | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 18 | „ | „ | B 195 | Middle part (E.) of the Dogger Bank. | 55° 1½′ N., 2° 43½′ E. | W. by S. ½ S. 4 miles | 54° 58¾′ N., 2° 36½′ E. | 15 | .. | 13 | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 20 | „ | „ | B 196 | Middle part (N.W.) of Dogger Bank. | 55° 1⅜′ N., 2° 19½′ E. | N. 4 miles W. ¾ S. 4 miles. | 55° 3½′ N., 2° 11½′ E. | 13 | 16 | 16½ | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 22 | Sept. | 1 | B 197 | Middle part (W.) of Dogger Bank. | 54° 50½′ N., 2° 17½′ E. | W. ⅜ S. 7¼ miles. | 54° 47½′ N., 2° 6½′ E. | 12 | .. | 14½ | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 24 | „ | „ | B 198 | „ „ | 54° 44½ N., 1° 58½′ E. | N.W. by N. 3½ miles W. ¾ S. 3½ miles. | 54° 45¼′ N., 1° 48′ E. | 13½ | 14 | 13 | f.g.s. & sh. | .. | f.g.s. & sh. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damages to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 3.30 a.m. | 10.30 a.m. | 7 | Last 5 hours ebb; first 2 hours flood. | Moderate | S.E. 5 | Cloudy, tempest. | — | | |
| 12.15 p.m. | 2.15 p.m. | 2 | Last 2 hours ebb. | Moderately rough. | E. 6 | Fine, cloudy. | — | Very little taken .. .. .. .. .. | Large piece of "Moorlog" in trawl. |
| 2.30 p.m. | 4.30 p.m. | 2 | First 2 hours ebb. | Moderately rough. | E. 6 | Cloudy, tempest. | — | Not recorded. | |
| 4.30 a.m. | 9.30 a.m. | 5 | Last hour ebb; first 4 hours flood. | Smooth | W. 2 | Fine, cloudy. | — | **Halichondria panicea** v.c. .. .. *Obelia longissima* f.c. *Pecten opercularis* f.c., *Fusus antiquus.* *Galathea intermedia* c. **Asterias rubens** v. abundant. **Ophiothrix fragilis** v.c. | J. O. Borley, G. T. Atkinson. |
| Noon | 4 p.m. | 4 | First 4 hours ebb. | Smooth | S.W. 2 | Fine, cloudy. | — | **Sponge** v. abundant. **Obelia longissima, dead** v. abundant. *Portunus holsatus* c. *Ophiothrix fragilis* c., *Asterias rubens* f.c. | |
| 6 p.m. | 11 p.m. | 5 | Last 5 hours flood. | Smooth | S.S.W. 2. | Fine | — | **Halichondria panicea** v. abundant. **Obelia longissima**, dead v. abundant. *Fusus antiquus* f.c. *Paratylus swammerdami* c. *Ophiothrix fragilis* c. | |
| (28th) 11.30 p.m. | (29th) 4.30 a.m. | 5 | Last 5 hours ebb. | Smooth | S.W. 4 | Cloudy, rainy. | — | **Halichondria panicea,** abuudant, **Alcyonidium gelatinosum,** v. abundant. *Fusus antiquus* c. *Portunus holsatus* f.c. **Ophiothrix fragilis** v.c. | |
| 5 a.m. | 10 a.m. | 5 | Last hour ebb; first 4 hours flood. | Smooth | S.W. by W. 4. | Fine, cloudy, hazy. | — | **Halichondria panicea** v.c. .. .. *Alcyonium digitatum* f.c. **Alcyonidium gelatinosum** v. abundant. *Fusus antiquus, Pecten opercularis.* *Eupagurus bernhardus.* | 2 steam trawlers with us. |
| 2.30 p.m. | 4.30 p.m. | 2 | Nil | Smooth | S.W. by W. 2. | Fine, hazy | — | **Alcyonium digitatum** v.c. .. .. **Alcyonidium gelatinosum** v. abundant. *Fusus antiquus* c. | Small mesh nets round ordinary trawl (Expt. No. 6). Cod end supported by an oval iron hoop at hinder end. |
| 6 p.m. | 11 p.m. | 5 | Nil | Smooth | S.S.W. 2. | Fine, hazy | — | *Alcyonidium gelatinosum.* *Fusus antiquus* f.c. *Schistomysis ornata* c. *Asterias rubens* c. | |
| (29th) 11.15 p.m. | (30th) 4.15 a.m. | 5 | Nil | Smooth | S. 2 | Fine, hazy | — | **Alcyonidium gelatinosum** v. abundant. *Fusus antiquus, Loligo forbesi.* *Eupagurus bernhardus* f.c. | Several Norwegian mackerel smacks about us. |
| 7.30 a.m. | 10.30 a.m. | 3 | Nil | Smooth | S.S.E. 3. | Fine | — | *Obelia longissima* c. **Alcyonidium gelatinosum** v. abundant, *Flustra securifrons* c. *Doris pilosa* f.c., *Fusus antiquus, Loligo forbesi.* *Caprella linearis* c., *Paratylus swammerdami* f.c. **Asterias rubens** v.c. | |
| Noon | 4 p.m. | 4 | Nil | Smooth | S.E. by S. 4. | Fine, cloudy. | — | **Alcyonidium gelatinosum** v. abundant, *Flustra securifrons* c. *Fusus antiquus* f.c. *Caprella linearis* c. *Asterias rubens* c. | |
| 7.15 p.m. | 9.15 p.m. | 2 | Nil | Moderately smooth. | S.E. by E. 4. | Fine, cloudy. | — | **Alcyonidium gelatinosum** v. abundant. *Fusus antiquus, Loligo forbesi.* | |
| 4.15 a.m. | 9.15 a.m. | 5 | Nil | Moderately smooth. | S.E. 4 | Fine, hazy | — | **Alcyonidium gelatinosum** v. abundant. *Pecten opercularis, Fusus antiquus.* | Net cut to let out "curly weed" (a. gelatinosum), some fish escaped. |
| 3.30 p.m | 5.30 p.m. | 2 | Third and fourth hours ebb. | Smooth | S.W. 1 | Dull, rain. | — | *Eupagurus bernhardus* f.c. **Asterias rubens,** abundant. | |
| 7.30 p.m. | 11.30 p.m. | 4 | First 4 hours flood. | Smooth | Variable 1. | Overcast | — | **Alcyonidium gelatinosum,** abundant. *Pecten opercularis* f.c. *Portunus holsatus* f.c., *Cancer pagurus.* **Asterias rubens** v.c. | |
| 4.30 a.m. | 7.30 a.m. | 3 | Last 2 hours ebb; first hour flood. | Northerly swell. | Variable 2. | Dull, thick, rain. | — | *Obelia geniculata* c. **Alcyonidium gelatinosum** v.c. *Fusus antiquus, Pecten opercularis.* *Echinus sp.* c. | |
| 9.30 a.m. | 1.30 p.m. | 4 | Last 3 hours flood; first hour ebb. | Moderately rough. | N.N.E. 5. | Overcast, cloudy, rain. | — | **Alcyonidium gelatinosum** v. abundant. **Galathea intermedia** v.c. | Net out to let out weed. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XXXVIII | 25 | Sept. | 1 | B 199 | West part of South West Patch of Dogger. | 54° 32¾′ N., 1° 46′ E. | S. by W. 6½ miles | 54° 26½′ N., 1° 46½′ E. | 10 | 9 | 17 | f.g.s. & sh. | .. | f.g.s. & sh. |
| ,, | 26 | ,, | 2 | B 200 | North part of Leman Ground. | 53° 46′ N., 2° 34′ E. | S. by E. ⅛ E. 8 miles | 53° 39′ N., 2° 39½′ E. | 19 | .. | 19 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 28 | ,, | ,, | B 201 | Leman Ground .. | 53° 36′ N., 2° 39¼′ E. | S.E. by S. 9 miles | 53° 31′ N., 2° 50½′ E. | 18 | 17 | 17 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 29 | ,, | 2-3 | B 202 | East part of Leman Ground. | 53° 29′ N., 2° 51¼′ E. | S.E. 11⅓ miles | 53° 22′ N., 3° 10½′ E. | 17 | 16 | 15 | f.d.s. & oz. | .. | f.d.g.s. |
| ,, | 30 | ,, | 3 | B (c) 203 | Brown Bank, North West part. | 53° 19¼′ N., 3° 14′ E. | S.E. ½ E. 2½ miles | 53° 18′ N., 3° 19′ E. | 14 | .. | 14 | f.d.g.s. | .. | f.d.g.s. |
| XXXIX | 1 | ,, | 15 | B 204 | Outer Sylt .. .. | 54° 52½′ N., 7° 21′ E. | N.W. 2 miles | 54° 53½′ N., 7° 18′ E. | 12½ | .. | 14 | l.s. | .. | l.s. |
| ,, | 3 | ,, | ,, | B 205 | West of Horn Reef.. | 55° 12¼′ N., 7° 17⅝′ E. | N.N.W. 3 miles | 55° 14¾′ N., 7° 15′ E. | 12 | .. | 14 | f.g.s. | .. | f.d.g.s. |
| ,, | 5 | ,, | 16 | B 206 | White Bank .. .. | 54° 55¾′ N., 6° 13½′ E. | W. by S. ¼ S. 3⅜ miles | 54° 54½′ N., 6° 9′ E. | 22 | .. | 22 | s. & m. | .. | s. & m. |
| ,, | 7 | ,, | ,, | O 233 | Horn Reef Outer .. | 55° 28′ N., 6° 34′ E. | N. 1½ miles W ⅜ S. 7⅜ miles. | 55° 25¾′ N., 6° 20½′ E. | 21 | .. | 24½ | s. & oz. | .. | s. & oz. |
| ,, | 8 | ,, | ,, | O 234 | West part of Horn Reef Outer. | 55° 25¾′ N., 6° 20¼′ E. | W. by N. ¼ N. 10 miles | 55° 26¾′ N., 6° 3¼′ E. | 24½ | .. | 25 | s. & oz. | .. | s. & m. |
| ,, | 9 | ,, | ,, | O 235 | West of Horn Reef Outer. | 55° 26⅜′ N., 6° ¾′ E. | W. ½ N. 7½ miles N. by E. ½ E. 2½ miles. | 55° 29′ N., 5° 50½′ E. | 25 | .. | 26 | s. & m. | .. | s. & m. |
| ,, | 10 | ,, | 17 | O 236 | ,, ,, | 55° 29′ N., 5° 50½′ E. | E.S.E. 10¼ miles | 55° 27⅓′ N., 6° 9′ E. | 26 | .. | 26 | s. & m. | .. | s. & m. |
| ,, | 11 | ,, | ,, | O 237 | West part of Horn Reef Outer. | 55° 27⅓′ N., 6° 9′ E. | E. by S. ½ S. 2½ miles W. ⅜ N. 8½ miles. | 55° 27′ N., 5° 58¾′ E. | 26 | .. | 26 | s. & m. | .. | s. & m. |
| ,, | 12 | ,, | ,, | O 238 | West of Horn Reef Outer. | 55° 28′ N., 5° 57¾′ E. | S.W. by W. ⅞ W. 9¼ miles | 55° 23′ N., 5° 45′ E. | 26 | .. | 25½ | s. & m. | .. | f.g.s. & oz. |
| ,, | 13 | ,, | ,, | O 239 | ,, ,, | 55° 23′ N., 5° 45′ E. | E. by N. 9½ miles | 55° 26¼′ N., 6° 0′ E. | 25½ | .. | 26½ | f.g.s. & oz. | .. | s. & m. |
| ,, | 14 | ,, | ,, | O 240 | ,, ,, | 55° 26½′ N., 6° 0′ E. | W. by S. ⅛ S. 5 miles E. by N. 6¼ miles. | 55° 27¼′ N., 6° 3¼′ E. | 25½ | .. | 26½ | f.g.s. | .. | s. & m. |
| ,, | 15 | ,, | 18 | O 241 | West part of Horn Reef Outer. | 55° 27¼′ N., 6° 3¼′ E. | N.W. ½ W. 2⅜ miles S.S.W. 3 miles. N.E. by E. ⅜ E. 5 miles. | 55° 28⅜′ N., 6° 6½′ E. | 26½ | .. | 26½ | s. & m. | .. | s. & m. |
| ,, | 16 | ,, | ,, | O 242 | West of Horn Reef Outer. | 55° 28⅜′ N., 6° 6½′ E. | N.W. by N. 7½ miles N.N.E. 2⅜ miles. | 55° 36¾′ N., 5° 58′ E. | 26½ | .. | 26½ | s.m. | .. | s.m. |
| ,, | 17 | ,, | ,, | O 243 | ,, ,, | 55° 39½′ N., 5° 57′ E. | S.S.W. 7⅛ miles E. by N. 3¾ miles. | 55° 33′ N., 6° 0′ E. | 27 | .. | 26½ | s.m. | .. | s.m. |
| ,, | 18 | ,, | ,, | O 244 | ,, ,, | 55° 33′ N., 6° 0′ E. | S.W. ⅜ W. 9 miles | 55° 26½′ N., 5° 50½′ E. | 26½ | .. | 25 | s.m. | .. | f.g.s. & oz. |
| ,, | 19 | ,, | 19 | O 245 | West part of Horn Reef Outer. | 55° 18¾′ N., 6° 14½′ E. | N.E. ¼ E. 8½ miles | 55° 26′ N., 6° 23′ E. | 22 | .. | 26 | f.g.s. & oz. | .. | s. & oz. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 3.30 p.m. | 5.30 p.m. | 2 | Last 2 hours ebb. | Rough | N. by W. 6. | Dull, rain | Lost cod end, full of curly weed. | Nothing taken. | |
| 11.30 a.m. | 3.30 p.m. | 4 | Last 3 hours flood; first hour ebb. | Moderate swell. | N.W. 3 | Fine, cloudy. | — | *Pecten opercularis* c. .. .. .. .. .. *Cancer pagurus.* *Asterias rubens*, small, c., *Ophiura albida* f.c., *Ophiura ciliaris.* | 1 steam trawler with us. |
| 5 p.m. | 10 p.m. | 5 | Last 3 hours ebb; first 2 hours flood. | Smooth | W. 3 | Fine, small clouds. | — | *Actinoloba dianthus* c., *Alcyonium digitatum* f.c. *Eupagurus bernhardus* f.c., *Cancer pagurus.* **Asterias rubens** v.c. | " " |
| (2nd) 11.30 p.m. | (3rd) 4.30 a.m. | 5 | Last 4 hours flood; first hour ebb. | Moderately smooth. | S.S.W. 4. | Overcast | — | *Alcyonium digitatum* c., *Actinoloba dianthus* f.c. *Fusus antiquus.* *Portunus holsatus* f.c. **Asterias rubens** v.c., *Astropecten irregularis.* | |
| 6 a.m. | 7.30 a.m. | 1½ | Fourth and fifth hours ebb. | Moderate | S.S.W. 5. | Dull, rain | — | *Alcyonium digitatum*, large .. .. .. *Fusus antiquus.* **Portunus holsatus** v.c. *Asterias rubens* c. *Trachinus vipera* c. *Solea lutea.*, *Arnoglossus* sp., *Callionymus lyra.* | Small mesh nets round ordinary trawl (Expt. No. 7); cod-end supported by an oval iron hoop at hinder end. |
| 1.45 p.m. | 2.45 p.m. | 1 | Fifth hours flood. | Moderate | E.S.E. 5 | Cloudy | — | Not recorded; no Naturalists on board .. | C. W. Dance. |
| 6.15 p.m. | 7.45 p.m. | 1½ | Fourth and fifth hours ebb. | Moderate | E.S.E. 4 | Cloudy | — | " " " | |
| 4.45 a.m. | 6.15 a.m. | 1½ | Second and third hours ebb. | Smooth | S.E. by E. 3. | Fine, cloudy. | — | " " " | |
| 11 a.m. | 3 p.m. | 4 | Last 4 hours flood. | Smooth | E.S.E. 3 | Fine, small clouds. | — | " " " | |
| 3.30 p.m. | 7.30 p.m. | 4 | First 4 hours ebb. | Smooth | S.E. by E. 3. | Fine, small clouds. | — | **Nephrops norvegicus** v. abundant (ca. 1,000). *Cyclopterus lumpus.* | |
| 8 p.m. | Midnight | 4 | Last 2 hours ebb; first 2 hours flood. | Moderately smooth. | S.E. 4 | — | — | Not recorded; no Naturalists on board .. | Sighted one steam trawling fleet. |
| 12.30 a.m. | 4.30 a.m. | 4 | Last 4 hours flood. | Moderately smooth. | S.E. 4 | Fine, small clouds. | — | " " " .. | Hauled with Great Northern fleet. |
| 5 a.m. | 9 a.m. | 4 | From second to fifth hours ebb. | Moderately smooth. | S.E. by S. 4. | Fine, small clouds. | Net slightly torn | " " " .. | With Great Northern fleet. |
| 10 a.m. | 2 p.m. | 4 | First 4 hours flood. | Moderately smooth. | S.S.E. 4 | Fine, light clouds. | — | " " " .. | " " |
| 2.40 p.m. | 6.40 p.m. | 4 | Last 2 hours flood; first 2 hours ebb. | Moderately smooth. | S.E. 3 | Fine, light clouds. | — | " " " .. | " " |
| 7 p.m. | 11.30 p.m. | 4½ | Last 3 hours ebb; first 1½ hours flood. | Moderate | S.S.E. 3 | Fine, cloudy. | Belly torn .. | " " " .. | " " |
| 12.30 a.m. | 5 a.m. | 4½ | Last 4½ hours flood. | Moderate | S.S.E. 4 | Fine, cloudy. | Belly torn .. | " " " .. | " " |
| 6 a.m. | 10 a.m. | 4 | Second to fifth hours ebb. | Moderate | S.S.E. 4 | Fine, cloudy. | Belly torn .. | " " " .. | " " |
| 11.30 a.m. | 4 p.m. | 4½ | Last ½ hour ebb; first 4 hours flood. | Moderate | S.S.E. 5 | Fine, cloudy. | Belly torn .. | " " " .. | " " |
| 4.45 p.m. | 9 p.m. | 4¼ | First 4 hours ebb. | Rough | S.S.E. 6 | Fine, cloudy. | Net torn badly when hauling. | " " " .. | " " |
| 8 a.m. | 11.30 a.m. | 3½ | From 2 to 4½ hours ebb. | Moderate | S.E. 3 | Fine, light clouds. | Belly torn .. | " " " .. | " " |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shoot-ing. | Towing. | Haul-ing. | Shoot-ing. | Towing. | Haul-ing. |
| XXXIX | 20 | Sept. | 19 | O 246 | West part of Horn Reef Outer. | 55° 26′ N., 6° 23′ E. | W. by N. 12 miles | 55° 25′ N., 6° 2½′ E. | 26 | .. | 23 | s. & oz. | .. | s. & oz. |
| ,, | 21 | ,, | ,, | B 207 | ,, ,, | 55° 25′ N., 5° 55′ E. | E. by S. 10 miles | 55° 25′ N., 6° 11½′ E. | 23 | .. | 26 | f.g.s. | .. | s. & m. |
| ,, | 22 | ,, | 19-20 | B 208 | ,, ,, | 55° 25′ N., 6° 11½′ E. | W. by N. ⅝ N. 11¾ miles | 55° 26¼′ N., 5° 50¾′ E. | 26 | .. | 25 | s.m. | .. | s. & oz. |
| ,, | 23 | ,, | 20 | B 209 | South East of Tail End of Dogger Bank. | 55° 26¼′ N., 5° 30¾′ E. | S.W. by W. ¾ W. 9 miles | 55° 20½′ N., 5° 38½′ E. | 25 | .. | 23 | s. & oz. | .. | s. & oz. |
| ,, | 24 | ,, | ,, | B 210 | ,, ,, | 55° 20½′ N., 5° 38½′ E. | W. 11¼ miles | 55° 19′ N., 5° 19½′ E. | 23 | .. | 23 | s. & oz. | .. | f.d.s. & oz. |
| ,, | 25 | ,, | ,, | B 211 | ,, ,, | 55° 19′ N., 5° 19½′ E. | W.S.W. 9 miles | 55° 13½′ N., 5° 6½′ E. | 23 | .. | 23 | f.d.s. & oz. | .. | f.d.s. & oz. |
| ,, | 26 | ,, | ,, | B 212 | ,, ,, | 55° 13½′ N., 5° 6½′ E. | S.S.W. 4½ miles N. by W. 4½ miles. | 55° 13′ N., 5° 2¼′ E. | 23 | .. | 25 | f.d.s. & oz. | .. | f.s. & oz. |
| XL | 1 | ,, | 27 | B 213 | Extreme South of Leman Ground. | 53° 6½′ N., 2° 51¼′ E. | S.W. 5¼ miles | 53° 2′ N., 2° 47′ E. | 17 | .. | 15 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 2 | ,, | 27-28 | B 214 | ,, ,, | 53° 2′ N., 2° 47′ E. | N.E. by N. 9 miles | 53° 11′ N., 2° 50½′ E. | 15 | .. | 16 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 4 | ,, | 28 | B 215 | South East part of Leman Ground. | 53° 10½′ N., 2° 54⅝′ E. | E. ⅛ S. 4¼ miles | 53° 11½′ N., 3° 1½′ E. | 17 | .. | 17 | f.d.s. | .. | f.d.s. |
| ,, | 5 | ,, | ,, | B 216 | ,, ,, | 53° 11½′ N., 3° 1½′ E | W. by N. ⅛ N. 3½ miles | 53° 11¼′ N., 2° 56¼′ E. | 17 | .. | 17 | f.d.s. | .. | f.d.s. |
| ,, | 8 | ,, | ,, | B 217 | South East of Swarte Bank. | 53° 10½′ N., 2° 55′ E. | N W. by N. ⅛ N. 6 miles | 53° 16½′ N., 2° 46′ E. | 17 | .. | 16 | f.d.s. | .. | f.d.s. |
| ,, | 10 | ,, | ,, | B 218 | East of Swarte Bank | 53° 17¼′ N., 2° 43¾′ E. | N.W. by N. ⅛ N. 6⅜ miles | 53° 21½′ N., 2° 35¾′ E. | 16 | .. | 16 | f.d.s. | .. | f.d.s. |
| ,, | 11 | ,, | ,, | B 219 | ,, ,, | 53° 21½′ N., 2° 35¾′ E. | N. by W. ⅜ W. 5¼ miles | 53° 26′ N., 2° 31⅜′ E. | 16 | .. | 15 | f.d.s. | .. | f.d.s. |
| ,, | 13 | ,, | 29 | B 220 | Leman Ground .. | 53° 26′ N., 2° 31⅜′ E. | N. ¾ W. 5½ miles S. by E. ¾ E. 8 miles. | 53° 25¼′ N., 2° 34¾′ E. | 15 | 12 | 15 | f.d.s. | f.spk.s. | f.d.s. |
| ,, | 14 | ,, | ,, | B 221 | ,, ,, .. | 53° 25¼′ N., 2° 34¾′ E. | S.E. 5 miles N. ¼ E. 7¾ miles. | 53° 29⅜′ N., 2° 39′ E. | 15 | 17 | 14 | f.d.s. | f.d.s. | f.d.s. |
| ,, | 17 | ,, | 30 | B 222 | Lynn Deep .. .. | 52° 59½′ N., 0° 22⅜′ E. | N.E. by N. 1¼ miles S.W. ¼ S. 1¼ miles. | 52° 59⅝′ N., 0° 22½′ E. | 15 | 19 | 15 | d.c.s. & ross. | .. | d.c.s. & ross. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| Noon. | 4.15 p.m. | 4¼ | Last hour ebb; first 3 hours flood. | Moderately smooth. | S.E. by S. 3. | Fine, light clouds. | Belly torn .. | Not recorded; no Naturalist on board .. | With Great Northern fleet. |
| 4.45 p.m. | 10 p.m. | 5¼ | Last 2 hours flood; first 3 hours ebb. | Moderately smooth. | S. 3 | Fine, light clouds. | — | " " " .. | With Great Northern fleet. |
| (19th) 10.30 p.m. | (20th) 3.30 a.m. | 5 | Last 3 hours ebb; first 2 hours flood. | Moderately smooth. | S. 3 | Fine, light clouds. | — | " " " .. | Fish not measured. |
| 4.15 a.m. | 8.45 a.m. | 4½ | Last 4 hours flood; first ½ hour ebb. | Moderately smooth. | S. 3 | Fine, light clouds. | — | " " " .. | |
| 9.15 a.m. | 2 p.m. | 4¾ | Last 5 hours ebb. | Moderately smooth. | S. 3 | Fine, light clouds. | — | " " " .. | 1 steam trawler with us. |
| 2.30 p.m. | 6.30 p.m. | 4 | First 4 hours flood. | Moderately smooth. | S.E. | Fine, cloudy. | — | " " " .. | Saw Red Cross fleet's rocket S.W. of us |
| 7 p.m. | 11 p.m. | 4 | Last hour flood; first 3 hours ebb. | Moderately rough. | S.E. by E. 4. | Fine, cloudy | — | " " " .. | With Red Cross fleet. |
| 7.45 p.m. | 9.30 p.m. | 1¾ | Second and third hours flood. | Smooth. | E.S.E. 3 | Fine, hazy. | — | *Obelia geniculata* c. .. .. .. .. .. *Eupagurus bernhardus* f.c., *Portunus holsatus*. *Asterias rubens*, *Astropecten irregularis*, *Ophiura ciliaris*. *Trachinus vipera* f.c. | W. Wallace, R. A Todd. Several drifters about us. |
| (27th) 10 p.m. | (28th) 2.30 a.m. | 4½ | Last 3 hours flood; first 2 hours ebb. | Smooth. | E.S.E. 3 | Fine, hazy. | — | *Alcyonidium gelatinosum* .. .. .. .. *Loligo forbesi*. *Eupagurus bernhardus* f.c., *Portunus holsatus* f.c., *Cancer pagurus*. *Asterias rubens*, *Astropecten irregularis*. | Several drifters about us. |
| 5.30 a.m. | 7.30 a.m. | 2 | Last hour ebb; first hour flood. | Smooth. | E.S.E. 3 | Fine, hazy. | — | *Obelia geniculata* c. .. .. .. .. .. *Sabellaria spinulosa*. *Henricia sanguinolenta* f.c., *Ophiura ciliata*, *Asterias rubens*, *Astropecten irregularis*. | 1 trawling smack and 1 steam drifter about us. |
| 8 a.m. | 10 a.m. | 2 | Second and third hours flood. | Smooth. | E.S.E. 4 | Fine, light clouds. | — | *Eupagurus bernhardus* .. .. .. *Astropecten irregularis* c., *Ophiura ciliaris* f.c., *Asterias rubens*. | 1 trawling smack with us |
| 11 a.m. | 1 p.m. | 2 | 2 last hours flood. | Smooth. | E. by S. 4 | Fine, light clouds. | — | *Actinoloba dianthus* on *Buccinum*. *Loligo forbesi*. *Eupagurus bernhardus*, *Portunus holsatus*. *Asterias rubens* c., *Astropecten irregularis* f.c. *Ophiura ciliaris* f.c. | |
| 2 p.m. | 4 p.m. | 2 | Second and third hours ebb. | Smooth. | E. 4 | Fine, cloudy, hazy. | — | *Actinoloba dianthus*, *Alcyonium digitatum*. *Buccinum undatum* and spawn, *Fusus antiquus* and spawn. *Eupagurus bernhardus* c. *Asterias rubens* f.c., *Astropecten irregularis*. *Solea lutea*. | |
| 4.15 p.m. | 6.15 p.m. | 2 | 2 last hours ebb. | Smooth. | N.E. by E. 4. | Fine, cloudy, hazy. | — | *Alcyonium digitatum*. *Fusus antiquus*, *Loligo forbesi*. *Eupagurus bernhardus*. *Astropecten irregularis*, *Ophiura ciliaris*. | |
| 5.45 a.m. | 10.45 a.m. | 5 | Last hour ebb; first 4 hours flood. | Moderately smooth. | N.E. by E. 4. | Fine, light clouds, hazy. | — | *Buccinum undatum*, *Loligo forbesi* .. .. *Asterias rubens*, *Astropecten irregularis*, *Echinus miliaris*. | 1 steam trawler with us |
| 11.15 a.m. | 4.15 p.m. | 5 | Last hour flood; first 4 hours ebb. | Moderately rough. | N.E. 4 | Fine, cloudy. | — | *Actinoloba dianthus*, f.c. on *Buccinum* and *Fusus*. *Alcyonium digitatum*. *Buccinum undatum*, *Fusus antiquus* and spawn. *Eupagurus bernhardus* f.c. *Astropecten irregularis* f.c., *Asterias rubens*. | |
| 1.30 p.m. | 3 p.m. | 1½ | Last of ebb. | Smooth. | S.W. by S. 5. | Dull, thick rain. | Ground rope parted, net badly torn. | *Hydrallmania falcata* f.c., *Sertularia abietina* f.c. *Flustra foliacea* f.c. *Buccinum undatum*, *Dendronotus arborescens*. *Cancer pagurus*, *Eupagurus bernhardus*, *Stenorhynchus phalangium*. *Asterias rubens*, *Ophiothrix fragilis*. | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shoot-ing. | Towing. | Haul-ing. | Shoot-ing. | Towing | Haul-ing. |
| XL | 34 | Oct. | 3 | B 223 | Lynn Deep .. .. | 52° 56¾′ N., 0° 16½′ E. | E.N.E. 2½ miles | 52° 58⅜′ N., 0° 19⅜′ E. | 13 | .. | 13 | c.s. & m. | .. | c.s. & m. |
| ,, | 41 | ,, | 4 | B 224 | Off Sutton .. .. | 53° 14½′ N., 0° 21½′ E. | N.E. ¾ N. 4½ miles | 53° 19′ N., 0° 25⅛′ E. | 5 | .. | 9 | s. & gvl. | .. | s. & gvl. |
| ,, | 42 | ,, | 5 | B 225 | Off Mablethorpe .. | 53° 19′ N., 0° 18′ E. | S.E. 2 miles | 53° 18′ N., 0° 21½′ E. | 5 | .. | 7 | s.m. | .. | s.m. |
| ,, | 44 | ,, | ,, | B 226 | ,, ,, .. | 53° 21¾′ N., 0° 19½′ E. | N.E. ¾ N. 3 miles W. by N. 1 mile. S.E. ½ mile. | 53° 24½′ N., 0° 21′ E. | 7 | .. | 8 | s.gvl. | .. | s.gvl. |
| ,, | 45 | ,, | ,, | B 227 | Off Inner Dowsing Light-vessel. | 53° 19¾′ N., 0° 35½′ E. | E. by N. ⅜ N. 4½ miles | 53° 22¾′ N., 0° 40½′ E. | 11½ | .. | 14 | c.s. | .. | s.c. & m. |
| ,, | 47 | ,, | ,, | B 228 | South end of Little Silver Pit. | 53° 22⅜′ N., 0° 42′ E. | W.S.W. 1½ miles N. by E. ⅜ E. 2¾ miles. | 53° 24¼′ N., 0° 41′ E. | 18 | .. | 40 | c.s. & m. | .. | m. |
| XLI | 1 | ,, | 15 | B 229 | Flamborough Head Ground. | 54° 7′ N., 0° 11½′ E. | E. by N. ½ N. 3 miles | 54° 9′ N., 0° 15½′ E. | 27 | .. | 28 | c.s. & gvl. | .. | c.s. & gvl. |
| ,, | 5 | ,, | 16 | B 230 | Flamborough Off .. | 54° 9⅜′ N., 0° 29′ E. | S.E. ½ E. 5½ miles | 54° 7′ N., 0° 37½′ E. | 30 | .. | 30 | f.g.s. & sh. | .. | f.g.s.& sh. |
| ,, | 6 | ,, | ,, | B 231 | ,, ,, .. | 54° 8¾′ N., 0° 38′ E. | E. by S. ¾ S. 3⅛ miles N. by E. ¾ E. 1½ miles. | 54° 9¾′ N., 0° 43½′ E. | 30 | .. | 29 | f.g.s. & sh. | .. | g.spk.s. & sh. |
| ,, | 7 | ,, | ,, | B 232 | ,, ,, .. | 54° 9¾′ N., 0° 43½′ E. | S.S.W. 2⅜ miles E. ⅝ N. 1½ miles. | 54° 7½′ N., 0° 45½′ E. | 29 | .. | 28 | g.spk.s. & sh. | .. | g.br.s. |
| ,, | 11 | ,, | 18 | B 233 | ,, ,, .. | 54° 4⅜′ N., 0° 41′ E. | E. by S. ¾ S. 5 miles | 54° 3⅜′ N., 0° 50′ E. | 30 | .. | 25 | g.spk.s. | .. | g.spk.s. |
| ,, | 12 | ,, | ,, | B 234 | ,, ,, .. | 54° 9¼′ N., 0° 50½′ E. | E. by N. 5 miles | 54° 11½′N., 0° 58½′ E. | 25 | .. | 27 | g.s. & sh. | .. | g.spk.s. |
| ,, | 13 | ,, | ,, | B 235 | ,, ,, .. | 54° 11½′ N., 0° 58½′ E. | S. ⅜ E. 4½ miles | 54° 7¾′ N., 1° 1′ E. | 27 | .. | 25½ | g.spk.s. | .. | d.g.s. |
| ,, | 14 | ,, | ,, | B 236 | ,, ,, .. | 54° 7¾′ N., 1° 1′ E. | S.W. ⅝ S. 3 miles E. by N. 1¼ miles. | 54° 6′ N., 1° 1¼′ E. | 25½ | .. | 26 | d.g.s. | .. | d.g.s. |
| ,, | 15 | ,, | ,, | B 237 | ,, ,, .. | 54° 6′ N., 1° 1¼′ E. | S. ¾ W. 3¼ miles N.W. by W. 1 mile. | 54° 3′ N., 1° 0′ E. | 26 | .. | 23 | d.g.s. | .. | d.g.s. |
| ,, | 16 | ,, | 19 | B 238 | ,, ,, .. | 54° 2¾′ N., 1° 3′ E. | E. by S. ½ S. 2 miles W. ¼ S. 2½ miles. | 54° 2′ N., 1° 2½′ E. | 26 | .. | 26 | g.s. & m. | .. | g.s. & m. |
| ,, | 17 | ,, | ,, | B 239 | ,, ,, .. | 54° 2′ N., 1° 2½′ E. | W. ¾ S. 4 miles N.E. ½ N. 1 mile. | 54° 1⅜′ N., 0° 57½′ E. | 26 | .. | 26½ | g.s. & m. | .. | g.s. & m. |
| ,, | 18 | ,, | ,, | O 247 | Dogger Bank, South East of South West Patch. | 54° 18¼′ N., 2° 30½′ E. | N. ½ E. 5 miles S. by W. 4⅝ miles. | 54° 18¾′ N., 2° 30′ E. | 17 | 16 | 17 | g.s. & sh. | g.s. & sh. | g.s. & sh. |
| ,, | 19 | ,, | 20 | O 248 | ,, ,, | 54° 18¾′ N., 2° 30′ E. | W. by N. 2⅝ miles S.E. by S. ⅝ S. 3⅝ miles. N. by W. ⅜ W. 5 miles. | 54° 20′ N., 2° 25′ E. | 17 | 17 | 18 | g.s. & sh. | g.s. & sh. | s. & gvl. |

| Duration of Haul. | | | Tide. | Sea | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 1.15 p.m. | 2.5 p.m. | ⅚ | Third hour ebb. | Smooth | E.N.E. 2. | Fine, light clouds. | Came fast to wreck; lost trawl. | *Sertularia abietina* f.c., *Hydrallmania falcata*. **Vesicularia spinosa** v.c., *Flustra foliacea*. *Thelepus cincinnatus*. *Asterias rubens*. | |
| 1.30 p.m. | 3.20 p.m. | 1⅚ | Second and third hours ebb. | Moderately smooth. | S.W. by S. 5. | Overcast, hazy. | Had a pull out, hove up, net badly torn. | *Hydrallmania falcata* f.c. **Vesicularia spinosa** v.c., *Gemellaria loricata* c. *Flustra foliacea* f.c. *Sabellaria spinulosa* c. *Eupagurus bernhardus*. *Asterias rubens*. | |
| 6.45 a.m. | 7.45 a.m. | 1 | Last hour ebb. | Smooth | W. by S. 4. | Cloudy, hazy. | — | Very little taken. | |
| 9.15 a.m. | 11.15 a.m. | 2 | Third and fourth hours flood. | Smooth | W. by S. 4. | Fine, cloudy, hazy. | — | *Flustra foliacea* f.c. *Buccinum undatum*, *Loligo forbesi*. *Eupagurus bernhardus*. *Ophiothrix fragilis*. | |
| 1.30 p.m. | 3.30 p.m. | 2 | Fourth and fifth hours flood. | Moderately smooth. | S.W. by W. 6. | Dull, hazy | — | **Sabellaria spinulosa** v.c. *Pecten opercularis*. *Eupagurus bernhardus*, *Homarus vulgaris*, *Hyas coarctatus*. *Asterias rubens*, *Henricia sanguinolenta*, *Ophiothrix fragilis*, *Solaster papposus*. | |
| 4 p.m. | 6 p.m. | 2 | Last hour flood; first hour ebb. | Rough | S.W. by W. 6. | Cloudy, rain. | Belly badly torn | *Pecten opercularis* .. .. .. .. .. | 2 steam trawlers about us. |
| 4.45 p.m. | 6 p.m. | 1¼ | First hour flood. | Smooth | S. 3 | Fine, cloudy. | Belly badly chafed. | **Pecten opercularis**, abundant . .. | G. T. Atkinson, O. D. Atkinson. Several drifters about. |
| 8.15 a.m. | 10.15 a.m. | 2 | Last 2 hours flood. | Moderately smooth. | S.S.W. 5. | Hazy, overcast. | Broke fore roller. Net slightly torn. | Quantities not recorded. | |
| 11.15 a.m. | 1.15 p.m. | 2 | First 2 hours ebb | Moderately rough. | S.S.W. 5. | Hazy, overcast. | — | " " .. .. .. .. | 2 steam trawlers with us. |
| 1.40 p.m. | 3.40 p.m. | 2 | Fourth and fifth hours ebb. | Moderately rough. | S.W. by S. 6. | Dull, thick rain. | — | *Cancer pagurus* .. .. .. .. .. | 1 steam trawler with us. |
| 8 a.m. | 10 a.m. | 2 | Second and third hours flood. | Moderately smooth. | N.N.E. 2. | Overcast, cloudy. | — | Not recorded .. .. .. .. .. .. | No fish. 1 steam trawler with us. |
| 11 a.m. | 1 p.m. | 2 | Last 2 hours flood. | Moderately smooth. | W. 2 | Cloudy, fine, hazy. | — | Very little taken. | |
| 1.30 p.m. | 3.30 p.m. | 2 | First 2 hours flood. | Smooth | Variable 1-2. | Overcast, hazy. | Belly torn .. | Quantities not recorded. | |
| 4.15 p.m. | 6.15 p.m. | 2 | Fourth and fifth hours ebb. | Smooth | Variable 1-2. | Overcast, hazy. | — | *Cancer pagurus*. | |
| 6.45 p.m. | 8.45 p.m. | 2 | Last hour ebb; first hour flood. | Smooth | Variable 1-2. | Overcast, hazy. | — | *Cancer pagurus* .. .. .. .. .. | Several drifters about us. |
| 6.45 a.m. | 8.45 a.m. | 2 | Last hour ebb; first hour flood. | Smooth | W.S.W. 3 | Overcast, hazy. | — | Quantities not recorded .. .. .. .. | Several drifters about us. |
| 9.15 a.m. | 11.15 a.m. | 2 | Second and third hour flood. | Smooth | W. 2 | Overcast, hazy. | — | " " | |
| 7 15 p.m. | Midnight. | 4¾ | Last 2 hours ebb; first 3 hours flood. | Smooth | Variable 1-2. | Fine, cloudy, hazy. | — | **Obelia longissima**, abundant .. .. **Portunus holsatus**, v. abundant. | 4 steam trawlers about us. |
| 1.15 a.m. | 6 a.m. | 4¾ | Last 2 hours flood; first 3 hours ebb. | Smooth | Variable 1-2. | Overcast, hazy. | — | *Obelia longissima* f.c. .. .. .. .. *Pecten opercularis* c. *Ascidiella virginea*, covered with herring spawn. | 2 steam trawlers with us. |

| Voyage. | Station. | Month | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XLI | 20 | Oct. | 20 | O 249 | Dogger Bank, South of South West Patch. | 54° 20′ N., 2° 25′ E. | S.W. by S. ½ S 3½ miles<br>N. ½ W. 3⅜ miles.<br>S.W. ⅜ S. 2⅝ miles.<br>N. ½ W. 3½ miles. | 54° 21′ N. 2° 17¾′ E. | 18 | .. | 17 | s. & gvl. | .. | g.s. |
| „ | 21 | „ | „ | O 250 | „ „ | 54° 21½′ N., 2° 17¾′ E. | S. ½ W. 4⅜ miles<br>N. by E. ⅛ E. 6¼ miles. | 54° 22½′ N. 2° 18′ E. | 17 | .. | 17 | g.s. | .. | g.spk.s. |
| „ | 22 | „ | „ | O 251 | „ „ | 54° 22½′ N., 2° 18′ E. | S. by E. ⅜ E. 9½ miles<br>N. ⅞ W. 2¾ miles. | 54° 17½′ N. 2° 26′ E. | 17 | 18 | 17 | g.spk.s. | sh. & g. spk.s. | g.spk.s. |
| „ | 23 | „ | 21 | O 252 | Dogger, Edge of Clay Deep. | 54° 56¼′ N., 3° 40¼′ E. | N. by W. 7 miles<br>S.E. ⅜ S. 2½ miles. | 55° 1½′ N. 3° 38′ E. | 22 | 20 | 22 | f.g.s. | .. | f.g.s. |
| „ | 24 | „ | „ | O 253 | „ „ | 55° 1½′ N., 3° 38′ E. | N. 2½ miles<br>S.E. 8 miles. | 55° 0′ N. 3° 48½′ E. | 22 | 19 | 23 | f.g.s. | f.g.s. | f.g.s. |
| „ | 25 | „ | „ | O 254 | „ „ | 55° 0′ N., 3° 48½′ E. | N. ½ E. 5 miles | 55° 5½′ N. 3° 47′ E. | 23 | .. | 23 | f.g.s. | .. | f.g.s. |
| „ | 26 | „ | 22 | O 255 | Borkum Outer .. | 54° 9¾′ N., 5° 47½′ E. | W.S.W. 7⅜ miles | 54° 5½′ N. 5° 36½′ E. | 20 | 19 | 20 | f.g.s. & oz. | f.g.s. & oz. | f.g.s. & oz. |
| „ | 27 | „ | „ | O 256 | „ „ .. | 54° 6½′ N., 5° 35′ E. | E. ¼ N. 10½ miles | 54° 9⅜′ N 5° 53′ E. | 20 | 20 | 20 | f.g.s. & m. | f.g.s. & m. | f.g.s. & oz. |
| „ | 28 | „ | „ | O 257 | „ „ .. | 54° 9⅜′ N., 5° 53′ E. | E. ⅜ N. 9¾ miles | 54° 12¾′ N. 6° 12⅜′ E. | 20 | 20 | 20 | f.g.s. & oz. | f.g.s. & m. | f.g.s. & m. |
| „ | 29 | „ | 23 | O 258 | North of Borkum Flat. | 54° 12⅜′ N., 6° 12⅜′ E. | S. 3 miles.<br>N.E. by N. ⅜ N. 8 miles. | 54° 17¾′ N., 6° 16¼′ E. | 20 | 20 | 21 | f.g.s. & m. | f.g.s. & oz. | f.g.s. & oz. |
| „ | 30 | „ | „ | O 259 | „ „ | 54° 17¾′ N., 6° 16½′ E. | N.E. 2⅜ miles<br>S. ⅛ W. 2⅛ miles.<br>N.E. by N. 3½ miles.<br>W. by S. ¾ S. 4 miles. | 54° 19′ N., 6° 16′ E. | 21 | 21 | 21 | f.g.s. & oz. | f.g.s. & m. | f.g.s. & m. |
| „ | 31 | „ | „ | O 260 | „ „ | 54° 19′ N., 6° 16′ E. | N. by W. ½ W. 2½ miles<br>S.W. by S. ⅞ S. 2⅝ miles.<br>N. by W. ½ W. 2½ miles.<br>S.S.W. 1½ miles.<br>N. ½ E. 3⅜ miles. | 54° 22¾′ N., 6° 10′ E. | 21 | 21 | 21½ | f.g.s. & m. | f.g.s. & m. | f.g.s. & m. |
| „ | 32 | „ | „ | O 261 | „ „ | 54° 22¾′ N., 6° 10′ E. | S. 8 miles<br>N. by W. ¾ W. 3¼ miles. | 54° 17¾′ N., 6° 11′ E. | 21½ | 21 | 22 | f.g.s. & m. | f.g.s. & m. | f.g.s. & m. |
| „ | 33 | „ | 23–24 | O 262 | Borkum Outer .. | 54° 17¾′ N., 6° 11′ E. | W. by S. ¾ S. 16 miles. | 54° 8¾′ N., 5° 48′ E. | 22 | 21 | 21 | f.g.s. & m. | f.g.s. & m. | f.g.s. & oz. |
| XLII | 1 | „ | 28 | B 240 | Brighton .. .. | 50° 43′ N., 0° 2½′ W. | S. by E. 3½ miles<br>N. by W. ¾ W. 1 mile. | 50° 40½′ N., 0° 1′ W. | 12 | .. | 15½ | c.s. | .. | c.s. & m. |
| „ | 2 | „ | „ | B 241 | Brighton Outer .. | 50° 38¾′ N., 0° 0½′ W. | W.S.W. 4 miles | 50° 36′ N., 0° 4¾′ W. | 24 | .. | 30 | s. & m. | .. | s. & m. |
| „ | 3 | Nov. | 11 | B (c) 242 | Teignmouth Bay .. | 50° 32⅛′ N., 3° 28¼′ W. | W. by S. ¼ S. 1 mile<br>S.W. by S. ½ S. 2 miles.<br>S. ¼ E. ⅝ miles. | 50° 29¾′ N., 3° 29¼ W. | 7 | 4 | 7 | s. & m. | .. | s. & m. |
| „ | 4 | „ | „ | B 243 | „ „ | 50° 32¼′ N., 3° 28¼′ W. | S.W. ½ W. 2¼ miles<br>S. ½ W. 2⅝ miles. | 50° 28½′ N., 3° 28⅛′ W. | 7 | 7–4½ | 7 | s. & m. | .. | s. & m |
| XLIII | 1 | „ | 17 | B 244 | South of Eastern Deep Water. | 52° 13¾′ N., 3° 19¼′ E. | N. ⅛ E. 5⅜ miles | 52° 18¾ N., 3° 17⅛′ E. | 15½ | 16½ | 18 | f.d.s. | .. | f.d.s. |
| „ | 5 | „ | „ | B 245 | Edge of Eastern Deep Water. | 52° 16½′ N., 3° 4⅛′ E. | E. 5 miles | 52° 18′ N., 3° 11¾′ E. | 18 | .. | 18½ | f.s., clay & sh. | .. | f.spk.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 6.30 a.m. | 11.30 a.m. | 5 | Last hour flood; first 4 hours ebb. | Moderately smooth. | S. 3 | Overcast, hazy. | — | Quantities not recorded .. .. .. .. | 1 steam trawler with us. |
| Noon. | 4.30 p.m. | 4½ | Last hour ebb: 3½ hours flood. | Moderately smooth. | S. 4 | Overcast, hazy. | — | " " | |
| 5 p.m. | 10 p.m. | 5 | Last 2 hours flood; first 3 hours ebb. | Moderately smooth. | S. 4 | Overcast, hazy. | — | " " .. .. .. .. | Several drifters about us. |
| 6.15 a.m. | 10.15 a.m. | 4 | Nil | Moderately rough. | S. 4 | Overcast, hazy. | Turn in aft wing and net slightly torn. | " " .. .. .. .. | Several steam trawlers about us. |
| 11.30 a.m. | 4.30 p.m. | 5 | Nil | Rough | S.S.E. 5 | Overcast, hazy. | — | *Loligo* sp., c. .. .. .. .. .. .. | 1 steam trawler with us. |
| 5 p.m. | 7.15 p.m. | 2¼ | Nil | Rough | S. 7 | Overcast, hazy. | Had a 'pull-out,' hauled, and found net all right. | Quantities not recorded. | |
| 10 a.m. | 1 p.m. | 3 | First 3 hours ebb. | Moderately smooth. | S.W. 4 | Overcast, thick rain. | — | " " .. .. .. .. | 11.30 a.m., spoke S.S. "Zennor," bound for Grimsby. |
| 2 p.m. | 6 p.m. | 4 | Last 1½ hours ebb; first 2½ hours flood. | Smooth | S.S.W. 2 | Overcast, hazy. | — | " " .. .. .. .. | 4 German sailing trawlers and 2 steam trawlers. |
| 6.30 p.m. | 11.30 p.m. | 5 | Last 3 hours flood; first 2 hours ebb. | Smooth | S. 2. | Overcast, dull, hazy. | — | " " | |
| 12.15 a.m. | 5.15 a.m. | 5 | Last 4 hours ebb; first hour flood. | Smooth | S.W. 2 | Overcast, hazy. | — | Quantities not recorded. | |
| 5.45 a.m. | 10.45 a.m. | 5 | Last 4 hours flood; first hour ebb. | Smooth | S.S.W. 2. | Overcast, hazy. | — | " " .. .. .. .. | 2 steam trawlers about us. |
| 11.15 a.m. | 4.15 p.m. | 5 | Last 5 hours ebb. | Smooth | S.S.W. 2. | Overcast, hazy. | — | " " | |
| 4.45 p.m. | 9.45 p.m. | 5 | First 5 hours flood. | Smooth | Variable, 1-2. | Overcast, hazy. | — | " " | |
| (23rd) 10.15 p.m. | (24th) 4.15 a.m. | 6 | All ebb. | Smooth | Variable, 1-2. | Dull, thick rain. | — | " " | |
| 7.10 a.m. | 9.10 a.m. | 2 | Last hour ebb; first hour flood. | Moderately smooth. | S.S.E. 3. | Fine, cloudy, hazy. | — | *Callionymus lyra*. Invertebrates not recorded. | G. T. Atkinson, D. J. Matthews. Several trawling smacks about us. |
| 10 a.m. | 12 a.m. | 2 | Fourth and fifth hours flood. | Moderately smooth. | S.E. 5. | Fine, cloudy. | — | Not recorded. | |
| 11.45 a.m. | 1.30 p.m. | 1¾ | Last ½ hour flood; first hour ebb. | Smooth | W. by N. 5. | Overcast | Small mesh net badly torn. | **Callionymus lyra** abundant, *Arnoglossus* sp. f.c., *Solea lutea* f.c. *Gobius* sp. Invertebrates not recorded. | Small mesh nets round ordinary trawl (Expt. No. 8); cod-end supported by hoop. |
| 2.15 p.m. | 4.30 p.m. | 2¼ | Fourth and fifth hours ebb. | Smooth | W. 4. | Overcast | — | *Arnoglossus* sp., *Callionymus lyra* v.c. .. .. Invertebrates not recorded. | A number of small fishing boats about. |
| 7 a.m. | 9 a.m. | 2 | First 2 hours ebb. | Smooth | S.S.E. 2. | Cloudy, hazy. | — | *Buccinum undatum* spawn .. .. .. **Asterias rubens** v.c | J. O. Borley, G. P. Bidder. Coming through drifters all night till shooting. |
| 3 p.m. | 5 p.m. | 2 | Third and fourth hours flood. | Smooth | S.W. 3 | Cloudy, fine, hazy. | — | *Buccinum undatum*. *Asterias rubens* c. | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XLIII | 7 | Nov. | 18 | B 246 | Off Gabbard Light-vessel. | 52° 0⅝′ N., 2° 11½ E. | E.N.E. 7½ miles | 52° 5′ N., 2° 20¼ E. | 23 | .. | 26 | sharp s. | .. | f.s. & sh. |
| XLIV | 1 | „ | 26 | B 247 | Off Sandettie Light-vessel. | 51° 14¼′ N., 1° 51⅝′ E. | W. by S. ½ S. 2 miles | 51° 13⅜′ N., 1° 49′ E. | 19 | .. | 20½ | gvl. | .. | gvl. |
| „ | 3 | „ | „ | B 248 | North West of Sandettie Light-vessel. | 51° 15′ N., 1° 49⅝′ E. | N.W. ⅜ N. 1⅛ miles | 51° 16′ N., 1° 47¾′ E. | 21 | .. | 21 | c.s. | .. | c.s. |
| „ | 5 | „ | 26 | B 249 | N.N.W. of Sandettie Light-vessel. | 51° 16½′ N., 1° 48′ E. | N.E. ¼ E. 3¼ miles | 51° 19½′ N., 1° 50¾′ E. | 21 | .. | 21 | c.s. | .. | gvl. sh. |
| „ | 12 | Dec. | 1 | B 250 | Lowestoft Deep Water. | 52° 25⅛′ N., 2° 9½′ E. | S. by W. ⅞ W. 2½ miles W.S.W. 3⅜ miles. S. by W. ¾ W. 5⅝. | 52° 15⅝′ N., 2° 3⅜′ E. | 21 | 20 | 20 | br.s. & sh. | d.s. | s.m. & sh. |
| „ | 14 | „ | 2 | B 251 | Edge of Deep Water | 52° 16′ N., 2° 2⅝′ E. | N. by E. ¼ E. 10 miles | 52° 26′ N., 2° 2½′ E. | 19 | .. | 19½ | s.m. & gvl. | .. | s. & gvl. |
| „ | 15 | „ | „ | B 252 | Off Lowestoft .. | 52° 26′ N., 2° 2½′ E. | S.S.W. 1¼ miles | 52° 24¾′ N., 2° 2¼′ E. | 19½ | .. | 20 | s. & gvl. | .. | s. & gvl. |
| XLV | 1 | „ | 8 | O 263 | North of Terschelling Light-vessel. | 53° 42½′ N., 4° 41′ N. | N.E. by E. ⅜ E. 6⅜ miles S. by E. ⅛ E. 4 miles. | 53° 43¾′ N., 4° 52′ E. | 20 | .. | 19 | s. & m. | .. | s. & m. |
| .. | 2 | „ | „ | O 264 | „ „ „ | 53° 43′ N., 4° 53⅝′ E. | N.W. ⅛ N. 3⅝ miles | 53° 45′ N., 4° 48½′ E. | 19 | .. | 20 | s. & m. | .. | s. & m. |
| „ | 3 | „ | 9 | O 265 | „ „ „ | 53° 51½′ N., 4° 50′ E. | S. by E. ⅜ E. 1 mile | 53° 50½′ N., 4° 51¼′ E. | 21 | .. | 21 | m. | .. | m. |
| „ | 4 | „ | „ | B 253 | „ „ „ | 53° 49½′ N., 4° 51½′ E. | S.S.W. 7 miles N.E. ½ E. 6⅛ miles. | 53° 47′ N., 4° 56¼′ E. | 21 | 20 | 19 | m. | s. & m. | c.s. |
| .. | 5 | „ | „ | B 254 | „ „ „ | 53° 47′ N., 4° 56¼′ E. | W. 11 miles. | 53° 44⅜′ N., 4° 38′ E. | 19 | 19 | 20½ | c.s | .. | m. |
| „ | 6 | „ | 9–10 | B 255 | „ „ „ | 53° 44⅜′ N., 4° 38′ E. | S.E. by S. 6¼ miles S. by E. ⅝ E. 6 miles. | 53° 36′ N., 4° 52½′ E. | 20½ | 19 | 13 | m. | f.s. | f.s. & sh. |
| „ | 7 | „ | 10 | B 256 | „ „ „ | 53° 27⅜′ N., 4° 52½′ E. | N. by W. ⅝ W. 3⅝ miles. S.E. ½ S. 4⅜ miles. N.E. 3⅜ miles. | 53° 31⅜′ N., 4° 58⅝′ E. | 14½ | 13 | 13 | d.s. | .. | d.g.s. |
| „ | 8 | „ | „ | B 257 | „ „ „ | 53° 31⅜′ N., 4° 58⅝′ E. | N. by W. ⅜ W. 4⅛ miles S.W. ⅜ W. 5½ miles. N.N.E. 3½ miles. | 53° 34⅝′ N., 4° 50′ E. | 13 | .. | 13 | d.g.s. | .. | f.l.s. |
| „ | 9 | „ | 10–11 | B 258 | „ „ „ | 53° 34⅝′ N., 4° 50′ E. | S.E. ½ S. 3¾ miles N. by E. ⅝ E. 5⅜ miles. S. ½ E. 5½ miles. | 53° 33′ N., 4° 58½′ E. | 13 | .. | 12 | f.l.s. | .. | f.g.s. |
| „ | 10 | „ | 11 | B 259 | „ „ „ | 53° 33′ N., 4° 58½′ E. | N. ¼ W. 4 miles S.W. ⅜ W. 5 miles. N. ⅝ E. 4 miles. | 53° 36′ N., 4° 53′ E. | 12 | .. | 13½ | f.g.s. | .. | f.d.s. |
| „ | 11 | „ | 11 | B 260 | Terschelling Ground. | 53° 36′ N., 4° 53′ E. | N.E. by E. ½ E. 5½ miles S. by W. ¼ W. 3 miles. N.E. ⅛ N. 6⅝ miles. | 53° 43′ N., 5° 5′ E. | 13½ | 15 | 16½ | f.d.s. | f.d.s. | s. & m. |
| „ | 12 | „ | „ | B 261 | „ „ | 53° 43′ N., 5° 5′ E. | S.E. ⅛ E. 2⅝ miles S.W. by W. ⅛ W. 4¾ miles. W. by S. ⅜ S. 5¾ miles. | 53° 35¼′ N., 4° 55⅝′ E. | 16½ | .. | 13 | s. & m. | .. | f.d.s. |
| „ | 13 | „ | 11–12 | B 262 | North of Terschelling Light-vessel. | 53° 35¼′ N., 4° 55⅝′ E. | S.W. by S. 3⅜ miles N. ⅜ E. 4½ miles. S.E. ½ S. 2⅝ miles. | 53° 34½′ N., 4° 56′ E. | 13 | 13 | 13 | f.d.s. | .. | f.g.s. |
| „ | 14 | „ | 13 | B 263 | Terschelling Ground. | 53° 28′ N., 5° 10⅜′ E. | N.E. by E. ¼ E. 5⅝ miles N. by E. ⅜ E. 7½ miles. | 53° 39½′ N., 5° 16½′ E. | 12½ | 14 | 15 | f.d.s. | .. | s. & m. |
| „ | 15 | „ | „ | B 264 | „ „ | 53° 39½′ N., 5° 16½′ E. | W. by N. 14½ miles | 53° 39⅜′ N., 4° 51¼′ E. | 16 | .. | 16 | f.d.s. | .. | s. & m. |

| Duration of Haul, | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 6.30 a.m. | 9.45 a.m. | 3¼ | Last 2 hours flood; first 2 hours ebb. | Smooth | W. by N. 3. | Overcast, cloudy. very hazy. | Belly "all to pieces." | *Ophelia limacina* c. .. .. .. .. .. | Several Dutch drifters about us. |
| 7.45 a.m. | 8.45 a.m. | 1 | Last ½ hour ebb: first ½ hour flood. | Moderately smooth. | Variable, 2. | Dull, overcast. | — | *Chondractinia digitata* .. .. .. .. *Flustra foliacea* c., *Diastopora patina* f.c. *Loligo forbesi.* | W. Wallace, J. O. Borley. |
| Noon | 1 p.m. | 1 | Last ½ hour flood; first ½ hour ebb. | Moderately rough. | N.N.E. 2. | Cloudy, showery. | — | *Flustra foliacea* c. .. .. .. .. *Sepia officinalis.* *Asterias rubens.* | Several trawling smacks about us. |
| 1.45 p.m. | 3.15 p.m. | 1½ | First 2 hours ebb. | Rough | N.N.E. 6. | Overcast, cloudy. | Lost trawl .. | Nothing taken. | |
| 11.45 a.m. | 4.15 p.m. | 4½ | First hour ebb; 4 hours flood. | Moderately smooth. | S.W. to W. 4. | Cloudy | — | *Asterias rubens, Echinus miliaris* .. .. .. | Several drifters about us, and sailing trawlers "lying to." |
| 9 a.m. | 1 p.m. | 4 | Second to sixth hours ebb. | Moderately smooth. | S.W. by W. 4. | Dull, hazy | — | *Hydrallmania falcata* f.c., *Actinoloba dianthus* *Sabellaria spinulosa.* *Buccinum* spawn f.c. *Eupagurus bernhardus* f.c. *Asterias rubens.* | Several trawling smacks and drifters under weigh. |
| 1.30 p.m. | 2 p.m. | ½ | First ½ hour flood. | Moderately smooth. | S.W. by W. 4. | Dull, hazy | 2 p.m., came fast, probably to a wreck, hauled, lost trawl beam and after head. | Nothing taken. | |
| 7.30 a.m. | 11.30 a.m. | 4 | Last 4 hours flood. | Moderately rough. | N. by E. 4-7. | Cloudy, squally. | — | Not recorded; no Naturalists on board .. | No Naturalist on board; Captain in charge: measurements and records of fish by the Chief Steward, H.J. Howes. 2 Dutch steam trawlers with us. |
| 2 p.m. | 4.30 p.m. | 2½ | Second to fourth hours ebb. | Rough | N. by E. 4-7. | Cloudy, snow squalls. | — | " " " .. | Shot at noon, got gear foul; hove up, tore net, mended and shot again. 3 steam trawlers with us. |
| Midnight. | 12.30 a.m. | ½ | Last ½ hour flood. | Rough | N.W. by N. 3-6. | Cloudy, snow showers. | 12.30 a.m., came fast, probably to a wreck; hove up, lost trawl and after otter board. | " " " | |
| 8 a.m. | 1 p.m. | 5 | Last 5 hours flood. | Rough | S. 5 | Heavy clouds. | — | " " .. | 7.30 a.m. shot, came fast probably to a mud bank, hove up and shot again at 8 a.m. |
| 1.30 p.m. | 6.30 p.m. | 5 | Last 5 hours ebb. | Rough | S. 5 | Dull, cloudy. | — | " " " | |
| (9th) 7 p.m. | (10th) 12.30 a.m | 5½ | Last 5½ hours flood | Rough | S.S.E. 7. | Overcast, hazy. | Net torn .. .. | " " " .. | 2 steam trawlers about us. |
| 8 a.m. | 1.30 p.m. | 5½ | Last 5½ hours flood. | Moderately smooth. | S. by W. 3. | Dull. thick rain. | — | " " " .. | 4 steam trawlers about us. |
| 2 p.m. | 7.30 p.m. | 5½ | Last 5½ hours ebb. | Moderately smooth. | S. by W. 4. | Dull, thick rain. | — | " " " .. | 2 steam trawlers about us. |
| 8 p.m. | 1.30 a.m. | 5½ | Last 5½ hours flood. | Moderately smooth. | N. by W. | Cloudy, dull, rain. | — | " " " .. | Several steam trawlers about us. |
| 2 a.m. | 7.30 a.m. | 5½ | Last 5½ hours ebb. | Moderately rough. | N. by W. 5. | Cloudy | — | " " " .. | Several steam trawlers about us. |
| 8 a.m. | 2 p.m. | 6 | All flood | Moderately rough. | N. by W. 4 | Cloudy | — | " " " .. | Several steam trawlers about us. |
| 2.30 p.m. | 8.30 p.m. | 6 | All ebb | Moderately rough. | Variable 3-6. | Cloudy | — | " " " .. | Several steam trawlers about. |
| (11th) 9 p.m. | (12th) 2.30 a.m. | 5½ | Last 5½ hours flood. | Rough | S. 4-8 | Cloudy | — | " " " .. | Several steam trawlers about us. |
| 8 a.m. | 2 p.m. | 6 | All flood | Moderately smooth. | S. by E. 3 | Cloudy, hazy. | — | " " " | |
| 2.30 p.m. | 8.30 p.m. | 6 | All flood | Moderately smooth. | S. by E. 3 | Cloudy, hazy. | — | " " " .. | Several steam trawlers about us. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XLV | 16 | Dec. | 13-14 | B 265 | North of Terschelling Light-vessel. | 53° 39¾′ N., 4° 51¼′ E. | S. ⅞ W. 6⅝ miles<br>N.W. by N. 4¼ miles. | 53° 35⅝′ N., 4° 46¾′ E. | 16 | .. | 13 | m. | .. | f.s.& sh. |
| „ | 17 | „ | 14 | B 266 | „ „ „ | 53° 35⅝′ N., 4° 46¾′ E. | S.E. 4½ miles<br>N. ½ E. 7¾ miles. | 53° 41′ N., 4° 50⅞′ E. | 13 | .. | 17½ | f.s.& sh. | .. | s. & m. |
| „ | 18 | „ | „ | B 267 | „ „ „ | 53° 41′ N., 4° 50⅞′ E. | S.W. by S. ½ S. 3½ miles<br>S. by E. ¼ E. 5¾ miles. | 53° 32¾′ N., 4° 54⅝′ E. | 17½ | 15 | 12 | s. & m. | s. & m. | f.g.s. |
| XLVI | 1 | „ | 17 | B 268 | Lowestoft Deep Water. | 52° 15⅝′ N., 2° 23⅜′ E. | S.E. ⅜ E. 7 miles<br>S. by W. ½ W. 1 mile. | 52° 12¼′ N., 2° 33¼′ E. | 25 | .. | 24 | f.s. | .. | f.s. |
| „ | 2 | „ | 17-18 | B 269 | Lowestoft Deep Water, East part. | 52° 21′ N., 2° 49⅝′ E. | N. ¼ E. 7 miles<br>N.E. by E. ⅛ E. 8 miles. | 52° 33⅝′ N., 2° 56⅝′ E. | 21 | .. | 20 | f.g.s. | .. | f.g.s. |
| „ | 3 | „ | 18 | B 270 | „ „ „ | 52° 33⅝′ N., 2° 56⅜′ E. | S. ⅛ E. 7½ miles<br>N.W. ⅝ N. 4¾ miles. | 52° 29¾′ N., 2° 55¾′ E. | 20 | 20 | 20 | f.s. | f.s. | f.g.s. |
| „ | 4 | „ | „ | B 271 | „ „ „ | 52° 28¾′ N., 2° 51′ E. | N.W. by W. ½ W. 3⅝ miles<br>S.E. by E. ⅛ E. 3⅜ miles.<br>S.W. ¼ S. 3 miles. | 52° 26½′ N., 2° 49′ E. | 21 | 23 | 22 | f.s.& sh. | f.s. &sh. | f.s. & sh. |
| „ | 5 | „ | „ | B 272 | „ „ „ | 52° 26½′ N., 2° 49 E. | N.E. by N. ⅜ N. 6¼ miles<br>S. by E. ⅛ E. 4 miles.<br>N. by E. ⅛ E. 4¾ miles. | 52° 34′ N., 2° 53½′ E. | 22 | 22 | 21 | f.s. & sh. | .. | f.s. |
| „ | 6 | „ | 19 | B 273 | East part of Lowestoft Deep Water. | 52° 34′ N., 2° 53½′ E. | N. 1 mile<br>S.E. by S. ⅛ S. 7⅜ miles.<br>N.W. ⅝ N. 4½ miles.<br>S. ¾ E. 2⅜ miles. | 52° 30½′ N., 2° 58½′ E. | 21 | 22 | 19 | f.s. | .. | f.g.s. |
| „ | 7 | „ | „ | B 274 | „ „ .. | 52° 30½′ N., 2° 58½′ E. | N.W. ½ N. 6½ miles<br>E. by S. ⅜ S. 4½ miles.<br>N.W. by N. ½ N. 6½ miles. | 52° 38′ N., 2° 49½′ E. | 19 | 22 | 21 | f.g.s | .. | f.g.s. |
| „ | 8 | „ | „ | B 275 | „ „ .. | 52° 38′ N., 2° 49½′ E. | S.E. ½ E. 5 miles<br>N.W. by W. ⅝ W. 5 miles.<br>S.E. ⅞ S. 5½ miles.<br>N.W. by N. 4 miles. | 52° 36′ N., 2° 50½′ E. | 21 | 22 | 23 | f.g.s. | f.g.s. | f.d.s. |
| XLVII | 1 | 1905 Jan. | 9 | B 276 | Bridlington Bay .. | 54° 2¾′ N., 0° 9¼′ W. | S. by W. ⅞ W. 1⅝ miles | 54° 1⅛′ N., 0° 9¾′ W. | 6 | .. | 6½ | f.s. | .. | f.s. |
| „ | 2 | „ | 13 | B 277 | Flamborough Head Ground. | 54° 13¼′ N., 0° 31½′ E. | S.W. by W. ½ W. 3¾ miles | 54° 10⅝′ N., 0° 26¾′ E. | 31 | .. | 31 | f.d.s. | .. | f.d.s. |
| „ | 3 | „ | 13-14 | O 266 | „ „ .. | 54° 11¾′ N., 0° 26′ E. | E. 4½ miles<br>W. by N. ⅛ N. 4⅛ miles. | 54° 13′ N., 0° 25¼′ E. | 31 | .. | 31 | f.d.s. | .. | f.d.s. |
| „ | 4 | „ | 14 | O 267 | „ „ .. | 54° 13′ N., 0° 25½′ E. | E. by N. 4½ miles<br>W. 4½ miles. | 54° 14′ N., 0° 25¼′E. | 31 | .. | 31 | f.d.s. | .. | f.d.s. |
| „ | 5 | „ | 20 | O 268 | Flamborough Off .. | 53° 59⅞′ N., 0° 34′ E. | E. 4½ miles<br>S.W. by W. ¼ W. 5 miles. | 53° 57½′ N., 0° 35½′ E. | 26 | .. | 25½ | f.s. | .. | f.s. |
| „ | 7 | „ | 21 | O 269 | Eastern Edge of Flamborough Off. | 53° 50′ N., 1° 11⅝′ E. | N. E. ¾ N. 6⅝ miles<br>N.W. ⅜ W. 4½ miles. | 54° 6′ N., 1° 8′ E. | 23 | 27 | 27 | f.s. | f.s. | f.s. |
| „ | 12 | „ | 22 | O 270 | Dogger Bank, East of South West Patch. | 54° 20′ N., 2° 38′ E. | N.E. ¾ N. 14 miles | 54° 33′ N., 2° 45¾′ E. | 15 | .. | 17 | f.s. | .. | f.s. |
| „ | 15 | „ | „ | O 271 | Dogger Bank, Eastern Shoal. | 54° 33′ N., 2° 45¼′ E. | N. by W. ⅛ W. 8 miles | 54° 39¾′ N., 2° 38¾′ E. | 17 | 16 | 11½ | f.s. | f.s. | f.s. |
| „ | 18 | „ | 22-23 | O 272 | North of Dogger Bank Eastern Shoal. | 54° 39½′ N., 2° 38¼′ E. | N.E. ½ E. 6 miles<br>N.W. ¾ N. 7 miles. | 54° 48½′ N., 2° 34′ E. | 11½ | 11½ | 12 | f.s. | .. | f.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks. Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| (13th) 9.30 p.m. | (14th) 2.30 a.m. | 5 | First 5 hours ebb. | Smooth | S.S.E. 2 | Dull, thick fog. | — | Not recorded ; no Naturalists on board .. | Several steam trawlers about us. |
| 3 a.m. | 8.30 a.m. | 5½ | Last 5½ hours flood. | Moderately rough. | S. by E. 2-5 | Dull, foggy. | — | " " " .. | Several steam trawlers about us. |
| 9 a.m. | 2 p.m. | 5 | 5 hours ebb. | Rough | S.S.W. 6 | Dull, hazy. | — | " " " | |
| Noon | 4.15 p.m. | 4¼ | Last ¼ hour ebb ; first 3¾ flood. | Rough | S.W. 7 | Dull, cloudy. | Belly "torn to pieces." | " " " .. | No Naturalists on board ; Captain in charge ; measurements and records of fish by the chief steward, H. J. Howes. Several sailing trawlers about us. |
| (17th) 9.30 p.m. | (18th) 2.15 a.m. | 4¾ | Last 4½ hours ebb. | Rough | S.W. 6 | Cloudy. | — | " " " .. | Several sailing trawlers about us. |
| 2.45 a.m. | 7.30 a.m. | 4¾ | Last 4¾ hours flood. | Rough | S.W. 7 | Cloudy, hazy. | — | " " " .. | Several sailing trawlers about us. |
| 1 p.m. | 6 p.m. | 5 | Last hour ebb ; 4½ hours flood. | Moderately rough. | N.W. 5 | Cloudy. | — | " " " .. | Several sailing trawlers about us. |
| (18th) 6.30 p.m. | (19th) 1 a.m. | 6½ | Last 1½ hours flood ; 5 hours ebb. | Smooth. | N.W. by N. 2 | Fine, cloudy. | — | " " " .. | Several sailing trawlers about us. |
| 1.30 a.m. | 7.30 a.m. | 6 | All flood | Smooth. | N.W. by N. 1. | Fine, hazy. | — | " " " .. | Several sailing trawlers about us |
| 8.15 a.m | 3 p.m. | 6¾ | All ebb. | Smooth | N. 2 | Fine, cloudy, hazy. | — | " " " .. | Several sailing trawlers about us. |
| 3.30 p.m. | 11 p.m. | 7½ | All flood ; 1½ hours ebb. | Moderately smooth. | Calm | Fine, cloudy. | — | " " " .. | Two "drift bottles" in trawl. Several sailing trawlers about us. |
| 3.30 p.m. | 4 p.m. | ½ | Second hour flood. | Moderately smooth. | W. by S. 7. | Cloudy | — | *Hydrallmania falcata* f.c. .. .. .. .. *Flustra foliacea* f.c. | W. Wallace, R. A. Todd, G. T. Atkinson. |
| 6.45 p.m. | 8.45 p.m. | 2 | First 2 hours flood. | N.N.E. swell. | Variable | Cloudy, hazy. | Came fast, probably to a wreck, hauled, net badly torn, and beam broken. | *Actinoloba dianthus*, many on wreckage. *Alcyonidium gelatinosum* f.c. *Pecten opercularis*. *Porcellana longicornis* f.c. **Pycnogonum littorale** v.c. on *Actinoloba*. *Eupagurus bernhardus*, *Portunus holsatus*. *Ophiothrix fragilis* f.c. *Cyclopterus lumpus*. | |
| (13th) 11 p.m. | (14th) 4 a.m. | 5 | Last hour flood ; first 4 hours ebb. | Moderately rough. | S. 4 | Fine, hazy | — | *Alcyonium digitatum*. *Alcyonidium gelatinosum*. *Fusus antiquus*, *Buccinum undatum*, *Pecten opercularis*. *Eupagurus bernhardus* f.c., *Portunus holsatus* f.c. *Asterias rubens*. | |
| 5 a.m. | 10 a.m. | 5 | Last hour ebb ; first 4 hours flood. | Rough | S. 6 | Fine, cloudy, hazy. | — | *Actinoloba dianthus*. *Pecten opercularis* c. *Asterias rubens*. | |
| 11.45 a.m. | 3.45 p.m. | 4 | First 4 hours flood. | Moderately rough. | S. E. by E. 5. | Overcast | — | *Alcyonium digitatum* f.c., *Actinoloba dianthus* *Pecten opercularis* c., *Fusus antiquus*. *Eupagurus bernhardus* c., *Portunus holsatus*. *Asterias rubens* c. | Several steam trawlers about us. |
| 9.15 a.m. | 1.15 p.m. | 4 | Last 4 hours ebb. | Moderately rough. | S. E. by E. 5. | Fine, cloudy. | Belly and fore wing badly torn, | *Alcyonium digitatum*. *Pecten opercularis*. *Eupagurus bernhardus*. | |
| 8 a.m. | 1 p.m. | 5 | Last 5 hours ebb. | Moderately rough. | E. 4 | Overcast | — | **Sponge** v. abundant. *Obelia longissima* c., surf-rolled. *Eupagurus bernhardus* c. *Asterias rubens* c. | |
| 2 p.m. | 7 p.m. | 5 | Last 5 hours flood. | Moderately smooth. | E. 2 | Overcast | — | *Obelia longissima* c., surf-rolled .. .. .. *Pholas crispata* f.c. *Eupagurus bernhardus*, f.c., *Paratylus swammerdami* f.c. *Asterias rubens* c. *Ascidiella virginea* f.c. | "Moorlog" present. |
| (22nd) 8 p.m. | (23rd) 1 a.m. | 5 | Last 5 hours ebb. | Moderately smooth. | S. 2 | Overcast | — | *Obelia geniculata* c., *Obelia longissima* f.c. **Alcyonidium gelatinosum** v.c. *Eupagurus bernhardus* f.c. | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XLVII | 19 | Jan. | 23 | O 273 | North of Dogger Bank Eastern Shoal. | 54° 48½′ N., 2° 34′ E. | N.E. by N. ½ N. 11 miles | 54° 59′ N., 2° 39′ E. | 12 | 11 | 14 | f.s. | f.s. | f.s. & sh. |
| ,, | 22 | ,, | ,, | O 274 | ,, ,, | 54° 59′ N., 2° 38½′ E. | S. ½ E. 12 miles | 54° 48¼′ N., 2° 46′ E. | 14 | 11 | 10 | f.s. & sh. | f.s. & sh. | f.s. & sh. |
| ,, | 25 | ,, | ,, | O 275 | Clay Deep, Edge of Dogger. | 54° 52′ N., 3° 20½′ E. | E. by S. ½ S. 5½ miles | 54° 51½′ N., 3° 30½′ E. | 20 | .. | 22 | .. | .. | f.s. & oz. |
| ,, | 26 | ,, | 25 | O 276 | East of Leman Ground. | 53° 29¼′ N., 3° 1′ E. | E. by N. 2½ miles W. by S. 6½ miles. | 53° 27½′ N., 2° 54⅝′ E. | 19 | 20 | 17½ | f.s. & m. | .. | f.s. & m. |
| ,, | 29 | ,, | ,, | O 277 | Leman Ground .. | 53° 27½′ N., 2° 55½′ E. | W. 4½ miles | 53° 27′ N., 2° 48′ E. | 17½ | .. | 17 | f.s. & m. | .. | f.g.s. |
| XLVIII | 2 | Fe | 14 | B 278 | South East of Smith's Knoll Light-vessel. | 52° 46′ N., 2° 13⅞′ E. | N.E. by E. ¼ E. 7½ miles | 52° 51⅜′ N., 2° 22½′ E. | 22 | .. | 24 | s. & m. | .. | s. & ross. |
| ,, | 5 | ,, | 14-15 | B 279 | Extreme South of Leman Ground. | 52° 57⅞′ N., 2° 33¾′ E. | N.E. ⅞ N. 6½ miles | 53° 4⅜′ N., 2° 38′ E. | 20½ | .. | 18 | s. | .. | f.s. |
| ,, | 8 | ,, | 15 | B 280 | Leman Ground .. | 53° 13′ N., 2° 44¼ E. | N.E. by N. ½ N. 6⅝ miles | 53° 19⅜′ N., 2° 56⅜′ E. | 18 | .. | 16½ | f.s. | .. | f.s. |
| ,, | 10 | ,, | ,, | B 281 | East part of Leman Ground. | 53° 29½′ N., 2° 53′ E. | N.E. ⅛ N. 7½ miles | 53° 35⅝′ N., 2° 59′ E. | 16½ | .. | 17 | f.s. | .. | f.d.s. |
| ,, | 12 | ,, | ,, | B 282 | Botney Ground .. | 53° 39⅜′ N., 3° 5′ E. | S.E. by S. ⅞ S. 15⅝ miles | 53° 27′ N., 3° 21½′ E. | 18½ | .. | 16½ | f.d.s. | .. | f.d.s. |
| ,, | 14 | ,, | 16 | B 283 | South West part of New Zealand. | 53° 20¼′ N., 3° 34½′ E. | S.E. by S. ½ S. 12¼ miles | 53° 11⅜′ N., 3° 48½′ E. | 15 | .. | 14 | f.s. | .. | f.d.s. |
| ,, | 16 | ,, | ,, | B 284 | North West part of Texel Ground. | 53° 7′ N., 3° 57⅞′ E. | S.E. ½ E. 6¼ miles | 53° 4¼′ N., 4° 7¼′ E. | 15½ | 17 | 15 | f.s. | f.s. | f.s. |
| ,, | 18 | ,, | ,, | B 285 | Texel Ground .. | 53° 1½′ N., 4° 12⅝′ E. | S.W. 3½ miles N.E. ⅝ N. 5 miles. | 53° 3′ N., 4° 13⅛′ E. | 16 | .. | 16½ | f.g s. | — | f.g.s. |
| ,, | 20 | ,, | 17 | B 286 | Brown Ridges .. | 52° 54½′ N., 3° 55⅝′ E. | W. by S. ½ S. 14⅝ miles | 52° 46⅝′ N., 3° 34′ E. | 14 | 17 | 14 | f.g.s. | f.g.s. | f.br.s. |
| ,, | 22 | ,, | ,, | B 287 | Western Edge of Lowestoft Deep Water. | 52° 29′ N., 2° 11′ E. | S.W. ¼ W. 9½ miles | 52° 21′ N., 2° 3′ E. | 23 | .. | 20 | f.g.s. & pebbles | — | f.d.s. |
| XLIX | 1 | ,, | 28 | B 288 | Knoll Deep .. .. | 52° 34½′ N., 2° 16′ E. | S.E. ⅝ S. 1 mile | 52° 34′ N., 2° 17⅛′ E. | 22 | .. | 22 | sharp s. | — | ross. |
| ,, | 3 | Mar. | 1 | B 289 | Winterton Shoal .. | 52° 39½′ N., 2° 50⅜′ E. | S.E. by E. ½ E. 6 miles N.E. by E. ⅜ E. 5 miles | 52° 41¼ N., 3° 6¼′ E. | 19½ | .. | 16 | blk. spk.s. | — | bk.spk. s. |
| ,, | 5 | Mar | 1-2 | B 290 | Leman Ground .. | 53° 8½′ N., 2° 30¾′ E. | N. by E. ½ E. 12⅜ miles | 53° 21¼′ N., 2° 31′ E. | 17 | 16 | 15 | f.d.s. | f.g.s. | f.g.s. |
| ,, | 6 | ,, | 2 | B 291 | ,, ,, .. | 53° 24¾′ N., 2° 20′ E. | N.E. by E. ½ E. 4 miles S.W. by S. 1⅜ miles. | 53° 26½′ N., 2° 24⅝′ E. | 12 | .. | 13 | f.blk. spk.s | .. | f.d.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 2 a.m. | 7 a.m. | 5 | Last 5 hours flood. | Moderately smooth. | S. 4 | Overcast | — | *Obelia longissima* f.c.<br>**Alcyonidium gelatinosum** abundant.<br>*Lacuna crassior* and spawn c.<br>*Galathea intermedia* c., *Eupagurus bernhardus* f.c.<br>*Asterias rubens* c.<br>*Ascidiella virginea.* | |
| 8 a.m. | 1 p.m. | 5 | Last 5 hours ebb. | Moderately smooth. | S.W. 5 | Overcast | — | *Obelia longissima* c., *O. geniculata* f.c.<br>**Alcyonidium gelatinosum** v.c.<br>*Eupagurus bernhardus* c., *Galathea intermedia* f.c<br>*Asterias rubens* c.<br>*Ascidiella virginea* c. | |
| 5 p.m. | 7.45 p.m. | 2¾ | First 3 hours flood. | Rough | S.W. 6 | Overcast | — | *Eupagurus bernhardus.*<br>*Asterias rubens.* | |
| 4 a.m. | 9 a.m. | 5 | Last 3 hours ebb; first 2 hours flood. | Rough. | W.N.W. 6. | Cloudy | — | *Fusus antiquus, Ostrea edulis.*<br>*Asterias rubens* c., *Astropecten irregularis, Ophiothrix fragilis.* | |
| 9.50 a.m. | Noon | 2⅛ | Second to fourth hours flood. | Very rough. | W.N.W. 8. | Cloudy | — | *Actinoloba dianthus.*<br>*Asterias rubens* c. | |
| 5.45 p m. | 8.45 p.m. | 3 | First 3 hours ebb. | Moderately smooth. | N.W. 2 | Overcast, hazy. | — | *Sabellaria spinulosa* c. .. .. .. ..<br>*Buccinum undatum* spawn.<br>*Eupagurus bernhardus* c.<br>*Asterias rubens.* | J. O. Borley, J. Potter, A. J. Arrowsmith. |
| (14th) 10.40 p.m. | (15th) 1.40 a.m. | 3 | Last 1½ hours ebb; first 1½ hours flood. | Moderately smooth. | N.W. 3 | Dull, overcast. | — | *Buccinum undatum* spawn.<br>*Eupagurus bernhardus* c., *Cancer pagurus.* | |
| 3.55 a.m. | 7.55 a.m. | 4 | Last 2 hours flood; first 2 hours ebb. | Moderately smooth. | W. by N. 3. | Overcast, hazy. | — | Very little taken. | |
| 9.40 a.m. | 1.40 p.m. | 4 | Last 3 hours ebb; first hour flood. | Moderately smooth. | W. by S. 4. | Cloudy, hazy. | — | *Hydrallmania falcata.*<br>*Echinus miliaris* f.c., *Asterias rubens.* | |
| 2.45 p:m. | 8.45 pm. | 6 | All flood | Moderately smooth. | W. by S. 4. | Cloudy, rainy. | — | *Actinoloba dianthus* f.c.<br>*Eupagurus bernhardus, Portunus holsatus.*<br>*Asterias rubens* f.c , *Echinus miliaris* f.c. | |
| 4 a.m. | 9 a.m. | 5 | Last 4 hours flood; first hour ebb. | Smooth. | S.W. by W. 2. | Cloudy, hazy. | — | *Actinoloba dianthus. Alcyonium digitatum* ..<br>*Buccinum undatum* spawn.<br>*Portunus holsatus* c., *Eupagurus bernhardus.* | 1 steam trawler with us. |
| 10.45 a.m. | 2.15 p.m. | 3½ | Last of flood. | Moderately smooth. | S.W. by W. 3. | Thick fog | 2.15 p.m. Came fast to wreck, broke both trawl heads, and net partly torn. | *Eupagurus bernhardus, Hyas araneus,* .. ..<br>*Asterias rubens* f.c., *Astropecten irregularis.* | 1 steam trawler with us. |
| 3 45 p.m. | 7.45 p.m. | 4 | Last 4 hours ebb. | Moderately rough. | S.W. 4 | Cloudy, rainy. | Ground rope parted and belly split. | *Cancer pagurus. Eupagurus bernhardus.*<br>*Asterias rubens.* | |
| 4 a.m. | 9 a.m. | 5 | Last 5 hours flood. | Moderately rough. | W. by S. 4. | Fine, cloudy. | — | *Eupagurus bernhardus. Portunus holsatus* ..<br>*Asterias rubens* c. | Several Dutch fishing craft about us. |
| 5.10 p.m. | 9.10 p.m. | 4 | Last 4 hours flood. | Smooth. | W. by N. 2. | Fine, hazy. | — | *Chondractinia digitata.*<br>*Sabellaria spinulosa* f.c.<br>*Buccinum undatum* f.c.<br>*Asterias rubens* f.c. | |
| 5.30 p.m. | 6.15 p.m. | ¾ | From fifth to sixth hour flood. | Moderately rough. | W.S.W. 6. | Dull, rainy. | Came fast to ross bank, net very badly torn. | Very little taken .. .. .. .. .. | R. A. Todd, G. T. Atkinson. |
| 9.30 a.m. | 1.30 p.m. | 4 | From 2½ hours ebb to ½ hours flood. | Moderately rough. | W.S.W. 5. | Cloudy, showery. | — | *Eupagurus bernhardus* c. .. .. .. ..<br>*Asterias rubens, Spatangus purpureus.* | Several sailing trawlers about us. |
| (1st) 8.30 p.m. | (2nd) 1.30 a.m. | 5 | From ½ hour to 5½ hours ebb. | Moderately smooth. | E.N.E. 4 | Cloudy. | — | *Hydrallmania falcata* f.c.<br>*Buccinum undatum* spawn.<br>*Eupagurus bernhardus* c., *Portunus holsatus.*<br>*Asterias rubens* f.c. | |
| 11.30 a.m. | 2.30 p.m. | 3 | From 3 to 6 hours ebb. | Moderately rough. | N.E. 6 | Cloudy. | — | *Hydrallmania falcata* f.c., *Hydractinia echinata.*<br>*Eupagurus bernhardus, Portunus holsatus.*<br>*Asterias rubens* f.c. | 1 steam trawler, the "Aries" of Grimsby, with us. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| XLIX | 10 | Mar. | 2-3 | B 292 | Markham's Hole .. | 53° 45¼′ N., 2° 32½′ E. | E. 2⅛ miles N.W. by W. ⅛ W. 7 miles. | 53° 47½′ N., 2° 26′ E. | 20 | 33 | 19 | f.s. | s. & m. | sharp s. |
| ,, | 24 | ,, | 3 | O 278 | Off Grounds .. .. | 54° 2⅜′ N., 1° 15¾′ E. | N.W. by N. ⅜ N. 12⅝ miles | 54° 13′ N., 1° 1⅝′ E. | 24 | 29 | 33 | f.d.s. | .. | f.d.s. |
| ,, | 25 | ,, | 4 | O 279 | The Hills.. .. .. | 54° 17¾′ N., 1° 8¾′ E. | E. ⅛ N. 3¼ miles S. ⅜ E. 3⅜ miles. N.W. ¼ N. 2 miles. | 54° 16⅜′ N., 1° 12⅝′ E. | 26 | 30 | 24 | f.d.s. | f.d.s. | f.d.s. |
| ,, | 26 | ,, | ,, | O 280 | ,, .. | 54° 16⅜′ N., 1° 12¾′ E. | E.N.E. 2½ miles W. by N. 5 miles. N.E. ½ N. 2½ miles. | 54° 20⅛′ N., 1° 8¼′ E. | 24 | 27 | 15 | f.g.s. | f.d.s. | f.s. |
| L | 1 | ,, | 8 | B 293 | Hartlepool .. .. | 54° 41′ N., 0° 45¼′ W. | N.N.W. 4½ miles | 54° 44¾′ N., 0° 50′ W. | 27 | .. | 29 | c.s. & gvl. | .. | m. |
| ,, | 8 | ,, | 10 | B 294 | North of Hartlepool | 54° 45½′ N., 1° 14¼′ W. | S. by E. ⅜ E. 1⅝ miles | 54° 43¾′ N., 1° 12½′ W. | 10 | 6½ | 5 | c.s. | f.s. | c.s. |
| ,, | 9 | ,, | 17 | O 281 | Hartlepool Ground.. | 54° 40½′ N., 1° 4½′ W. | E. by N. 5 miles | 54° 43′ N., 0° 56¾′ W. | 14 | 20 | 25 | f.d.s. | f.d.s. | f.d.s. |
| ,, | 12 | ,, | ,, | O 282 | ,, ,, .. | 54° 43′ N., 0° 54¼′ W. | E.N.E. 1¼ miles W. by S. 2⅛ miles. N.N.W. ¾ mile. | 54° 42¾′ N., 0° 58′ W. | 27 | .. | 27 | f.d.s. & m. | .. | f.d.s. & m. |
| ,, | 13 | ,, | ,, | O 283 | Whitby Ground .. | 54° 41¾′ N., 0° 23¾′ W. | E. ⅜ N. 4⅜ miles | 54° 43¾′ N., 0° 16½′ W. | 34 | .. | 34 | f.d.s. | .. | f.d.s. |
| ,, | 16 | ,, | 17-18 | O 284 | ,, ,, .. | 54° 44′ N., 0° 18′ W. | W. by S. ⅛ S. 2⅜ miles E. by S. ⅜ S. 6 miles. W. by S. ¼ S. 4½ miles. | 54° 40′ N., 0° 18½′ W. | 34 | .. | 35 | f.d.s. | .. | f.d.s. |
| ,, | 17 | ,, | 18 | O 285 | ,, ,, .. | 54° 40′ N., 0° 18½′ W. | E. 5 miles W. by N. ⅛ N. 6 miles. N.E. 2 miles. | 54° 41½′ N., 0° 17′ W. | 35 | .. | 35 | f.d.s. | .. | f.d.s. |
| ,, | 24 | ,, | ,, | O 286 | West of Brucey's Garden. | 54° 55⅜′ N., 0° 19½ W. | E. ⅜ N. 5¾ miles | 54° 58′ N. 0° 28½′ E. | 42 | .. | 43 | f.d.s. | .. | f.d.s. |
| ,, | 25 | ,, | ,, | O 287 | ,, ,, .. | 54° 58½′ N., 0° 29¾′ E. | E. by N. 7⅜ miles S.W. by W. ⅜ W. 3 miles. E. by S. 3¼ miles. | 55° 0′ N., 0° 42′ E. | 43 | .. | 37 | f.d.s. | .. | f.d.s. |
| ,, | 28 | ,, | 19 | O 288 | Brucey's Garden .. | 55° 0′ N., 0° 42′ E. | S.E. by E. ½ E. 4⅜ miles | 54° 58⅜′ N., 0° 50′ E. | 37 | .. | 33 | f.s. | .. | f.s. |
| ,, | 31 | ,, | ,, | O 289 | Dogger Bank, North of South West Patch. | 54° 35¼′ N., 1° 46′ E. | E. by S. ¼ S. 4¼ miles E.N.E. 8 miles. | 54° 41′ N., 2° 4½′ E. | 11½ | .. | 13 | f.g.s. | .. | f.g.s. |
| LI | 2 | ,, | 31 | B 295 | Brielle Ground .. | 52° 5¼′ N., 3° 47¾′ E. | N.W. by W. ⅜ W. 4½ miles | 52° 6⅜′ N., 3° 41′ E. | 13 | .. | 11 | f.s. | .. | f.s. & sh. |
| ,, | 3 | ,, | ,, | B 296 | ,, ,, .. | 52° 6⅜′ N., 3° 41′ E. | N. 3¼ miles E. by N. 1¼ miles. | 52° 10⅜′ N., 3° 41½′ E. | 11 | .. | 13 | f.s. & sh. | .. | f.br.s. |
| ,, | 4 | ,, | ,, | B 297 | ,, ,, .. | 52° 14′ N., 3° 46½′ E. | E.N.E. 5 miles | 52° 17⅜′ N., 3° 53¼′ E. | 14½ | .. | 13 | f.s. | .. | f.g.br. s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| (2nd) 9.30 p.m. | (3rd) 1.30 a.m. | 4 | From ½ to 4½ hours ebb. | Moderately rough. | N.N.E. 3 | Cloudy. | — | *Alcyonium digitatum* c., *Hydrallmania falcata* c., *Tubularia indivisa* c., *Actinoloba dianthus* f.c.<br>**Buccinum undatum** spawn, v.c., *Cyprina islandica*, *Fusus antiquus*.<br>*Eupagurus bernhardus* c., *Portunus holsatus* c., *Cancer pagurus*, *Hyas coarctatus*.<br>*Asterias rubens* c., *Spatangus purpureus* f.c.<br>*Callionymus lyra*, *Cyclopterus lumpus*. | 2 steam trawlers about us. |
| 7 p.m. | Midnight. | 5 | From first to sixth hours ebb. | Smooth | Variable 1-2. | Fine, cloudy. | Ground rope parted, and net very badly torn. | *Alcyonium digitatum* c. .. .. .. ..<br>*Eupagurus bernhardus*. | Had a trawl beam and trawl head in our trawl. |
| 9.45 a.m. | 1.45 p.m. | 4 | Last 2 hours ebb; first 2 hours flood. | Moderately rough. | S.W. by W. 6. | Overcast, dull. | — | *Actinoloba dianthus*, *Alcyonium digitatum* ..<br>*Buccinum undatum*, *Fusus antiquus*.<br>*Eupagurus bernhardus* f.c.<br>*Asterias rubens* c. | 4 steam trawlers about us. |
| 2.15 p.m. | 6.15 p.m. | 4 | From second to sixth hours flood. | Moderately rough. | S.W. by S. 4. | Cloudy. | — | *Actinoloba dianthus*, *Alcyonium digitatum*.<br>*Buccinum undatum*, *Fusus antiquus*.<br>*Eupagurus bernhardus* f.c.<br>*Asterias rubens*, *Ophiothrix fragilis*. | |
| 7 p.m. | 9 p.m. | 2 | First 2 hours ebb. | Moderately smooth. | W.S.W. 6 | Cloudy, hazy. | Ground rope parted, and net very badly torn. | Very little taken .. .. .. .. .. | W. Wallace, R. A. Todd, G. T. Atkinson. |
| 6.45 a.m. | 7.35 a.m. | ⅘ | From 5½ hours to 6 hours flood. | Smooth | W. by S. 7 | Cloudy. | Came fast probably to a wreck; broke beam, lost aft trawl head, ground rope, &c.; net very badly torn. | " " | |
| 8 a.m. | 10 a.m. | 2 | First 2 hours flood. | Moderately smooth. | W.S.W. 4 | Cloudy, hazy. | Net slightly torn. | *Actinoloba dianthus* c., *Alcyonium digitatum*. | |
| Noon | 2 p.m. | 2 | From fourth to sixth hour flood. | Moderately smooth. | W.S.W. 3 | Fine, cloudy, hazy. | — | *Alcyonium digitatum*, *Antennularia antennina*.<br>*Asterias rubens*. | |
| 6.45 p.m. | 8.45 p.m. | 2 | From fourth to sixth hour ebb. | Moderately smooth. | S.S.W. 3 | Fine, hazy, cloudy. | — | *Alcyonium digitatum*.<br>*Cellepora pumicosa* c.<br>*Buccinum undatum*.<br>*Asterias rubens*, *Luidia sarsi*. | |
| 10 p.m. | 3 a.m. | 5 | First 5 hours flood. | Smooth | S. 3 | Hazy, cloudy. | — | *Alcyonium digitatum* f.c., *Actinoloba dianthus*.<br>*Buccinum undatum*, *Fusus antiquus*, *Pecten opercularis*.<br>*Asterias rubens* c., *Ophiura ciliaris* c., *Luidia sarsi*. | |
| 4 a.m. | 9 a.m. | 5 | Last hour flood; first 4 hours ebb. | Smooth | S. 3 | Fine, hazy. | — | *Sertularia abietina* c. .. .. .. .. ..<br>*Alcyonidium gelatinosum* f.c., *Flustra securifrons* f.c.<br>*Sabella pavonina*.<br>*Dendronotus arborescens*, *Pecten opercularis*.<br>*Asterias rubens* c., *Ophiothrix fragilis* c., *Ophiura ciliaris* c. | 2 steam trawlers about us. |
| 3.50 p.m. | 6.20 p.m. | 2½ | First 2½ hours ebb. | Smooth | W.S.W. 3 | Fine, hazy, cloudy. | Had a "pull-out" at a wreck, hauled, found net all right. | *Halecium halecinum* f.c. .. .. .. ..<br>*Cellepora pumicosa* c<br>*Buccinum undatum*.<br>*Asterias rubens*.<br>*Brissopsis lyrifera*. | |
| 7 p.m. | Midnight | 5 | Last 3 hours ebb; first 2 hours flood. | Smooth | W. by S. 3. | Fine, cloudy. | — | *Actinoloba dianthus* c., *Alcyonium digitatum* ..<br>*Buccinum undatum* spawn f.c., *Pecten opercularis* f.c., *Fusus antiquus*, *Tritonia hombergi*.<br>*Eupagurus bernhardus*.<br>*Asterias rubens* f.c., *Ophiura ciliaris* f.c., *Spatangus purpureus* f.c., *Astropecten irregularis*. | 2 steam trawlers with us. |
| 2.45 a.m. | 4.10 a.m. | 1⅚ | Last 1½ hours flood. | Smooth | W.S.W. 4. | Fine, cloudy, hazy. | Gear foul, hauled, net slightly torn. | Not recorded. | |
| 10.10 a.m. | 3.10 p.m. | 5 | Last 1½ hours ebb; first 3½ hours flood. | Smooth | W. by S. 3. | Fine, cloudy. | Broke starboard piston of winch, hauled gear with tackle. | *Eupagurus bernhardus* f.c.<br>**Asterias rubens** v.c., *Echinocardium cordatum*. | |
| 4.10 a.m. | 6.10 a.m. | 2 | Second to fourth hours ebb. | Moderately smooth. | N.W. 4. | Fine, cloudy, hazy. | — | Very little taken .. .. .. .. .. | J. O. Borley, J. Potter G. T. Atkinson.<br>1 sailing trawler with us. |
| 6.30 a.m. | 8.30 a.m. | 2 | Fourth to sixth hours ebb. | Moderately smooth. | N.W. by N. 5. | Fine, cloudy, hazy. | — | " " .. .. .. .. | |
| 9.30 a.m. | 11.30 a.m. | 2 | 1½ to 3½ hours flood. | Moderately rough. | W. 5 | Fine, cloudy, hazy. | — | " " .. .. .. .. | Several Dutch fishing craft about. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| LI | 5 | Mar. | 31 | B 298 | Brielle Ground .. | 52° 17¼′ N., 3° 54½′ E. | E. by N. 5 miles | 52° 19¼′ N., 4° 2′ E. | 13 | .. | 13 | f.g.br. s. | .. | f.s. |
| LII | 22 | Apr. | 8 | B(c.) 299 | Lowestoft Flats .. | 52° 24½′ N., 1° 57′ E. | E.S.E. 3 miles | 52° 23⅝′ N., 2° 2⅜′ E. | 17 | .. | 19½ | c.s. | .. | s. & ross |
| LIII | 1 | „ | 18 | O 290 | Off Scheveningen .. | 52° 11¼′ N., 4° 11⅜′ E. | N.W. by W. ¼ W. 2½ miles | 52° 11⅓′ N., 4° 7½′ E. | 10 | .. | 11 | d.s. | .. | d.s. |
| „ | 2 | „ | „ | O 291 | „ „ .. | 52° 11⅞′ N., 4° 7½′ E. | N.W. by W. ¼ W. 2½ miles | 52° 12½′ N., 4° 3½′ E. | 11 | .. | 12 | d.s. | .. | d.br.s. |
| „ | 3 | „ | „ | O 292 | North West of Scheveningen | 52° 12½′ N., 4° 3½′ E. | N.W. by W. ½ W. 5 miles | 52° 13½′ N., 3° 55½′ E. | 12 | .. | 12 | f.br.s. | .. | f.br.s. |
| „ | 5 | „ | 19 | O 293 | „ „ .. | 52° 16⅜′ N., 4° 7¾′ E. | W. by N. ½ N. 4 miles | 52° 16½′ N., 4° 1′ E. | 10½ | .. | 12 | g.br.s. | .. | g.br.s. |
| „ | 6 | „ | „ | O 294 | „ „ .. | 52° 16′ N., 4° 0½′ E. | W. ½ N. 3¾ miles | 52° 16½′ N., 3° 54¾′ E. | 12 | .. | 12½ | g.br.s. | .. | g.br.s. |
| „ | 7 | „ | „ | O 295 | Northern Edge of Brielle Ground. | 52° 16′ N., 3° 54′ E. | N.W. by W. ½ W. 4 miles | 52° 17½′ N., 3° 48½′ E. | 12½ | .. | 13 | g.br.s. | .. | g.br.s. |
| „ | 8 | „ | „ | O 296 | „ „ .. | 52° 17½′ N., 3° 48½′ E. | N. ¼ W. 4 miles | 52° 21′ N., 3° 46⅝′ E. | 13 | .. | 14 | g.br.s. | .. | g.br.s. |
| LIV | 1 | „ | 28 | O 297 | West of Middle Ground. | 52° 16½′ N., 2° 33½′ E. | E.N.E. 4½ miles | 52° 18⅜′ N., 2° 39′ E. | 23 | .. | 23 | g.s. & sh. | .. | g.s. |
| „ | 2 | „ | „ | O 298 | Middle Ground .. | 52° 18½′ N., 2° 39′ E. | E. by N. ½ N. 3½ miles | 52° 20½′ N., 2° 44′ E. | 23 | .. | 24 | g.s. | .. | g.br.s. |
| „ | 3 | „ | „ | O 299 | „ „ .. | 52° 18½′ N., 2° 44⅜′ E. | N.E. 3¾ miles | 52° 21⅜′ N., 2° 48′ E. | 21 | .. | 20 | g.br.s. & sh. | .. | g.br.s. & sh. |
| LV | 1 | May | 9 | O 300 | North part of Leman Ground. | 53° 37¼′ N., 2° 9′ E. | S.E. ⅛ S. 12½ miles | 53° 30¾′ N., 2° 27¼′ E. | 14 | .. | 15½ | c.s. | .. | d.s. |
| „ | 2 | „ | 10 | O 301 | Leman Ground .. | 53° 28¾′ N., 2° 34¾′ E. | S.E. by E. ⅜ E. 10¼ miles | 53° 25⅜′ N., 2° 52′ E. | 15½ | .. | 16 | f.d.s. | .. | f.d.s. |
| „ | 3 | „ | „ | O 302 | Eastern Edge of Leman Ground, | 53° 25⅝′ N., 2° 57′ E. | S.E. ¾ S. 10½ miles | 53° 18⅜′ N., 3° 12′ E. | 16 | .. | 13½ | f.d.s. | .. | f.d.s. |
| „ | 4 | „ | „ | O 303 | North of Brown Bank. | 53° 18⅜′ N., 3° 12′ E. | S.E. ⅝ E. 9½ miles | 53° 14½′ N., 3° 27′ E. | 13½ | .. | 15 | f.d.s. | .. | f.d.s. |
| „ | 5 | „ | „ | O 304 | N.E. of Brown Bank. | 53° 14½′ N., 3° 27′ E. | S.E. by E. ¼ E. 12¼ miles | 53° 11¼′ N., 3° 46¼′ E. | 15 | .. | 13½ | f.d.s. | .. | f.d.s. |
| „ | 6 | „ | 11 | O 305 | East of Brown Bank. | 53° 11¼′ N., 3° 46¼′ E | S.E. by S. ½ S. 12 miles | 53° 1′ N., 4° 1⅜′ E. | 13½ | .. | 14½ | f.d.s. | .. | f.g.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks. Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| Noon | 2 p.m. | 2 | Fourth to sixth hours flood. | Moderately rough. | W. by S. 5. | Fine, cloudy, hazy. | — | Very little taken .. .. .. .. .. | Several Dutch fishing craft and 1 steam trawler about us. |
| 6 a.m. | 7.30 a.m. | 1½ | From fifth hour ebb to ½ hour flood. | Moderately rough. | N.N.W. 5. | Heavy clouds and snow showers. | — | *Flustra foliacea* c. .. .. .. .. .. **Sabellaria spinulosa** v.c. *Pandalus annulicornis, Crangon allmani. Echinus miliaris* c. | J. O. Borley and J. Potter. Small mesh net round ordinary trawl. |
| 1.25 p.m. | 2.25 p.m. | 1 | From 3½ to 4½ hours flood. | Moderately rough. | E.N.E. 5. | Cloudy | — | *Aurelia aurita* c. .. .. .. .. .. *Asterias rubens.* | R. A. Todd, J. Potter. |
| 2.50 p.m. | 3.50 p.m. | 1 | From fifth to sixth hour flood. | Moderately rough. | E.N.E. 5. | Cloudy, overcast. | — | *Aurelia aurita* f.c. .. .. .. .. .. Very little else. | Several Dutch fishing craft about. |
| 4.15 p.m. | 6.15 p.m. | 2 | Second 2 hours ebb. | Moderately rough. | E.N.E. 5. | Overcast | — | Very little taken .. .. .. .. .. | Several Dutch fishing craft about. |
| 6.15 a.m. | 7.45 a.m. | 1½ | From 1 hour to 2½ hours ebb. | Moderately rough. | E. by N. 5. | Cloudy, overcast. | — | „ „ .. .. .. .. .. | Several Dutch fishing craft about. |
| 8.15 a.m. | 9.45 a.m. | 1½ | From third to 4½ hours ebb. | Moderately rough. | E. 5 | Cloudy, overcast. | — | „ „ .. .. .. .. .. | Several Dutch fishing craft about. |
| 10.15 a.m. | 11.45 a.m. | 1½ | From fifth hour ebb to ½ hour flood. | Moderately rough. | E. 5 | Cloudy, overcast. | — | „ „ .. .. .. .. .. | Several Dutch fishing craft and 1 steam trawler with us. |
| 12.10 p.m | 1.45 p.m. | 1⅞ | From 1 hour to 1½ hours flood. | Moderately rough. | E. 5 | Cloudy, overcast. | — | *Eupagurus bernhardus* .. .. .. .. *Asterias rubens.* | Several Dutch fishing craft, one steam trawler, and 3 English fishing smacks with us. |
| 4 a.m. | 6 a.m. | 2 | Third to fifth hour flood. | Rough | S.W. 6 | Cloudy, overcast. | — | *Eupagurus bernhardus* c. .. .. .. .. *Spatangus purpureus.* | W. Wallace, G. T. Atkinson. Several drifters about us. |
| 6.30 a.m. | 8 a.m. | 1½ | From 5½ hours flood to first hour ebb. | Rough | S.W. 7 | Overcast, cloudy. | — | *Eupagurus bernhardus. Spatangus purpureus.* | |
| Noon. | 1.30 p.m. | 1½ | From fifth hour ebb to ½ hour flood. | Rough | S.W. 7 | Overcast, cloudy. | — | *Eupagurus bernhardus* c. *Echinocardium cordatum, Spatangus purpureus.* | |
| 8 p.m. | Mid-night. | 4 | First 4 hours flood. | Moderately smooth. | S.W. by W. 3. | Cloudy, overcast. | Ground rope parted and belly "all to pieces." | Nothing taken .. .. .. .. .. | W. Wallace, G. T. Atkinson. |
| 6 a.m. | 10 a.m. | 4 | From fourth hour ebb to second hour flood. | Smooth | W. by S. 3. | Cloudy, fine. | — | *Aphrodite aculeata.* **Echinocardium cordatum** v. abundant, **Asterias rubens** v.c., *Astropecten irregularis* c. | |
| 10.30 a.m. | 2.30 p.m. | 4 | Last 4 hours flood. | Moderately smooth. | W.S.W. 4. | Fine, cloudy, hazy. | — | *Aphrodite aculeata.* **Echinocardium cordatum** v. abundant, **Asterias rubens** v.c., *Astropecten irregularis* c. | |
| 3 p.m. | 7 p.m. | 4 | From slack water to fourth hour ebb. | Moderately smooth. | S.W. 3 | Fine, cloudy, hazy. | — | *Asterias rubens* c., *Astropecten irregularis* c., *Echinocardium cordatum* c. | |
| 7.30 p.m. | Mid-night. | 4½ | From 2½ hours ebb to second hour flood. | Smooth | .. .. | Fine, cloudy, hazy. | — | *Corystes cassivelaunus.* **Astropecten irregularis** v.c., *Asterias rubens* f.c. | |
| 12.30 a.m. | 5 a.m. | 4½ | From second hour ebb to ½ hour flood. | Smooth | W.N.W. 4. | Fine, hazy. | — | Not recorded. | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| LV | 7 | May | 11 | O 306 | Texel Ground .. | 53° 1′ N., 4° 1⅜′ E. | S.E. by S. ¼ S. 10 miles | 52° 53¾′ N., 4° 14′ E. | 14½ | .. | 16 | f.g.s. | .. | f.g.s. |
| „ | 8 | „ | „ | O 307 | „ „ .. | 52° 53⅜′ N., 4° 14′ E. | S. by W. 4½ miles<br>E. ⅝ N. 5½ miles. | 52° 51½′ N., 4° 24¼′ E. | 16 | 13 | 12 | f.g.s. | f.g.s. | f.g.s. |
| „ | 9 | „ | „ | O 308 | „ „ .. | 52° 51½′ N., 4° 24¼′ E. | N. 5 miles<br>S. by E. 1 mile.<br>N.E. 1 mile. | 52° 56⅜′ N., 4° 23⅜′ E. | 12 | .. | 13½ | f.g.s. | .. | f.g.s. |
| „ | 10 | „ | „ | O 309 | „ „ .. | 52° 56⅜′ N., 4° 23⅜′ E. | S. 8¼ miles | 52° 48⅜′ N., 4° 27¼′ E. | 13½ | .. | 11 | f.g.s. | .. | f.g.s. |
| „ | 11 | „ | 12 | B (c) 300 | South West of Kykduin Light-house. | 52° 48⅝′ N., 4° 35¼′ E. | S.W. ⅝ S. 3¼ miles | 52° 45¾′ N., 4° 33⅝′ E. | 7 | .. | 9 | f.d.s. | .. | f.d.s. & m. |
| „ | 12 | „ | 15 | B (c) 301 | „ „ „ | 52° 49¼′ N., 4° 36¼′ E. | S.W. ½ S. 4 miles | 52° 46′ N. 4° 33′ E. | 7 | .. | 10 | f.d.s. | .. | f.d.s. |
| „ | 13 | „ | 16 | O 310 | Brown Ridges .. | 52° 44⅜′ N., 3° 37′ E. | W. by N. ¼ N. 12¼ miles | 52° 44¼′ N., 3° 17¾′ E. | 15 | .. | 16 | f.g.s. | .. | f.g.br. s. |
| „ | 14 | „ | „ | O 311 | West part of Brown Ridges. | 52° 44¼′ N., 3° 17¾′ E. | S.W. by W. ⅜ W. 3½ miles<br>N. by E. 5½ miles.<br>S.W. by S. ¾ S. 3½ miles. | 52° 44½′ N., 3° 12½′ E. | 16 | .. | 16 | f.g.br. s. | .. | f.g.s. |
| LVI | 9 | „ | 24 | B 302 | Bridlington Bay .. | 54° 3⅝′ N., 0° 8½′ W. | S.W. by S. ⅛ S. 1⅜ miles | 54° 2′ N., 0° 9½′ W. | 5 | .. | 6 | f.d.s. | .. | f.d.s. |
| „ | 10 | „ | „ | B 303 | „ „ .. | 54° 2′ N., 0° 9½′ W. | S. ¾ E. ⅞ mile<br>N.E. by N. ½ N. ⅜ mile. | 54° 2⅛′ N., 0° 8¾′ W. | 6 | .. | 6 | f.d.s. | .. | f.d.s. |
| „ | 11 | „ | „ | B 304 | „ „ .. | 54° 2⅛′ N., 0° 8¾′ W. | S.S.W. ⅞ miles<br>N.N.W. ⅝ miles.<br>S. by E. ½ E. ¼ mile. | 54° 1′ N., 0° 9⅛′ W. | 6 | .. | 6½ | f.d.s. | .. | f.d.s. |
| „ | 13 | „ | 25 | B 305 | North East of Brown Ridges. | 52° 53′ N., 3° 49′ E. | E. by S. ½ S. 3¼ miles | 52° 52¾′ N., 3° 54½′ E. | 15 | .. | 14 | f.d.s. | .. | f.d.s. |
| „ | 14 | „ | „ | B 306 | Texel Ground .. | 52° 54′ N., 4° 16½′ E. | E. ⅝ S. 1⅝ miles | 52° 54½′ N., 4° 19⅜′ E. | 15 | .. | 13 | f.d.s. | .. | f.d.s. |
| „ | 15 | „ | „ | B 307 | „ „ .. | 52° 54½′ N., 4° 19⅜′ E. | E. by S. 1 mile<br>N.N.E. 1 mile. | 52° 55¼′ N., 4° 21′ E. | 13 | .. | 13 | f.d.s. | .. | f.d.s. |
| „ | 16 | „ | „ | B 308 | „ „ .. | 52° 55¼′ N., 4° 21′ E. | N.W. by N. ⅝ N. 2 miles | 52° 56¾′ N., 4° 18¾′ E. | 13 | .. | 13½ | f.d.s. | .. | f.d.s. |
| „ | 17 | „ | „ | B 309 | „ „ .. | 52° 56¾′ N., 4° 18¾′ E. | E. by N. 1 mile<br>W. by N. 1 mile. | 52° 57⅜′ N., 4° 19′ E. | 13½ | .. | 13½ | f.d.s. | .. | f.d.s. |
| „ | 18 | „ | „ | B 310 | „ „ .. | 52° 57⅜′ N., 4° 19′ E. | W. by S. ½ S. 2½ miles | 52° 56′ N., 4° 15½′ E. | 13½ | .. | 14 | f.d.s. | .. | f.g.s. |
| „ | 19 | „ | „ | B 311 | „ „ .. | 52° 56′ N., 4° 15½′ E. | N.W. ⅜ N. 2½ miles | 52° 57¾′ N., 4° 12⅜′ E. | 14 | .. | 17 | f.g.s. | .. | f.g.s. |
| „ | 20 | „ | „ | B 312 | .. | 52° 57¾′ N., 4° 12⅜′ E. | N.E. by N. ½ N. 4 miles | 53° 1¾′ N., 4° 13⅜′ E. | 17 | .. | 17 | f.g.s. | .. | f.g.s. |
| „ | 28 | „ | 26 | B (c) 313 | Dogger Bank, North part of South West Patch. | 54° 37′ N., 1° 47′ E. | E. ¼ N. 1¾ miles | 54° 37⅝′ N., 1° 49½′ E. | 11½ | .. | 12 | f.g.s. & sh. | .. | f.g.s. & sh. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks. Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 5.30 a.m. | 10 a.m. | 4½ | From sixth hour ebb to 4½ hours flood. | Smooth | W. 4 | Fine, cloudy, hazy. | — | *Cancer pagurus* .. .. .. .. .. **Asterias rubens** v.c., *Astropecten irregularis.* | Several Dutch fishing craft about. |
| 10.30 a.m. | 3 p.m. | 4½ | From last hour flood to 3½ hours ebb. | Smooth | W. 4 | Fine, cloudy, hazy. | — | Not recorded .. .. .. .. .. .. | Several Dutch fishing craft about. |
| 3.30 p.m. | 7.30 p.m. | 4 | Last 3 hours ebb; first hour flood. | Smooth | N.W. by W. 3. | Fine, cloudy, hazy. | — | „ .. .. .. .. .. .. | Several Dutch fishing craft about. |
| 8 p.m. | Midnight. | 4 | From 1½ hours to 5½ hours flood. | Smooth | N.W. 2 | Dull, hazy, rainy. | — | *Cyclopterus lumpus* .. .. .. .. .. Invertebrates not recorded. | Several Dutch fishing craft about. |
| 5.30 a.m. | 7 a.m. | 1½ | Last ½ hour ebb; first hour flood. | Moderately smooth. | N. 4 | Fine, cloudy. | — | *Trachinus vipera, Cottus scorpius* .. .. Invertebrates not recorded. | Small mesh net round ordinary trawl |
| 3.20 p.m. | 5.20 p.m. | 2 | From slack water to second hour ebb. | Moderately smooth. | N.N.E. 6. | Fine, cloudy. | — | *Pholas crispata* c. "in moorlog" .. .. .. *Cottus scorpius, Trachinus vipera.* | "Moorlog" present. Small mesh net round ordinary trawl. |
| 4.40 a.m. | 9 a.m. | 4⅓ | From second hour to sixth hour flood. | Moderately rough. | N.E. by E. 6. | Cloudy, fine. | — | *Eupagurus bernhardus.* *Asterias rubens* f.c., *Astropecten irregularis* f.c. | Several sailing trawlers about us. |
| 9.30 a.m. | 2.30 p.m. | 5 | From first to sixth hour ebb. | Rough | N.E. 7 | Cloudy, fine. | — | *Asterias rubens* c., *Astropecten irregularis* c., *Spatangus purpureus.* | Several sailing trawlers about us. |
| 6.45 a.m. | 7.45 a.m. | 1 | From second to third hour flood. | Smooth | W. 4 | Cloudy, showery. | — | *Hydrallmania falcata* *Sertularia operculata* f.c. *Flustra foliacea* f.c. | W. Garstang, R. A. Todd, A. J. Arrowsmith. |
| 8.15 a.m. | 9.15 a.m. | 1 | From third to fourth hour flood. | Smooth | W. 4 | Cloudy, showery. | — | *Cancer pagurus.* | |
| 9.35 a.m. | 10.35 a.m. | 1 | Five hours flood to ½ hour ebb. | Smooth | N. by E. 3. | Cloudy, showery. | — | Very little taken. | |
| 6.30 a.m. | 7.45 a.m. | 1¼ | From first to 2¼ hours flood. | Moderately smooth. | Variable 2. | Fine, hazy. | — | *Astropecten irregularis* c. .. .. .. .. *Asterias rubens.* | Several Dutch craft about us, and one steam trawler. |
| 10.10 a.m. | 11.10 a.m. | 1 | Last hour flood. | Moderately smooth. | S.W. 2 | Fine, hazy. | — | *Asterias rubens.* | |
| 11.35 a.m. | 12.35 p.m. | 1 | First hour ebb. | Moderately smooth. | W. 2 | Fine, hazy. | — | *Astropecten irregularis* f.c., *Asterias rubens* .. | 2 steam trawlers about us. |
| 1 p.m. | 2 p.m. | 1 | Second hour ebb. | Moderately smooth. | S.W. 2 | Fine, hazy. | — | *Asterias rubens* f.c., *Ophiura ciliaris* f.c., *Astropecten irregularis.* | 3 Dutch steam trawlers about us. |
| 2.25 p.m. | 3.25 p.m. | 1 | From 2½ hours to 3½ hours ebb. | Moderately smooth. | S.W. 2 | Fine, hazy. | — | Not recorded .. .. .. .. .. | 1 steam trawler with us. |
| 4 p.m. | 5 p.m. | 1 | Fourth to fifth hour ebb. | Smooth | S.W. 2 | Fine, hazy. | — | *Asterias rubens* c., *Astropecten irregularis* c., *Ophiura ciliaris.* | 2 steam trawlers with us. |
| 5.20 p.m. | 6.20 p.m. | 1 | Last hour ebb. | Smooth | S.W. 2 | Fine, hazy. | — | *Astropecten irregularis* f.c., *Asterias rubens*, *Ophiura ciliaris.* | 1 steam trawler with us. |
| 6.45 p.m. | 8.15 p.m. | 1½ | First 1½ hour flood. | Smooth | S.W. 2 | Fine, hazy. | — | *Astropecten irregularis* c., *Asterias rubens* f.c. .. | 1 steam trawler with us. |
| 7.20 p.m. | 8.20 p.m. | 1 | First hour flood. | Moderately smooth. | S.S.W. 5 | Cloudy, hazy. | — | *Sertularia abietina* c.. *Pecten opercularis.* *Asterias rubens* c. *Trachinus vipera.* | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| LVI | 30 | May | 29 | B 314 | Off Saltfleet .. .. | 53° 24¾′ N., 0° 18′ E. | S. ⅝ E. 2 miles | 53° 22¾′ N., 0° 19′ E. | 7 | .. | 7 | c.d.s. | .. | d.s. gvl. |
| „ | 31 | „ | „ | B 315 | Off Mablethorpe .. | 53° 22¾′ N., 0° 19′ E. | S.S.E. 1 mile<br>N.E. ⅞ N. 1 mile. | 53° 23¼′ N., 0° 21½′ E. | 7 | .. | 6 | s. & gvl. | .. | s. & gvl. |
| „ | 32 | „ | „ | B 316 | „ „ .. | 53° 23¼′ N., 0° 21½′ E. | E.N.E. 1 mile<br>S. ⅝ E. 1 mile. | 53° 22¾′ N., 0° 24′ E. | 6 | .. | 7 | s. & gvl. | .. | s. & gvl. |
| „ | 33 | „ | 30 | B 317 | Flamborough Off .. | 53° 57½′ N., 0° 39¾′ E. | E. ¾ N. 2½ miles | 53° 58½′ N., 0° 44′ E. | 25 | .. | 26 | c.d.s. | .. | f.d.s. |
| „ | 34 | „ | „ | B 318 | „ „ .. | 53° 58½′ N., 0° 44′ E. | N. ¼ E. 7½ miles<br>E. by S. ½ S. 2 miles. | 54° 5¾′ N., 0° 44½′ E. | 26 | .. | 27 | f.d.s. | .. | f.d.s. |
| „ | 35 | „ | „ | O 312 | „ „ .. | 54° 5¾′ N., 0° 44½′ E. | N.W. by N. ¾ N. 2½ miles<br>S. by W. ¾ W. 5 miles.<br>N.E. by E. 2½ miles. | 54° 3⅝′ N., 0° 42⅝′ E. | 27 | .. | 27 | f.d.s. | .. | f.d.s. |
| „ | 36 | „ | „ | B (c) 319 | „ „ .. | 54° 2′ N., 0° 42½′ E. | W. by S. 2¼ miles | 54° 1′ N., 0° 38¾′ E. | 27 | .. | 26 | f.d.s. | .. | g.s. & sh. |
| „ | 38 | „ | „ | O 313 | South of The Hills .. | 54° 9½′ N., 0° 55½′ E. | E.N.E. 5 miles | 54° 12½′ N., 1° 2′ E. | 27 | .. | 29 | f.g.s. | .. | f.g.s. |
| „ | 40 | „ | 31 | O 314 | Dogger Bank, North of South West Patch. | 54° 43½′ N., 2° 9½′ E. | E. by S. ½ S. 10 miles | 54° 43′ N., 2° 29½′ E. | 14½ | .. | 10½ | f.g.s. & sh | .. | f.g.s. & sh. |
| „ | 42 | „ | „ | B (c) 320 | Dogger Bank, North Edge of Eastern Shoal. | 54° 43′ N., 2° 29½′ E. | W.S.W. 1 mile<br>E.S.E. 1 mile. | 54° 42′ N., 2° 29½′ E. | 10½ | .. | 10½ | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 43 | „ | „ | O 315 | Dogger Bank, Eastern Shoal. | 54° 38′ N., 2° 34¼′ E. | E. ½ S. 10 miles | 54° 39¾′ N., 2° 52′ E. | 11 | .. | 16 | f.g.s. & sh. | .. | f.d.g.s. |
| „ | 45 | „ | „ | O 316 | Dogger Bank, Hospital Ground. | 54° 34′ N., 2° 56′ E. | S. ⅛ E. 7½ miles | 54° 26⅝′ N., 2° 59′ E. | 18½ | .. | 19½ | f.d.g.s. | .. | f.d.g.s. |
| „ | 47 | June | 1 | O 317 | North of Cleaver Bank. | 54° 21⅛′ N., 3° 23′ E. | E. ⅛ S. 6⅝ miles | 54° 22¾′ N., 3° 35′ E. | 25 | .. | 23 | s. & m. | .. | f.d.s. |
| „ | 53 | „ | „ | B 321 | Between Cleaver Bank and New Zealand. | 53° 50′ N., 3° 29¼′ E. | E by S. ¼ S. 5 miles | 53° 49¾′ N., 3° 37¾′ E. | 21 | .. | 19 | f.g.s. | .. | f.g.s. |
| „ | 56 | „ | 2 | B 322 | Brown Bank .. .. | 53° 10¾′ N., 3° 21⅝′ E. | S.W. by W. ½ W. 1½ miles<br>N. ⅛ W. 3 miles. | 53° 12½′ N., 3° 18¾′ E. | 15 | .. | 13½ | f.g.s. | .. | f.g.s. |
| „ | 57 | „ | „ | B 323 | „ „ .. .. | 53° 12½′ N., 3° 18¾′ E. | S. ⅜ W. 2⅝ miles<br>E. by N. ¾ N. 3 miles. | 53° 12⅜′ N., 3° 23¼′ E. | 13½ | .. | 17½ | f.g.s. | .. | f.g.s. |
| LVII | 21 | „ | 16 | B 324 | Lynn Deep .. .. | 52° 56¾′ N., 0° 17½′ E. | N.E. ⅞ E. 3 miles | 52° 59⅛′ N., 0° 20½′ E. | 9 | 12–14 | 16 | s.m. | s.m. | c.s.m. |
| „ | 22 | „ | „ | B 325 | Off Mablethorpe .. | 53° 19⅜′ N., 0° 24′ E. | N.N.W. 3½ miles<br>S.E. by S. ½ S. 1¾ miles<br>S. ⅓ mile. | 53° 21′ N., 0° 23¼′ E. | 7½ | 8-9 | 7¼ | spk.s. | s.m. | spk.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 4.40 p.m. | 5.40 p.m. | 1 | Second to third hour ebb. | Smooth | W. by S. 3 | Fine, cloudy. | — | *Hydrallmania falcata* f.c., *Sertularia abietina* f.c. *Flustra foliacea* f.c. *Cancer pagurus, Eupagurus bernhardus, Solaster papposus* c., *Asterias rubens*. | 3 steam trawlers about us. |
| 6.10 p.m. | 7.10 p.m. | 1 | 3½ hours to 4½ hours ebb. | Smooth | W. by S. 3 | Fine, cloudy, hazy. | — | *Sertularia abietina* c., *Hydrallmania falcata* f.c. **Flustra foliacea** abundant. *Cancer pagurus, Eupagurus bernhardus, Pandalus montagui.* | |
| 7.30 p.m. | 8.30 p.m. | 1 | Fifth to sixth hour ebb. | Smooth | Variable 2 | Fine, cloudy. | — | *Sertularia abietina* f.c. .. .. .. .. *Flustra foliacea* c. *Cancer pagurus, Eupagurus bernhardus. Echinus miliaris, Solaster papposus.* | 3 steam trawlers about us. |
| 3.30 a.m. | 4.30 a.m. | | Last hour flood. | Smooth | N.N.W. 2 | Fine, cloudy. | — | *Hyas coarctatus* .. .. .. .. .. *Asterias rubens, Ophiothrix fragilis.* | 2 steam trawlers about us. |
| 5 a.m. | 9 a.m. | 4 | First to fifth hour ebb. | Smooth | N.W. 2 | Fine, cloudy. | — | *Actinoloba dianthus* f.c., *Alcyonium digitatum* .. *Pycnogonum littorale* f.c., *Hyas coarctatus. Asterias rubens* c., *Ophiothrix fragilis* c., *Echinocardium cordatum, Callionymus lyra.* | 2 steam trawlers about us. |
| 9.45 a.m. | 1.45 p.m. | 4 | Last hour ebb; first 3 hours flood. | Smooth | Variable | Overcast | Had a round turn in middle of net when hauled. | *Alcyonium digitatum* .. .. .. .. *Asterias rubens* f.c. | 4 steam trawlers about us. |
| 2.30 p.m. | 3.30 p.m. | 1 | From fourth to fifth hour flood. | Smooth | E.S.E. 2 | Overcast | — | *Alcyonium digitatum* .. .. .. .. *Alcyonidium gelatinosum, Pycnogonum littorale, Ophiothrix fragilis. Ammodytes tobianus.* | Small mesh net round ordinary trawl. 4 steam trawlers about us. |
| 7 p.m. | 9 p.m. | 2 | From third to fifth hour ebb. | Smooth | S.E. 2 | Overcast | — | *Actinoloba dianthus* c., *Alcyonium digitatum* f.c. *Alcyonidium gelatinosum* f.c. *Buccinum undatum* spawn c., *Fusus antiquus* f.c.. *Anomia* sp., *Pecten opercularis. Eupagurus bernhardus* c., *Cancer pagurus. Asterias rubens* c., *Ophiothrix fragilis* f.c. *Callionymus lyra.* | |
| 4.45 a.m. | 8.45 a.m. | 4 | Nil | Smooth | N.N.E. 3 | Overcast, cloudy. | — | *Obelia longissima* f.c. **Alcyonidium gelatinosum** v.c. **Buccinum undatum spawn** v.c., *Fusus antiquus* c. *Eupagurus bernhardus* c. *Asterias rubens* c., *Ophiothrix fragilis.* | |
| 9.25 a.m. | 10.25 a.m. | 1 | Nil | Smooth | N.N.E. 4 | Overcast, cloudy, rain. | — | **Alcyonidium gelatinosum** v.abundant. *Trachinus vipera.* | Small mesh net round ordinary trawl. |
| Noon | 4 p.m. | 4 | Nil | Smooth | N. | Overcast, dull, rain. | — | *Obelia longissima* f.c. **Alcyonidium gelatinosum** v.c. **Natica catena spawn** v.c. **Paratylus swammerdami** v.c., *Galathea intermedia* c., *Porcellana longicornis* c. **Asterias rubens** v.c., *Ophiothrix fragilis* c. *Ascidiella sp.* f.c. | |
| 5.50 p.m. | 8.50 p.m. | 3 | Nil | Moderately smooth. | N.N.E. 4 | Overcast, dull, rain. | — | **Halichondria panicea** v. abundant. *Obelia longissima* f.c. *Eupagurus bernhardus* c., *Porcellana longicornis* c., *Corystes cassivelaunus. Asterias rubens* c., *Astropecten irregularis* c., *Ophiothrix fragilis* c. | |
| 6 a.m. | 9 a.m. | 3 | Nil | Smooth | W. by S. 4 | Cloudy, overcast. | — | *Alcyonium digitatum* f.c. *Flustra securifrons* f.c. *Aphrodite aculeata* c., *Pomatoceros triqueter* f.c. *Pecten opercularis* f.c., *Tritonia plebeia. Eupagurus bernhardus* f.c. **Ophiothrix fragilis** v.c., *Asterias rubens* c., *Astropecten irregularis* f.c., *Echinocardium cordatum* f.c. *Ascidiella virginea* c., *Ciona intestinalis* f.c. | |
| 5.25 p.m. | 7.25 p.m. | 2 | First to third hour flood. | Smooth | S.W. 4 | Cloudy, overcast. | — | *Alcyonium digitatum. Corystes cassivelaunus* c. *Astropecten irregularis* c., *Asterias rubens. Cyclopterus lumpus.* | |
| 2.30 a.m. | 4.30 a.m. | 2 | From third to fifth hour ebb. | Smooth | S.W. 2 | Overcast, dull, rain. | — | Very little taken. | |
| 5 a.m. | 7 a.m. | 2 | First 2 hours flood. | Moderately smooth. | W. by S. 6 | Overcast, dull, rain. | — | *Asterias rubens* f.c., *Astropecten irregularis* .. | Several sailing trawlers, and 3 steam trawlers about us. |
| 4.10 a.m. | 5.40 a.m. | 1½ | From fifth hour flood to ½ hour ebb. | Smooth | E.N.E. 4 | Cloudy, overcast. | — | *Hydrallmania falcata* c., *Sertularia abietina* c. *Flustra foliacea* c. *Buccinum undatum* spawn f.c. *Cancer pagurus, Eupagurus bernhardus, Homarus vulgaris, Hyas araneus. Asterias rubens* f.c *Solaster papposus.* | W. Wallace, J. O. Borley. |
| 8.50 a.m. | 11.50 a.m. | 3 | From third hour ebb to slack water. | Smooth | E.N.E. 3 | Fine, cloudy, hazy. | — | *Hydrallmania falcata* f.c., *Sertularia abietina* f.c. *Flustra foliacea* v. abundant. **Buccinum undatum spawn** v.c., *Ostrea edulis. Cancer pagurus, Eupagurus bernhardus, Hyas araneus. Solaster papposus.* | |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling | Shooting. | Towing | Hauling. |
| LVII | 29 | June | 16 | B 326 | North of Blakeney Overfalls. | 53° 6½′ N., 0° 57′ E. | S.S.E. 2⅛ miles | 53° 4½′ N., 0° 59¼′ E. | 11 | .. | 12 | s. & sh. | .. | s. & sh. |
| LVIII | 1 | „ | 19 | B 327 | Off Lowestoft .. | 52° 20⅝′ N., 1° 59′ E. | N.E. ¾ E. 3¾ miles | 52° 23½′ N., 2° 2⅝′ E. | 17 | .. | 19 | s.grv. st. | .. | s.grv. st. |
| „ | 3 | „ | 20 | B 328 | Between Knoll Deep and Middle Ground. | 52° 25½′ N., 2° 30¾′ E. | E. ¼ S. 10 miles | 52° 27¾′ N., 2° 46⅜′ E. | 24½ | .. | 26 | f.spk.s. | .. | f.spk.s. |
| „ | 4 | „ | „ | B 329 | North of Middle Ground. | 52° 27⅜′ N., 2° 46⅜′ E. | S.E. by E. ⅜ E. 5⅜ miles | 52° 27′ N., 2° 56′ E. | 26 | .. | 23½ | f.spk.s. | .. | f.g.s. |
| „ | 6 | „ | „ | B 330 | „ „ | 52° 27′ N., 2° 56′ E. | E. by N. ½ N. 9¾ miles | 52° 32′ N., 3° 9′ E. | 23½ | .. | 20 | f.g.s. | .. | f.g.s. & sh. |
| „ | 8 | „ | „ | B 331 | Between Winterton Shoal and Brown Ridges. | 52° 33¼′ N., 3° 9½′ E. | N.E. 7 miles | 52° 39′ N., 3° 15′ E. | 20 | .. | 19 | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 10 | „ | 21 | B 332 | North part of Brown Ridges. | 52° 42½′ N., 3° 17½′ E. | N.E. ⅝ E. 7½ miles | 52° 48′ N., 3° 24½′ E. | 16½ | 15, 21 19 | 16 | f.d.s. | .. | f.g.s. |
| „ | 12 | „ | „ | B 333 | „ „ | 52° 50¼′ N., 3° 27½′ E. | S.W. ⅝ S. 7½ miles | 52° 43⅜′ N., 3° 22½′ E. | 16 | 15, 18 | 20 | f.g.s. | .. | f.g.s. & sh. |
| „ | 14 | „ | 21 | B 334 | Brown Ridges .. | 52° 43½′ N., 3° 22½′ E. | S. by W. 7¾ miles | 52° 35½′ N., 3° 22⅜′ E. | 20 | 17 | 18 | f.g.s. & sh. | .. | f.g.s. & sh. |
| „ | 16 | „ | „ | B 335 | „ „ .. | 52° 36′ N., 3° 23′ E. | S.E. ½ S. 4⅜ miles N. by E. 3½ miles. S.S.E. 1⅜ miles. N.E. by N. ⅜ N. 2⅜ miles. | 52° 38′ N., 3° 31⅓′ E. | 18 | 15-14½ | 16 | f.g.s & sh. | .. | f.g.s. |
| „ | 18 | „ | 21-22 | B 336 | North part of Brown Ridges. | 52° 38′ N., 3° 31⅓′ E. | N. ¾ E. 13 miles | 52° 51′ N., 3° 29⅜′ E. | 16 | 15–17 | 16 | f.g.s. | .. | f.g.s. |
| „ | 20 | „ | 22 | B 337 | „ „ | 52° 51½′ N., 3° 30′ E. | S.E. ⅝ S. 5½ miles S. by W. ½ W. 4⅞ miles. | 52° 43⅜′ N., 3° 37½′ E. | 16 | 15-14½ | 18½ | f.g.s. | .. | f.g.s. |
| „ | 22 | „ | „ | B 338 | Eastern Edge of Brown Ridge. | 52° 43⅜′ N., 3° 37¼′ E. | S.E. by S. ½ S. 2 miles N. ½ W. 7 miles. | 52° 48½′ N., 3° 35¾′ E. | 18½ | 17 | 16 | f.g.s. | .. | f.g.s. |
| „ | 24 | „ | „ | B 339 | North of Brown Ridges. | 52° 48½′ N., 3° 35¾′ E. | W.N.W. 7½ miles N.W. ½ N. 2⅞ miles. S.W. by W. ¾ W. 2 miles. | 52° 50′ N., 3° 17½′ E. | 16 | 15–17 | 17 | f.g.s. | .. | f.g.s. |
| „ | 26 | „ | 22-23 | B 340 | Winterton Twenties | 52° 49⅝′ N., 3° 17½′ E. | W. by N. ¼ N. 12 miles | 52° 49⅝′ N., 2° 56¾′ E. | 17 | 19½ | 20 | f.g.s. | .. | f.g.s. |
| „ | 28 | „ | 23 | B 341 | „ „ | 52° 49½′ N., 2° 56½′ E. | N.W. by W. ⅜ W. 15⅝ miles | 52° 53¾′ N., 2° 31½′ E. | 20 | 19-22 | 20½ | f.g.s. | .. | f.g.s. |
| „ | 30 | „ | „ | B 342 | Between Winterton Twenties and Knoll Deep. | 52° 53¼′ N., 2° 32′ E. | S.W. by W. ¾ W. 7½ miles S.E. by S. 4½ miles. S.W. ¾ W. 2⅞ miles. | 52° 43⅜′ N., 2° 25⅛′ E. | 20⅛ | „ | 27 | f.g.s. | .. | c.s. & ross |
| „ | 32 | „ | „ | B 343 | „ „ | 52° 42⅜′ N., 2° 25½′ E. | S.E. ⅜ S. 10⅜ miles | 52° 35¾′ N., 2° 39′ E. | 27 | „ | 25 | c.s. & ross. | .. | c.s. & ross. |
| LIX | 1 | „ | 27 | O 318 | Dogger Bank, North of South West Patch. | 54° 32½′ N., 2° 17′ E. | N. by E. ⅜ E. 12⅛ miles | 54° 44′ N., 2° 19′ E. | 9 | 11-15 | 12 | f.g.br.s. | .. | fs. & sh. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun. Rain, &c. | | | |
| 4.30 p.m. | 5.30 p.m. | 1 | 1½ hours flood. | Moderately smooth. | E.N.E. 4 | Overcast. hazy. | — | *Alcyonium digitatum* f.c.<br>*Sabellaria spinulosa.*<br>**Buccinum undatum** spawn v.c.<br>*Cancer pagurus, Eupagurus bernhardus.*<br>*Echinus miliaris* f.c. | |
| 1.10 p.m. | 2.45 p.m. | 1 7/12 | Last flood to 1 hour ebb. | Moderately smooth. | S.S.W. 5 | Fine, cloudy, hazy. | Trawl "all to pieces." | *Hydrallmania falcata* f.c. .. .. .. ..<br>*Alcyonidium gelatinosum* f.c.<br>*Eupagurus bernhardus* f.c. | R. A. Todd, J. Potter. Surrounded by drifters. |
| 5.40 a.m. | 9 a.m. | 3½ | 3 hours ebb; ½ hour flood. | Moderately smooth. | S.W. 5 | Fine, very hazy. | — | *Hydractinia echinata* c.<br>*Eupagurus bernhardus* c.<br>*Asterias rubens* f.c. | |
| 9.30 a.m. | Noon | 2½ | From first to fourth hour flood. | Moderately smooth. | S.W. 5 | Fine, very hazy. | Noon, came fast, hauled, found net all right. | Very little taken. | |
| 12.50 p.m | 4.20 p.m. | 3½ | 3½ hours ebb. | Moderately smooth. | S.W. 5 | Dull, overcast, rain. | Fore wing and belly badly torn. | Not recorded. | |
| 6 p.m. | 9 p.m. | 3 | Last 2 hours ebb; and first hour flood. | Moderately rough. | S.W. by S. 5 | Overcast, dull, rainy. | — | *Eupagurus bernhardus* f.c.<br>*Astropecten irregularis* f.c., *Asterias rubens.* | |
| 3.15 a.m. | 6.15 a.m. | 3 | First 3 hours ebb. | Moderately rough. | S.W. 5 | Cloudy | — | *Hydractinia echinata* .. .. .. ..<br>*Corystes cassivelaunus, Eupagurus bernhardus.*<br>*Astropecten irregularis.*<br>*Callionymus lyra.* | 3 sailing trawlers about us |
| 6.45 a.m. | 11.15 a.m. | 4½ | Fourth hour ebb; 3 hours flood. | Moderately rough. | S.W. 6 | Cloudy | — | *Hydractinia echinata* f.c. .. .. .. ..<br>*Natica catena* spawn f.c.<br>*Eupagurus bernhardus* f.c., *Corystes cassivelaunus.*<br>**Astropecten irregularis** abundant,<br>*Asterias rubens* c., *Ophiura ciliaris.*<br>*Arnoglossus* sp., *Callionymus lyra.* | 2 sailing trawlers about us. |
| 11.50 a.m | 4.45 p.m. | 4 11/12 | Last 2 hours flood; first 3 hours ebb. | Moderately rough. | S.W. 5 | Cloudy | — | *Astropecten irregularis* c., *Asterias rubens* f.c. | |
| 5.10 p.m. | 10.15 p.m. | 5 1/12 | 3 hours ebb: 2 hours flood. | Moderately rough. | S.W. 5 | Cloudy | — | *Eupagurus bernhardus* c. .. .. .. ..<br>**Astropecten irregularis** abundant,<br>*Asterias rubens* c., *Ophiura ciliaris.* | 3 sailing trawlers about us. |
| (21st) 10.50 p.m | (22nd) 4 a.m. | 5⅓ | Last 3 hours flood; first 2 hours ebb. | Moderately smooth. | N.W. 3 | Cloudy, fine. | — | *Eupagurus bernhardus* f.c., *Portunus holsatus* f.c.<br>**Asterias rubens** v.c. **Astropecten irregularis** v.c., *Ophiura ciliaris.* | |
| 4.50 a.m. | 10 a.m. | 5½ | Last 3 hours ebb; first 2 hours flood. | Smooth | N.W. 4 | Fine, cloudy, hazy. | — | *Hydractinia echinata* c.<br>*Eupagurus bernhardus* c.<br>*Asterias rubens* c., *Astropecten irregularis* c. | |
| 10.30 a.m | 3.30 p.m. | 5 | From second hour flood to 1 hours ebb. | Moderately smooth. | N. 4 | Fine, cloudy, hazy. | — | *Eupagurus bernhardus* f.c.<br>**Asterias rubens** v.c., **Astropecten irregularis** v.c. | |
| 4 p.m. | 9 p.m. | 5 | From first to sixth hour ebb. | Moderately smooth. | N. 3 | Fine, cloudy. | — | *Eupagurus bernhardus* c., *Portunus holsatus* f.c.<br>*Corystes cassivelaunus.*<br>*Asterias rubens* c., *Astropecten irregularis* c.<br>*Ophiura ciliaris* f.c.<br>*Callionymus lyra.* | |
| (22nd) 9.30 p.m. | (23rd) 2.30 a.m. | 5 | From ½ hour to 5½ hours flood. | Moderately smooth. | N. 3 | Fine, cloudy. | — | *Hydractinia echinata* f.c.<br>*Corystes cassivelaunus* f.c., *Eupagurus bernhardus* f.c.<br>*Asterias rubens* f.c., *Astropecten irregularis* f.c., *Callionymus lyra, Trachinus vipera.* | |
| 3 a.m. | 9 a.m. | 6 | From 5½ hours flood to 5½ hours ebb. | Moderately smooth. | N. 4 | Fine, cloudy. | — | *Hydractinia echinata* c. .. .. .. ..<br>*Montacuta substriata* f.c.<br>*Eupagurus bernhardus* c., *Cancer pagurus.*<br>*Spatangus purpureus* c., *Asterias rubens* c., *Astropecten irregularis.* | Several sailing trawlers about us. |
| 9.30 a.m. | 2.30 p.m. | 5 | First 5 hours flood. | Moderately smooth. | N.E. 5 | Cloudy, tempest. | — | *Hydractinia echinata* f.c. .. .. .. ..<br>*Sabellaria spinulosa* f.c.<br>*Eupagurus bernhardus* f.c. | Several sailing trawlers about. |
| 3 p.m. | 8 p.m. | 5 | Last hour flood; 4 hours ebb. | Moderately smooth. | N.N.E. 4. | Cloudy, tempest. | — | *Sabellaria spinulosa* f.c. .. .. .. ..<br>*Montacuta substriata* f.c.<br>*Eupagurus bernhardus* f.c.<br>*Asterias rubens, Astropecten irregularis, Spatangus purpureus.* | Several sailing trawlers and drifters about us. |
| 8.15 a.m. | 1.15 p.m. | 5 | Nil | Moderately rough. | N.W. by N. 4-7. | Dull, thick rain. | — | *Alcyonidium gelatinosum* f.c. .. .. ..<br>**Pecten operculatis** v.c., *Buccinum undatum, Fusus antiquus.*<br>**Asterias rubens** v.c. | W. Wallace, G. T. Atkinson. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| LIX | 4 | June | 27 | O 319 | Dogger Bank, North of South West Patch. | 54° 44¾′ N., 2° 18½′ E. | N.E. ½ E. 12⅜ miles. | 54° 55′ N., 2° 31′ E. | 12 | 12½ | 13 | f.s. & sh. | .. | f.s. & sh. |
| ,, | 6 | ,, | 27–28 | O 320 | Dogger Bank, Middle | 54° 54⅜′ N., 2° 30⅞′ E. | N. by E. ⅝ E. 13⅛ miles | 55° 7¾′ N., 2° 33′ E. | 13 | 15 | 16½ | f.s. & sh. | .. | f.s. & sh. |
| ,, | 8 | ,, | 28 | O 321 | ,, ,, ,, .. | 55° 7½′ N., 2° 33½′ E. | N.W. by W. 5 miles<br>N.E. ¼ E. 5 miles.<br>N.N.W. ¼ W. 2 miles.<br>S.E. 1 mile. | 55° 12⅝′ N., 2° 32¼′ E. | 16½ | 17 | 17½ | f.s. & sh. | .. | f.g.s. |
| ,, | 10 | ,, | 28–29 | O 322 | Dogger Bank, Middle | 55° 8¾′ N., 2° 33½′ E. | S. by W. ¾ W. 9½ miles<br>N. by E. ¼ E. 6¼ miles. | 55° 5⅜′ N., 2° 33¾′ E. | 17½ | 15 | 15 | f.g.s. | .. | f.g.s. & sh. |
| ,, | 11 | ,, | 29 | O 323 | ,, ,, ,, | 55° 5⅜′ N., 2° 33¾′ E. | S. by W. ¾ W. 2½ miles<br>N.E. by N. ¾ N. 2½ miles. | 55° 5¼′ N., 2° 35′ E. | 15 | .. | 15 | f.g.s. & sh. | .. | f.g.s. & sh. |
| | 12 | ,, | ,, | B(c.)344 | ,, ,, ,, | 55° 5¼′ N., 2° 35′ E. | S. 2¼ miles | 55° 3′ N., 2° 35′ E. | 15 | .. | 14 | f.g.s. & sh. | .. | f.g.s. & sh. |
| ,, | 14 | ,, | ,, | O 324 | Dogger Bank, N.W. Slope. | 55° 16⅜′ N., 2° 31½′ E. | N. by E. 2 miles<br>S.S.W. 3 miles. | 55° 15¼′ N., 2° 29′ E. | 19½ | .. | 20 | f.g.s. & sh. | .. | f.g.s. & sh. |
| ,, | 17 | ,, | 30 | O 325 | North of the Dogger Bank. | 55° 50⅛ 2° 46⅜′ E. | N.E. by N. 5 miles | 55° 55½′ N., 2° 49′ E. | 44 | .. | 44 | s. & m. | .. | s. & m. |
| ,, | 21 | ,, | ,, | O 326 | ,, ,, ,, | 56° 21½′ N., 3° 11¾′ E. | N.E. ⅝ N. 4⅜ miles | 56° 25½′ N., 3° 15′ E. | 40 | .. | 38½ | f.s. & m. | .. | f.s. & m. |
| ,, | 24 | July | 1 | O 327 | North-West of Dogger Bank. | 56° 12⅜′ N., 1° 39′ E. | S.W. 5 miles | 56° 8¼′ N., 1° 34½′ E. | 53 | .. | 48 | f.s. & m. | .. | f.s. & m. |
| ,, | 28 | ,, | ,, | O 328 | North-West of Brucey's Garden. | 55° 9′ N., 0° 44′ E. | S.W. by W. 5 miles | 55° 5⅜′ N., 0° 38⅝′ E. | 39 | .. | 44 | f.g.s. & sh. | .. | f.s. & m. |
| ,, | 29 | ,, | 7 | B 345 | Bridlington Bay .. | 54° 1′ N., 0° 9¼′ W. | E. by N. ⅝ N. 1⅝ miles<br>W.S.W. 2⅝ miles.<br>N.N.E. 1⅝ miles. | 54° 1′ N., 0° 10½′ W. | 4¾ | 3½ | 5 | f.d.s. | .. | f.d.s. |
| ,, | 30 | ,, | ,, | O 329 | Flamborough Head Ground. | 54° 14⅛′ N., 0° 24⅝′ E. | E.N.E. 11½ miles | 54° 21½′ N., 0° 40′ E. | 29½ | .. | 36 | f.s. | — | f.d.s. |
| ,, | 32 | ,, | 8 | O 330 | The Hills .. .. | 54° 20½′ N., 0° 39′ E. | E. by S. ¾ S. 10½ miles | 54° 19¾′ N., 0° 57⅝′ E. | 31½ | 27 | 22 | f.d.s. | .. | f.g.s. |
| ,, | 35 | ,, | 9 | O 331 | Dogger North Ground. | 54° 30¾′ N., 1° 15¾′ E. | N.N.E. 2½ miles<br>W. ¼ S. 5 miles.<br>N. by E. 5 miles. | 54° 36¾′ N., 1° 7′ E. | 27 | 16, 21 | 27 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 38 | ,, | ,, | O 332 | North part of Dogger North Ground. | 54° 45½′ N., 1° 8′ E. | N.N.E. 5 miles | 54° 50¼′ N., 1° 9′ E. | 27 | .. | 25½ | f.d.g.s. | .. | f.d.g.s. |
| ,, | 39 | ,, | 10 | O 333 | Brucey's Garden .. | 54° 56¼′ N., 1° 6′ E. | E. by S. 1½ miles<br>N.N.W. 1¼ miles.<br>N.W. ¼ W. 2½ miles. | 54° 58¾′ N., 1° 2½′ E. | 30 | .. | 32 | f.d.g.s. | .. | f.s.m. |
| ,, | 40 | ,, | 10 | O 334 | East of Brucey's Garden. | 54° 58¾′ N., 1° 2½′ E. | E. by S. 2½ miles<br>N.N.W. 2½ miles. | 55° 1¼′ N., 1° 4¼′ E. | 32 | .. | 32 | f.s.m. | .. | f.s.m. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 3.25 p.m. | 8.25 p.m. | 5 | Nil | Moderately smooth. | N.W. 4 | Dull, foggy, rain. | — | *Alcyonidium gelatinosum* f.c.<br>*Fusus antiquus* and spawn.<br>*Eupagurus bernhardus* c., *Portunus holsatus* f.c.<br>*Asterias rubens* f.c. | |
| 9.30 p.m. | 3 a.m. | 5½ | Nil | Smooth | N.W. by N. 3. | Dull, thick, foggy. | — | *Alcyonidium gelatinosum* c.<br>*Pecten opercularis* f.c.<br>*Buccinum undatum* and spawn c., *Fusus antiquus* and spawn c.<br>*Eupagurus bernhardus* c. | |
| 3.50 a.m. | 8.50 a.m. | 5 | Nil | Smooth | N.W. by N. 3. | Dull, overcast. | — | **Alcyonidium gelatinosum** v. abundant.<br>*Sabella pavonina.*<br>**Pecten opercularis** v.c. *Buccinum undatum* spawn c., *Fusus antiquus* and spawn c.<br>*Asterias rubens* f.c. | |
| (28th) 8.15 p.m. | (29th) .m. | 6¼ | Nil | Smooth | Calm | Dull, thick, foggy. | — | Not recorded. | |
| 3 a.m. | 5 a.m. | 2 | Nil | Smooth | Calm | Dull, thick fog. | — | Not recorded. | |
| 5.45 a.m. | 6.45 a.m. | 1 | Nil | Smooth | Calm | Dull, thick, foggy. | — | *Trachinus vipera.* Invertebrates not recorded | With small mesh net. |
| 12.10 p.m. | 2.10 p.m. | 2 | Nil | Smooth | Variable 1-2. | Dull, thick, hazy. | — | **Alcyonidium gelatinosum** v. abundant.<br>*Pecten opercularis* c., *Fusus antiquus* f.c., *F. gracilis* f.c. | |
| 2.30 a.m. | 4.30 a.m. | 2 | Nil | Smooth | N.E. 3. | Dull, thick, hazy, rain. | — | *Actinoloba dianthus.*<br>*Buccinum undatum*, *Fusus antiquus.*<br>*Lithodes maia* c.<br>**Spatangus purpureus**, abundant, *Echinocardium* s.p. | |
| 2.30 p.m. | 4.30 p.m. | 2 | Nil | Smooth | N.E. 3. | Cloudy, overcast. | — | *Hydrallmania falcata* f.c.<br>**Flustra securifrons** v.c.<br>*Thelepus cincinnatus* c., *Filograna implexa.*<br>*Buccinum undatum*<br>*Eupagurus bernhardus* f.c., *Hyas coarctatus.*<br>*Spatangus purpureus* c., *Asterias rubens* f.c. | |
| 3.30 a.m. | 5.30 a.m. | 2 | Nil | Moderately smooth. | E.N.E. 4. | Cloudy, overcast. | — | *Flustra securifrons* c.<br>*Pecten opercularis* c., *Buccinum undatum*, *Fusus antiquus.*<br>**Spatangus purpureus** v.c., *Asterias rubens* f.c. | |
| 2.30 p.m. | 4.30 p.m. | 2 | Nil | Moderately rough. | E.N.E. 6. | Dull, overcast. | — | *Actinoloba dianthus*, *Thuiaria thuia*<br>*Pomatoceros triqueter* c.<br>*Pecten opercularis* c., *Buccinum undatum*, *Fusus antiquus*, *Modiola modiolus.*<br>*Lithodes maia* c.<br>**Spatangus purpureus** v.c., *Asterias rubens* f.c. | |
| 1 p.m. | 3 p.m. | 2 | From fourth to sixth hour ebb. | Smooth | N.E. 4. | Fine, cloudy, hazy. | — | Very little taken. | |
| 3.45 a.m. | 8.45 a.m. | 5 | Fifth hour ebb to fourth flood. | Smooth | N.W. 2. | Fine, hazy. | — | *Alcyonium digitatum* c., *Tubularia indivisa* ..<br>**Alcyonidium gelatinosum** abundant.<br>*Sabella pavonina* c.<br>*Pecten opercularis.*<br>*Hyas coarctatus.*<br>*Astropecten irregularis* c., *Asterias rubens* f.c. | 1 steam trawler with us |
| 11.30 a.m. | 4.30 p.m. | 5 | From first to sixth hour ebb. | Smooth | E.S.E. 2. | Fine, hazy. | Belly badly | *Alcyonium digitatum* f.c., *Actinoloba dianthus*<br>**Alcyonidium gelatinosum** v.c. | 1 steam trawler with us. |
| 2.45 a.m. | 7.45 a.m. | 5 | Nil | Smooth | S.E. 1. | Fine, hazy. | — | **Alcyonium digitatum** v.c., *Actinoloba dianthus* c.<br>*Aphrodite aculeata.*<br>**Pecten opercularis** v.c.<br>*Eupagurus bernhardus* c.<br>*Callionymus lyra.* | 2 steam trawlers about us. |
| 11.30 a.m. | 1.30 p.m. | 2 | Nil | Smoo h | S.E. by E. 3. | Fine, hazy. | — | *Halichondria panicea* c. .. .. .. ..<br>**Alcyonium digitatum** v.c., *Octinoloba dianthus* c.<br>*Pomatoceros triqueter* c.<br>*Sabella pavonina* f.c., *Aphrodite aculeata.*<br>*Pecten opercularis* f.c.<br>*Echinocardium cordatum* f.c., *Ophiothrix fragilis* f.c. | 8 steam trawlers about us. |
| 10 a.m. | Noon | 2 | Nil | Smooth | S. 3. | Fine, hazy. | — | Not recorded. | Gear fouled when shooting, hauled and shot again.<br>3 steam trawlers with us. |
| 1 p.m. | 3 p.m. | 2 | From first to third hours ebb. | Smooth | S. 1 | Fine, cloudy, hazy. | — | *Halichondria panicea* f.c. .. .. .. ..<br>*Actinoloba dianthus* c., *Alcyonium digitatum* c.<br>*Sabella pavonina.*<br>*Buccinum undatum* c., *Fusus antiquus* c.<br>*Eupagurus bernhardus* f.c.<br>*Astropecten irregularis*, *Echinocardium cordatum*, *Ophiura albida.*<br>*Ophiothrix fragilis.* | 4 steam trawlers about us. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shoot-ing. | Towing. | Haul-ing. | Shoot-ing. | Towing. | Haul-ing. |
| LIX | 43 | July | 10 | O 335 | North East of Brucey's Garden. | 55° 2⅜′ N., 1° 4½′ E. | E. 2½ miles S.W. by W. ⅜ W. 5 miles. N.E. by E. ⅜ E. 3¾ miles. | 55° 2⅜′ N., 1° 7¾′ E. | 32 | .. | 32 | f.s.m. | .. | f.s.m. |
| „ | 44 | „ | 11 | O 336 | Dogger Bank, North of West part. | 55° 28½′ N., 1° 27½′ E. | W. 5 miles | 55° 27¼′ N., 1° 18¾′ E. | 43 | .. | 36 | f.s.m. | .. | f.s.m. |
| „ | 46 | „ | „ | O 337 | Dogger Bank, North West of West part. | 55° 12¾′ N., 0° 30⅝′ E. | W.N.W. 5 miles | 55° 13¾′ N., 0° 22′ E. | 43 | .. | 40 | f.s.m. | .. | f.s.m. |
| „ | 50 | „ | 12 | B (c.) 346 | North East of Brucey's Garden. | 55° 1′ N., 1° 7½′ E. | N.W. by N. ½ N. 2¼ miles | 55° 2⅜′ N., 1° 4½′ E. | 31 | .. | 33 | f.s.m. | .. | f.s.m. |
| „ | 51 | „ | „ | O 388 | West of Brucey's Garden. | 54° 58¼′ N., 0° 24⅜′ E. | W. ¾ N. 5 miles | 54° 57⅝′ N., 0° 16′ E. | 41 | .. | 46 | f.s.m. | .. | f.s.m. |
| „ | 56 | „ | 13 | O 339 | Hartlepool Ground.. | 54° 40¼′ N., 0° 54′ W. | N.N.W. 3½ miles S.E. by S. 1½ miles. | 54° 42′ N., 0° 56′ W. | 24½ | .. | 23 | c.s. | .. | s.m. |
| LX | 1 | „ | 23 | O 340 | South of Horn Reef | 55° 23′ N., 7° 59⅞′ E. | W. ⅝ N. 2⅝ miles | 55° 22¾′ N., 7° 56′ E. | 9 | .. | 10 | f.d.s. & sh. | .. | f.d.s. |
| „ | 2 | „ | 24 | O 341 | Horn Reef Outer .. | 55° 40½′ N., 6° 39′ E. | N.E. by E. 1½ miles S.S.W. 1½ miles. | 55° 40½′ N., 6° 39½′ E. | 20½ | .. | 20½ | f.d.s. & sh. | .. | f.d.s. |
| „ | 3 | „ | „ | O 342 | South of Horn Reef | 55° 22¾′ N., 7° 54′ E. | E. by N. ¼ N. 1½ miles | 55° 23¼′ N., 7° 56′ E. | 10½ | .. | 9 | f.d.s. & sh. | .. | f.d.s. & s.h. |
| LXI | 36 | Aug. | 8 | B 347 | Leman Ground .. | 53° 20⅝′ N., 2° 23¾′ E. | S. by E. 4¾ miles | 53° 15⅞′ N., 2° 27¼′ E. | 17 | .. | 13 | f.d.s. | .. | f.s. |
| „ | 37 | „ | 9 | B 348 | „ „ .. | 50° 15⅞′ N., 2° 27¼′ E. | N. ⅜ W. 4⅜ miles | 53° 20′ N., 2° 24¼′ E. | 13 | .. | 17 | f.s. | .. | f.d.s. |
| „ | 38 | „ | „ | B 349 | „ „ .. | 53° 21½′ N., 2° 22¾′ E. | S.S.E. 4½ miles | 53° 18¼′ N., 2° 27½′ E. | 16 | .. | 17 | f.g.s. | .. | f.g.s. |
| „ | 39 | „ | „ | B 350 | „ „ .. | 53° 18¼ N., 2° 27½′ E. | N.N.W. 4½ miles | 53° 21⅜′ N., 2° 23½′ E. | 17 | .. | 13 | f.g.s. | . | f.g.s. |
| „ | 40 | „ | 9 | B 351 | „ „ .. | 53° 21⅜′ N., 2° 26¾′ E. | S.W. by W. 4½ miles | 53° 18½′ N., 2° 21⅝′ E. | 12 | .. | 10 | f.g.s. | .. | f.g.s. |
| „ | 41 | „ | „ | B 352 | „ „ .. | 53° 18½′ N., 2° 21⅝′ E. | N.E. by E. ⅝ E. 4⅜ miles | 53° 21′ N., 2° 27¾′ E. | 10 | .. | 17 | f.g.s. | .. | f.g.s. |
| „ | 42 | „ | „ | B 353 | „ „ .. | 53° 18½ N., 2° 27′ E. | N.N.W. 4½ miles | 53° 21½′ N., 2° 22½′ E. | 17½ | .. | 14½ | f.g.s. | .. | f.g.s. |
| „ | 44 | „ | „ | B 354 | „ „ .. | 53° 20¼′ N., 2° 24′ E. | S. by E. 4½ miles | 53° 16′ N., 2° 27½′ E. | 15 | .. | 13 | f.g.s. | .. | f.g.s. |
| „ | 45 | „ | 10 | B 355 | Brown Bank .. .. | 53° 7⅜′ N., 3° 44′ E. | N.E. by N. ½ N. 5 miles | 53° 12¼′ N., 3° 45½′ E. | 15¼ | .. | 13½ | f.g.s. | .. | f.g.s. |
| „ | 46 | „ | „ | B 356 | „ „ .. .. | 53° 12¼′ N., 3° 45¾′ E. | S.W. by S. ⅛ S. 4½ miles | 53° 8⅝′ N., 3° 44′ E. | 13½ | .. | 15¼ | f.g.s. | .. | f.g.s. |
| „ | 47 | „ | „ | B 357 | „ „ .. .. | 53° 7⅝′ N., 3° 45′ E. | N.E. by N. ¾ N. 4½ miles | 53° 11¾′ N., 3° 47¾′ E. | 15¼ | .. | 15 | f.g.s. | .. | f.g.s. |
| „ | 48 | „ | „ | B 358 | „ „ .. .. | 53° 9½′ N., 3° 48′ E. | N.W. ¾ W. 4 miles | 53° 11′ N., 3° 41⅝′ E. | 15 | .. | 15 | f.g.s. | .. | f.g.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 6.15 p.m. | 11 p.m. | 4¾ | Nil | Smooth | Variable, 2. | Fine, cloudy, hazy. | — | *Argentina* sp. .. .. .. .. .. .. Invertebrates not recorded. | 4 steam trawlers with us. |
| 7.45 a.m. | 9.45 a.m. | 2 | Nil | Smooth | E. 1 | Overcast, dull. | — | *Modiola modiolus.* **Spatangus purpureus** v.c., *Ophiura ciliaris* f.c. | |
| 3.30 p.m. | 5.30 p.m. | 2 | Nil | Smooth | Calm | Dull, thick fog. | Ground rope parted, and belly very badly torn. | *Spatangus purpureus* c., *Echinocardium cordatum*, f.c. | |
| 5.45 a.m. | 6.45 a.m. | 1 | Nil | Smooth | W.S.W. 3. | Dull, rainy. | — | *Actinoloba dianthus* c., *Alcyonium digitatum* f.c. *Sabella pavonina.* *Buccinum undatum, Fusus antiquus, Modiola modiolus, Pecten opercularis, Tritonia hombergi.* *Eupagurus bernhardus* c. *Astropecten irregularis* f.c., *Ophiothrix fragilis* f.c. | Small mesh net round ordinary trawl. 2 steam trawlers with us. |
| 11.15 a.m. | 1.15 p.m. | 2 | Nil | Smooth | Variable. 1. | Dull, overcast. | — | *Actinoloba dianthus* c. **Pecten opercularis** v.c., *Modiola modiolus* f.c. **Spatangus purpureus** v.c., *Asterias rubens* c., *Astropecten irregularis* c., *Echinocardium cordatum* c. | |
| 4.30 a.m. | 6.30 a.m. | 2 | Second to fourth hour ebb. | Smooth | N.W. 3 | Dull, thick, foggy. | Large stone in trawl. Ground rope parted, not very badly torn. | **Alcyonium digitatum** v.c., *Sertularia abietina* f.c. *Flustra foliacea* f.c. **Saxicava rugosa** v.c., *Pecten pusio* c. **Echinus s.p.**, v.c., *Ophiothrix fragilis.* | |
| 8.40 p.m. | 9.40 p.m. | 1 | Fourth to fifth hour ebb. | Smooth | Calm | Dull, overcast, thick, hazy. | — | *Buccinum undatum* spawn .. .. .. *Asterias rubens* c. | W. Wallace, R. A. Todd. |
| 8 a.m. | 9 a.m. | 1 | Fourth to fifth hour ebb. | Moderately rough. | N. 6 | Dull, cloudy. | — | *Echinocardium cordatum* c., *Ophiothrix fragilis.* | |
| 4.30 p.m. | 5 p.m. | ½ | Last hour flood. | Rough | W. 6 | Dull, cloudy. | — | Not recorded. | |
| 10 p.m. | Midnight | 2 | Last ½ hour ebb; first 1½ hours flood. | Smooth | S.E. 2 | Fine, hazy. | — | *Corystes cassivelaunus, Portunus holsatus* .. *Astropecten irregularis, Ophiura ciliaris.* *Callionymus lyra.* | J. O. Borley, G. T. Atkinson. Towing 48 revolutions. |
| 12.30 a.m. | 2.30 a.m. | 2 | Second to fourth hour flood. | Smooth | S.E. by E. 3. | Fine, hazy. | — | *Callionymus lyra, Solea lutea.* Very little else taken. | Towing 52 revolutions. |
| 5 a.m. | 7 a.m. | 2 | First and second hours ebb. | Smooth | S.E. by S. 5. | Dull, overcast. | — | *Callionymus lyra, Solea lutea.* Very little else taken. | Towing 58 revolutions. |
| 7.20 a.m. | 9.20 a.m. | 2 | From 2½ to 4½ hours ebb. | Moderately smooth. | S.S.W. 5. | Dull, overcast. | — | *Arnoglossus* sp. .. .. .. .. .. | Towing 42 revolutions. |
| 10 a.m. | Noon | 2 | Last 2 hours ebb. | Moderately smooth. | S.S.E. 6 | Dull, overcast. | — | *Callionymus lyra.* Very little else taken .. | Towing 54 revolutions. |
| 12.20 p.m. | 2.20 p.m. | 2 | First 2 hours flood. | Moderately smooth. | S.S.W. 6 | Dull, overcast. | — | „ „ „ .. | Towing 46 revolutions. |
| 3.15 p.m. | 5.15 p.m. | 2 | Last 2 hours flood. | Moderately smooth. | S.S.W. 5 | Dull, overcast. | — | *Arnoglossus* sp. .. .. .. .. .. | Towing 54 revolutions. |
| 6.10 p.m. | 8.10 p.m. | 2 | Second and third hours ebb. | Moderately smooth. | S.S.W. 5 | Dull, overcast, rain. | — | *Callionymus lyra* .. .. .. .. .. | Towing 58 revolutions. |
| 7.50 a.m. | 9.50 a.m. | 2 | Second and third hours flood. | Moderately smooth. | W. by S 5. | Cloudy, fine. | — | „ .. .. .. .. .. | Towing 52 revolutions. |
| 10.15 a.m. | 12.15 p.m. | 2 | Fourth and fifth hours ebb. | Moderately smooth. | W. by S. 5. | Cloudy, fine. | Cod end insecurely fastened, some fish escaped. | *Chrysaora* sp., f.c. .. .. .. .. .. *Astropecten irregularis.* | Towing 62 to 64 revolutions. |
| 1.30 p.m. | 3.30 p.m. | 2 | First and third hours flood. | Moderately rough. | S.W. by W. 6. | Cloudy, fine. | — | Not recorded .. .. .. .. .. .. | Towing 58 revolutions. |
| 4.15 p.m. | 6.15 p.m. | 2 | 3½ to fifth hours flood. | Moderately rough. | S.W. by W. 6. | Cloudy, tempest. | — | *Aequorea* sp., *Chrysaora* sp., f.c. .. .. .. **Alcyonidium gelatinosum,** young, v.c. *Sabellaria spinulosa* c. *Echinus miliaris* c. | Towing 54 revolutions. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| LXI | 49 | Aug. | 12 | B 359 | Off Southwold .. | 52° 16¾′ N., 1° 46½′ E. | N.E. ½ N. 4¼ miles | 52° 20⅝′ N., 1° 49⅜′ E. | 13 | .. | 15 | c.s. | .. | c.s. |
| ,, | 50 | ,, | ,, | B 360 | ,, ,, .. | 52° 21⅝′ N., 1° 50′ E. | S.W. ½ S. 3 miles | 52° 18⅞′ N., 1° 48′ E. | 12 | .. | 12 | c.s. | .. | c.s. gvl. |
| ,, | 51 | ,, | ,, | B 361 | ,, ,, .. | 52° 21½′ N., 1° 48¾′ E. | S.W. by S. ⅛ S. 4½ miles | 52° 17¼′ N., 1° 46½′ E. | 11 | .. | 12 | f.s. | .. | c.s. & st. |
| ,, | 52 | ,, | ,, | B 362 | ,, ,, .. | 52° 16⅝′ N., 1° 46¼′ E. | N.E. ⅞ N. 1½ miles | 52° 18¼′ N., 1° 47⅛′ E. | 12 | .. | 12 | c.s. & st. | .. | c.s. & st. |
| ,, | 54 | ,, | ,, | B 363 | North part of Winterton Shoal. | 52° 48′ N., 2° 56¼′ E. | N. by E. ⅞ E. 4¾ miles | 52° 52¾′ N., 2° 57¼′ E. | 17 | .. | 22 | f.s. | .. | f.s. |
| ,, | 55 | ,, | ,, | B 364 | ,, ,, .. | 52° 53½′ N., 2° 57½′ E. | S. by W. ¼ W. 3½ miles | 52° 50′ N., 2° 57½′ E. | 22 | .. | 22 | f.s. | .. | f.s. |
| ,, | 56 | ,, | 13 | B 365 | North part of Winterton Shoal. | 52° 52′ N., 2° 57⅝′ E. | S. by W. ⅜ W. 3 miles | 52° 49′ N., 2° 57⅛′ E. | 22 | .. | 22 | f.s. | .. | f.s. |
| ,, | 57 | ,, | ,, | B 366 | ,, ,, ,, | 52° 49′ N., 2° 57⅛′ E. | N.W. by N. 1 mile | 52° 49¼′ N., 2° 56⅛′ E. | 22 | .. | 17 | f.s. | .. | f.s. |
| ,, | 59 | ,, | 14 | B 367 | Off Smith's Knoll Light-vessel. | 52° 52¼′ N., 2° 17′ E. | S. ½ W. 4⅝ miles | 52° 48′ N., 2° 18′ E. | 23 | .. | 26 | f.d.s. | .. | s.blk.m. |
| ,, | 60 | ,, | ,, | B 368 | ,, ,, ,, | 52° 47½′ N., 2° 17′ E. | N. by W. 4 miles | 52° 51½′ N., 2° 15½′ E. | 26 | .. | 26 | f.s.m. | .. | blk. spk.s. |
| ,, | 61 | ,, | ,, | B 369 | ,, ,, ,, | 52° 48′ N., 2° 16¾′ E. | N.N.W. 3½ miles | 52° 51′ N., 2° 13½′ E. | 26 | .. | 21 | s.m. | .. | f.s. |
| ,, | 62 | ,, | ,, | B 370 | ,, ,, ,, | 52° 50⅜′ N., 2° 14¾′ E. | N.E. by E ½ E. 3⅜ miles | 52° 52⅜′ N., 2° 17¾′ E. | 25 | .. | 23 | f.s. | .. | e.s. |
| LXII | 19 | ,, | 24 | B 371 | Off Sutton .. .. | 53° 20½′ N., 0° 18¼′ E. | S. by E. ¼ E. 1⅜ miles | 53° 18¾′ N., 0° 19⅝′ E. | 6 | 6½ | 7 | f.d.s. | f.d.s. | gvl. |
| ,, | 20 | ,, | ,, | B 372 | Off Mablethorpe .. | 53° 20¾′ N., 0° 21⅜′ E. | S.E. ¼ S. 1½ miles N. by W. ½ W. 2⅝ miles. | 53° 21⅝′ N., 0° 21¼′ E. | 8½ | 9–7 | 7 | gvl. | s. | s.gvl. |
| ,, | 33 | ,, | 29 | B 373 | Off Horn Reef Light-Vessel. | 55° 33′ N., 7° 21½′ E. | S.W. 5 miles. | 55° 29¼′ N., 7° 16⅜′ E. | 17 | .. | 15 | f.g.s. & sh. | .. | f.g.s. |
| LXII | 1 | Sept. | 5 | O 343 | Leman Ground .. | 53° 20½′ N., 2° 26¼′ E. | S.E. by E. ¼ E. 8½ miles | 53° 18′ N., 2° 38¾′ E. | 17 | .. | 15½ | f.g.s. | .. | f.g.s. |
| ,, | 3 | ,, | ,, | O 344 | ,, ,, | 53° 19½′ N., 2° 38½′ E. | W. by N. ⅝ N. 8 miles | 53° 19½′ N., 2° 25′ E. | 15½ | .. | 17 | f.g.s. | .. | f.d.g.s. |
| ,, | 4 | ,, | ,, | O 345 | ,, ,, | 53° 18½′ N., 2° 40′ E. | S.E. 9½ miles | 53° 13½′ N., 2° 54¾′ E. | 17 | .. | 16 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 5 | ,, | 6 | O 346 | Eastern Edge of Leman Ground. | 53° 13½′ N., 2° 54½′ E. | S.E. ⅞ E. 8½ miles | 53° 10½′ N., 3° 8⅞′ E. | 16 | .. | 15½ | f.d.g.s. | .. | f.d.g.s. |
| ,, | 7 | ,, | .. | B(c.) 374 | ,, ,, ,, | 53° 10½′ N., 3° 9′ E. | N.W. by W. ⅜ W. 3½ miles | 53° 11′ N., 3° 3½′ E. | 15½ | .. | 16 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 8 | ,, | 6 | B(c.) 375 | Leman Ground .. | 53° 11′ N., 3° 3½′ E. | N.W. ½ W. 4½ miles | 53° 13′ N., 2° 57′ E. | 16 | .. | 16½ | f.d.g.s. | .. | f.d.g.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c., Naturalist in charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 9.25 a.m. | 11.25 a.m. | 2 | First 2 hours ebb. | Moderately smooth. | N.W. 6 | Cloudy, tempest. | — | *Aequorea* sp., *Chrysaora* sp., f.c. .. .. .. **Alcyonidium gelatinosum,** young, v.c. *Sabellaria spinulosa* c. *Echinus miliaris* c. | Towing 48 revolutions. |
| 11.45 a.m. | 1.45 a.m. | 2 | 3½ to 5½ hours ebb. | Moderately smooth. | N.W. 5 | Cloudy, tempest. | — | " " " | Towing 60 to 68 revolutions. |
| 3.25 p.m. | 5.25 p.m. | 2 | First and second hours flood. | Smooth | Variable 2. | Cloudy, fine. | — | " " " | Towing 38 revolutions. |
| 5.45 p.m. | 7.45 p.m. | 2 | Third to fifth hours flood. | Smooth | Variable 2. | Cloudy, fine. | — | " " " | Towing 54 revolutions. |
| 10.45 a.m. | 12.45 p.m. | 2 | Second and third hours ebb. | Smooth | Calm | Overcast, tempest. | — | Very little taken .. .. .. .. .. | Towing 44 revolutions. |
| 1.15 p.m. | 3.15 p.m. | 2 | Fourth and fifth hours ebb. | Smooth | Calm | Overcast, tempest. | — | *Callionymus lyra.* Very little else taken .. | Towing 54 revolutions. Several trawling smacks about us. |
| 4.30 p.m. | 6·30 p.m. | 2 | First and second hours flood. | Smooth | Calm | Overcast, tempest. | — | Very little taken .. .. .. .. .. | Towing 34 revolutions. |
| 6.50 p.m. | 8.50 p.m. | 2 | Third to fifth hours flood. | Smooth | Calm | Overcast, tempest. | — | " " .. .. .. .. .. | Towing 44 revolutions. |
| 5.15 a.m. | 7.15 a.m. | 2 | First 2 hours flood. | Smooth | Calm | Cloudy, fine, hazy. | — | " " .. .. .. .. .. | Towing 44 revolutions. Many Lowestoft sailing trawlers about us. |
| 7.45 a.m. | 9.45 a.m. | 2 | Third to fifth hours flood | Smooth | Calm | Fine, cloudy, hazy. | — | " " .. .. .. .. .. | Towing 66 revolutions. Many Lowestoft sailing trawlers about us. |
| 11.35 a.m. | 12.55 p.m. | 1¼ | First 2 hours ebb. | Smooth | E. 2 | Fine, cloudy, hazy. | — | " " .. .. .. .. .. | Towing 34 revolutions. |
| 1.30 p.m. | 3 p.m. | 1½ | Third to 4½ hours ebb. | Smooth | E. 3 | Fine, cloudy. | — | " " .. .. .. .. .. | Towing 44 to 54 revolutions. Many Lowestoft sailing trawlers about us. |
| 9.30 a.m. | 10.30 a.m. | 1 | Last hours flood. | Heavy swell | W.N.W. 6 | Cloudy, fine, hazy. | Belly badly torn | *Chrysaora* sp., f.c., *Aurelia aurita* .. .. *Cancer pagurus* c., *Crangon vulgaris, Pandalus montagui, Portunus holsatus.* | R. A. Todd, G. T. Atkinson. |
| 12.15 p.m. | 2.30 p.m. | 2¼ | First to third hours ebb. | Heavy swell, Easterly. | Variable | Cloudy, fine, hazy. | — | *Flustra foliacea* f.c., *Gemellaria loricata* f.c., *Vesicularia spinosa* f.c. *Cancer pagurus* f.c. | |
| 9.30 a.m. | 11.30 a.m. | 2 | From 5½ hours flood to 1½ hours ebb. | Rough | N.E. 7 | Rain, heavy clouds. | — | *Eupagurus bernhardus* f.c. | |
| 3 a.m. | 7 a.m. | 4 | First 4 hours ebb. | Moderately rough. | W. 6 | Cloudy | — | *Portunus holsatus* f.c., *Eupagurus bernhardus. Asterias rubens, Astropecten irregularis.* | W. Wallace, J. O. Borley. Saw several sailing trawlers. |
| 7.30 a.m. | 11.30 a.m. | 4 | 1½ hours ebb; 2½ hours flood. | Moderately rough. | W. by S. 5 | Heavy clouds. | — | *Loligo forbesi* c.. *Aphrodite aculeata. Eupagurus bernhardus* c., *Corystes cassivelaunus, Portunus holsatus. Asterias rubens* v.c., *Astropecten irregularis, Echinocardium cordatum. Echinus miliaris, Ophiura ciliaris.* | |
| 1.30 p.m. | 5.30 p.m. | 4 | 2 hours flood; 2 hours ebb. | Rough | S.W. 7 | Heavy clouds. | — | Not recorded. | |
| 4.30 a.m. | 8.30 a.m. | 4 | 1½ hours to 5 hours ebb. | Moderately smooth. | S.W. by S. 5. | Dull, cloudy. | — | *Eupagurus bernhardus* .. .. .. .. *Astropecten irregularis* c. | A few sailing trawlers about us. |
| 9.30 a.m. | 11.30 a.m. | 2 | First 2 hours flood. | Moderately smooth. | S.W. by S. 5. | Dull, cloudy. | Hole in cod end | *Arnoglossus* sp., *Callionymus lyra* .. .. Very little else taken. | Small mesh net over ordinary trawl. Five sailing trawlers about us. |
| 12.15 p.m. | 2.15 p.m. | 2 | Second to fourth hour flood. | Moderately smooth. | S.S.E. 6. | Dull, cloudy. | Hole in cod end | *Trachinus vipera, Solea lutea* .. .. .. Very little else taken | Small mesh covering round ordinary trawl. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| LXIII | 9 | Sept. | 6 | O 347 | North part of Brown Bank. | 53° 10⅜′ N., 3° 9¾′ E. | S.E. 9½ miles | 53° 6′ N., 3° 23½′ E. | 16½ | .. | 15½ | f.d.g.s. | .. | f.s. |
| „ | 11 | „ | 13 | O 348 | Texel Ground .. | 52° 48⅜′ N., 4° 35⅝′ E. | N.W. by N. ¼ N. 5 miles | 52° 52′ N., 4° 30′ E. | 8 | .. | 12 | f.g.s. | .. | f.g.s. |
| „ | 12 | „ | „ | B(c.) 376 | „ „ .. | 52° 49′ N., 4° 36½′ E. | S.W. ⅝ S. 4¾ miles | 52° 44⅝′ N., 4° 33⅜′ E. | 7 | .. | 10 | c.s. | .. | f.g. spk.s. |
| „ | 14 | „ | „ | B(c.) 377 | „ „ .. | 52° 48½′ N., 4° 35⅞′ E. | N.N.W. 4¼ miles | 52° 51⅝′ N., 4° 31⅜′ E. | 7 | .. | 12 | f.l.g.s. | .. | f.g.s. |
| „ | 16 | „ | „ | O 349 | „ „ .. | 52° 51¾′ N., 4° 31⅜′ E. | N.W. by W. ¾ W. 8½ miles | 52° 53⅜′ N., 4° 18′ E. | 12 | .. | 13 | f.g.s. | .. | f.g.s. |
| „ | 18 | „ | 14 | O 350 | „ „ .. | 52° 53½′ N., 4° 17½′ E. | N.W. ¾ W. 9 miles | 52° 57′ N., 4° 4¼′ E. | 14 | .. | 14 | f.g.s. | .. | f.g.s. |
| „ | 20 | „ | „ | O 351 | East part of Brown Bank. | 52° 57′ N., 4° 4¼′ E. | N.W. ¾ W. 14½ miles | 53° 2⅜′ N., 3° 41½′ E. | 14 | .. | 14½ | f.g.s. | .. | f.g.s. |
| „ | 22 | „ | „ | O 352 | Brown Bank .. .. | 53° 2⅜′ N., 3° 41½′ E. | N.W. ⅜ W. 11½ miles | 53° 6⅜′ N., 3° 24′ E. | 14½ | .. | 16 | f.g.s. | .. | f.g.s. |
| LXIV | 1 | „ | 19 | B 378 | South part of Lowestoft Flats. | 52° 21½′ N., 1° 57¾′ E. | E.N.E. 2 miles, S.S.W. 2 miles, | 52° 20⅜′ N., 2° 1′ E. | 14½ | 18 | 20 | c.s. | .. | c.br.s. |
| „ | 3 | „ | „ | B 379 | „ „ „ | 52° 21′ N., 1° 59′ E. | W. ⅜ S. 1⅝ miles, E.S.E. 1⅜ miles. | 52° 20′ N., 1° 59⅜′ E. | 19 | .. | 16½ | c.br.s. | .. | c.s. & sh. |
| „ | 4 | „ | 20 | B 380 | Western Deep Water | 52° 3½′ N., 2° 17′ E. | E. by N. 9 miles | 52° 6½′ N., 2° 32¼′ E. | 30 | 27 | 22½ | c.s. & sh. | c.s. & sh. | f.g.s. |
| „ | 6 | „ | 21 | B 381 | Eastern Deep Water, East North East of Outer Gabbard Light-vessel. | 52° 8½′ N., 2° 35¼′ E. | N.E. ⅜ E. 7⅓ miles, E. ½ S. 1⅓ miles. | 52° 14¼′ N., 2° 45½′ E. | 21 | .. | 24 | c.s. | .. | f.g.s. |
| „ | 8 | „ | „ | B 382 | Eastern Deep Water | 52° 13′ N., 2° 45¼′ E. | N.E. by N. ¾ N. 9¼ miles | 52° 22′ N., 2° 48¼′ E. | 24 | .. | 25 | f.g.s. | .. | f.g.s. |
| „ | 10 | „ | „ | B 383 | Between Middle Ground and Winterton Shoal. | 52° 21′ N., 2° 47½′ E. | N.E. by N. ½ N. 13½ miles | 52° 35′ N., 2° 53¾′ E. | 25 | .. | 22 | f.g.s. | .. | f.g.s. |
| „ | 12 | „ | 22 | B 384 | South part of Winterton Shoal. | 52° 38′ N., 2° 58′ E. | N. by E. ⅞ E. 5 miles, N.E. by N. 2¼ miles, S.S.W. 2½ miles, S.W. 2½ miles. | 52° 39¾′ N., 2° 57¾′ E. | 21 | .. | 19 | f.g.s. | .. | f.g.s. |
| „ | 14 | „ | 26 | B 385 | Eastern Deep Water | 52° 8¾′ N., 2° 30¼′ E. | N.E. by E. ¾ E. 6½ miles, N. by E. 5 miles. | 52° 18′ N., 2° 38½′ E. | 22½ | .. | 23½ | f.g.s. | .. | f.g.s. |
| „ | 16 | „ | „ | B 386 | South of Winterton Shoal. | 52° 17½′ N., 2° 38′ E. | E. by N. ½ N. 6⅝ miles, N. by E. ½ E. 5 miles. | 52° 26′ N., 2° 47¾′ E. | 23½ | .. | 24 | f.g.s. | .. | f.g.s. |
| „ | 18 | „ | 27 | B 387 | Between Middle Ground and Knoll Deep. | 52° 26′ N., 2° 47¾′ E. | N. ⅛ W. 12⅝ miles | 52° 38½′ N., 2° 42′ E. | 24 | .. | 24 | f.g.s. | .. | f.g.s. blk. clay. |
| „ | 20 | „ | „ | B 388 | North East part of Knoll Deep. | 52° 38′ N., 2° 41¼′ E. | N.N.W. 11 miles | 52° 47′ N., 2° 31¼′ E. | 24 | .. | 22½ | f.g.s. blk. clay. | .. | f.g.s. |
| „ | 22 | „ | „ | B 389 | Leman Ground .. | 53° 16½′ N., 2° 23½′ E. | E. ¾ S. 5 miles | 53° 17′ N., 2° 36¼′ E. | 17 | .. | 17 | f.g.s. | .. | f.g.s. |
| „ | 23 | „ | „ | B 390 | „ „ .. | 53° 16′ N., 2° 42′ E. | S.E. by E. ⅝ E. 13 miles | 53° 13⅜′ N., 3° 4′ E. | 17 | .. | 15 | f.g.s. | .. | f.g.s. |
| „ | 24 | „ | 28 | B 391 | Eastern Edge of Leman Ground. | 53° 13⅜′ N., 3° 4′ E. | N. 12 miles | 53° 25⅝′ N., 2° 58½′ E. | 15 | .. | 17 | f.g.s. | .. | f.g.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c. Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 3.50 p.m. | 7.50 p.m. | 4 | 1 hour flood; 3 hours ebb. | Moderately rough. | S. 5 | Cloudy, tempest. | — | *Trachinus vipera* f.c., *Solea lutea*. Very little else taken. | |
| 5.15 a.m. | 7.15 a.m. | 2 | Last 2 hours flood. | Moderately smooth. | S.W. 3 | Cloudy, fine. | — | *Rhizostoma* sp., c. | |
| 8.15 a.m. | 10.15 a.m. | 2 | First 2 hours ebb. | Moderately smooth. | S.W. 5 | Cloudy, fine. | — | *Rhizostoma* sp., c. .. .. .. .. .. *Portunus holsatus* c. **Asterias rubens,** v.c. | Small mesh covering round ordinary trawl. |
| 12.30 p.m. | 2.30 p.m. | 2 | 1 hour ebb; 1 hour flood. | Moderately rough. | S.W. 5 | Cloudy, fine. | — | *Rhizostoma* sp... .. .. .. .. .. *Hydractinia echinata*. *Loligo forbesi*, small. *Portunus holsatus* c. *Asterias rubens* f.c. | Small mesh covering round ordinary trawl. |
| 3.55 p.m. | 7.55 p.m. | 4 | 2 hours flood; 2 hours ebb. | Moderately smooth. | S.W. by W. 4. | Cloudy, fine. | — | *Cancer pagurus*, *Eupagurus bernhardus*, *Portunus holsatus*. *Asterias rubens*, *Astropecten irregularis*, *Ophiura ciliaris*. | |
| 6.15 a.m. | 10.15 a.m. | 4 | First 4 hours ebb. | Smooth | N. 3 | Cloudy, fine. | — | *Loligo forbesi* .. .. .. .. .. .. *Eupagurus bernhardus*. *Asterias rubens* c., *Astropecten irregularis* f.c., *Ophiura ciliaris*. | Several Dutch fishing craft about us. |
| 10.15 a.m. | 3.50 p.m. | 5 | First 5 hours ebb. | Moderately rough. | N. 5 | Cloudy, fine. | — | *Hydractinia echinata* .. .. .. .. *Cancer pagurus*, *Eupagurus bernhardus*, *Portunus holsatus*. *Asterias rubens*, *Ophiura ciliaris*. | 1 steam trawler and several Dutch fishing craft about us. |
| 4.20 p.m. | 8.50 p.m. | 4½ | 2 hours ebb; 2½ hours flood. | Moderately smooth. | N. 3 | Fine, cloudy. | — | *Portunus holsatus* f.c., *Eupagurus bernhardus*. *Asterias rubens*, *Astropecten irregularis*. | |
| 12.45 p.m. | 2.45 p.m. | 2 | 1½ hours flood; ½ hour ebb. | Moderately smooth. | N.E. by N. 4. | Cloudy, fine, hazy. | Belly torn .. | *Hydrallmania falcata* f.c., *Plumularia* sp., f.c. *Sabellaria spinulosa* c. *Porcellana longicornis*. *Echinus miliaris*. | R. A. Todd, L. R. Crawshay, J. Potter. |
| 3.45 p.m. | 5.45 p.m. | 2 | Second to fourth hours ebb. | Moderately smooth. | N.E. by N. 5, | Overcast, cloudy. | — | *Hydrallmania falcata* f.c., *Sertularia abietina*. *Alcyonidium gelatinosum* c., *Gemellaria loricata* f.c., *Vesicularia spinosa* f.c. *Trachinus vipera*. | |
| 7.20 a.m. | 11.20 a.m. | 4 | Fifth hour ebb to third hour flood. | Moderately rough. | N. by E. 5. | Cloudy, fine. | Belly torn .. | *Hydractinia echinata*. *Loligo forbesi*. *Eupagurus bernhardus* c. | |
| 8.45 a.m. | 12.45 p.m. | 4 | First 4 hours flood. | Moderately rough. | N.E. 5 | Dull, cloudy, rain. | — | *Eupagurus bernhardus*. *Asterias rubens* c., *Spatangus purpureus*. | |
| 1.30 p.m. | 5.30 p.m. | 4 | 2 hours flood; 2 hours ebb. | Moderately rough. | N.E. 5 | Cloudy. | — | *Hydractinia echinata* c., *Hydrallmania falcata* c. *Cancer pagurus*. *Asterias rubens* f.c., *Astropecten irregularis*. | |
| 6 p.m. | 11 p.m. | 5 | 4 hours ebb; 1 hour flood. | Moderately rough. | E. 5 | Cloudy | Ground rope parted; net badly torn. | Not recorded .. .. .. .. .. .. | Several fishing vessels lights about us. |
| 8 a.m. | 1 p.m. | 5 | 2 hours ebb; 3 hours flood. | Rough | E. by S. 7. | Fine, cloudy. | — | *Buccinum undatum*, *Loligo forbesi*. *Eupagurus bernhardus* c. *Asterias rubens* f.c., *Astropecten irregularis*. | |
| 1 p.m. | 6 p.m | 5 | 3 hours ebb; 2 hours flood. | Moderately smooth. | N. 2 | Cloudy | Belly slightly torn. | *Hydractinia echinata*. *Loligo forbesi*. *Homarus vulgaris*. *Echinus* sp. | |
| 6.30 p.m. | 11.30 p.m. | 5 | 3 hours flood; 2 hours ebb. | Moderately smooth. | N.N.E. 4 | Cloudy | Aft wing torn .. | *Eupagurus bernhardus* f.c. *Asterias rubens*, *Spatangus purpureus*. *Arnoglossus* sp. | |
| 12.30 a.m. | 5.30 a.m. | 5 | 3 hours ebb; 2 hours flood. | Moderately smooth. | N.N.E. 4 | Cloudy | — | *Eupagurus bernhardus* c. .. .. .. .. *Asterias rubens* f.c., *Astropecten irregularis*, *Echinus* sp. | Several sailing trawlers about us. |
| 6 a.m. | 11 a.m. | 5 | 4 hours flood; 1 hour ebb. | Moderately smooth. | N.E. 5 | Cloudy, showery. | — | *Loligo forbesi* c., *Buccinum undatum* .. .. *Eupagurus bernhardus*, *Galathea intermedia*, *Porcellana longicornis*, *Portunus holsatus*. *Asterias rubens*, *Echinus* sp. | Several sailing trawlers about us. |
| 4 p.m. | 6 p.m. | 2 | First 2 hours flood. | Moderately smooth. | N.E. 4 | Cloudy, overcast. | — | *Loligo forbesi* .. .. .. .. .. .. *Eupagurus bernhardus* f.c., *Portunus holsatus* f.c. *Astropecten irregularis* f.c., *Ophiura ciliaris* f.c., *Asterias rubens*. | A few sailing trawlers about us. |
| 6.30 p.m. | Midnight | 5½ | 2½ hours flood to 1½ hours ebb. | Smooth | E. 3 | Fine, cloudy. | — | **Portunus holsatus** abundant, *Eupagurus bernhardus* c., *Corystes cassivelaunus*. *Asterias rubens* f.c., *Ophiura ciliaris* f.c., *Astropecten irregularis*, *Echinus* sp. *Trachinus vipera*. | A few sailing trawlers about us. |
| Midnight | 5 a.m. | 5 | First to sixth hours ebb. | Smooth | E. 3 | Fine, cloudy. | — | *Actinoloba dianthus*, *Alcyonium digitatum* .. *Fusus antiquus* and spawn c. *Portunus holsatus* f.c., *Eupagurus bernhardus*, *Porcellana longicornis*. *Asterias rubens*, *Echinus* sp. | Two sailing trawlers about us. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shooting. | Towing. | Hauling. | Shooting. | Towing. | Hauling. |
| LXIV | 26 | Sept. | 28 | B 392 | Between Leman and Ower Banks. | 53° 9¾′ N., 1° 55′ E. | N.N.W. 5 miles | 53° 13⅝′ N., 1° 50′ E. | 18 | .. | 15½ | s. ross. | .. | s. & ross. |
| ,, | 28 | ,, | ,, | B 393 | ,, ,, .. | 53° 14′ N., 1° 49½′ E. | N.W. 4½ miles | 53° 16⅛′ N., 1° 43⅛ E. | 15½ | .. | 17 | s. ross. | .. | s. ross. |
| ,, | 29 | ,, | 29 | B 94 | Off Smith's Knoll Light-vessel. | 52° 55¼′ N., 2° 18′ E. | S. ½ W. 12½ miles | 52° 43′ N., 2° 21½′ E. | 23 | .. | 25½ | c.s. | .. | s. & ross. |
| ,, | 30 | ,, | ,, | B 395 | ,, ,, .. | 52° 44¼′ N., 2° 21½′ E. | N. ⅝ E. 13 miles | 52° 57¼′ N., 2° 18¼′ E. | 25½ | .. | 19½ | s. & ross. | .. | s. ross. |
| ,, | 31 | ,, | ,, | B 396 | ,, ,, .. | 52° 56¼′ N., 2° 18′ E. | S. ½ W. 13 miles | 52° 43⅜′ N., 2° 25⅜′ E. | 22 | .. | 27 | s. ross. | .. | s. ross. |
| LXV | 1 | Oct. | 9 | O 353 | East of Farn Island | 55° 37⅝′ N., 1° 18½′ W. | E. by S. ⅜ S. 10 miles | 55° 37¼′ N., 1° 2′ W. | 41 | .. | 48 | m. | .. | m. |
| ,, | 3 | ,, | ,, | O 354 | ,, ,, ,, | 55° 34½′ N., 0° 50′ W. | S.E. by S. 10½ miles | 55° 28¼′ N., 0° 36′ W. | 50 | .. | 40½ | m. | .. | m. |
| ,, | 4 | ,, | 10 | O 355 | Brucey's Garden .. | 55° 1½′ N., 0° 50½′ E. | S.E. by S. ⅛ S. 12¼ miles | 54° 53′ N., 1° 6½′ E. | 34 | .. | 29 | s.m. | .. | s.m. |
| ,, | 5 | ,, | ,, | O 356 | Dogger Bank, East of North West Rough. | 54° 53½′ N., 1° 40′ E. | N.E. ¾ N. 11½ miles | 55° 4½′ N., 1° 46½′ E. | 13 | .. | 17½ | f.g.s. | .. | gvl. |
| ,, | 6 | ,, | ,, | O 357 | ,, ,, ,, | 55° 4½′ N., 1° 46½′ E. | N.E. by E. ¼ E. 10 miles | 55° 11½′ N., 1° 58′ E. | 17½ | .. | 18 | gvl. | .. | c.s. |
| ,, | 7 | ,, | 11 | O 358 | Dogger Bank, North West of Eastern Shoal. .. .. | 54° 39½′ N., 2° 12½′ E. | S.E. by S. ½ S. 6¼ miles, N. by E. ½ E. 6¼ miles. | 54° 42′ N., 2° 20¼′ E. | 14 | 10½ | 13 | f.g.s. | f.g.s. | f.g.s. |
| ,, | 8 | ,, | ,, | O 359 | DoggerBank,Eastern Shoal. | 54° 41′ N., 2° 24½′ E. | E. ½ N. 4 miles, S. ½ E. 5 miles, S.W. 1 mile. | 54° 39½′ N., 2° 35½′ E. | 13 | 13 | 11½ | f.g.s. | f.g.s. & sh. | f.g.s. |
| ,, | 9 | ,, | 12 | O 360 | East part of Clay Deep. | 55° 11¾′ N., 4° 26′ E. | N.W. by W. ½ W. 10 miles, E. 2¼ miles. | 55° 14½′ N., 4° 13½′ E. | 24 | 24 | 24 | s.oz. | s.oz. | s.oz. |
| ,, | 10 | ,, | ,, | O 361 | Clay Deep, Edge of Dogger. | 55° 14½′ N., 4° 13½′ E. | N.W. by W. ½ W. 6¼ miles, S. ½ W. 6¼ miles. | 55° 10½′ N., 4° 5′ E. | 24 | 20 | 23 | f.g.s. | f.g.s. & sh. | f.g. blk.s. |
| LXVI | 1 | ,, | 19 | B 397 | Flamborough Off .. | 54° 2′ N., 0° 27′ E. | E. ⅛ N. 9 miles | 54° 5′ N., 0° 41¾′ E. | 28 | .. | 26 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 2 | ,, | ,, | O 362 | ,, ,, | 54° 4′ N., 0° 40½′ E. | N. by E. 6 miles, E. by N. ¼ N. 4 miles. | 54° 12¼′ N., 0° 45¼′ E. | 26 | .. | 30 | f.d.g.s. | .. | f.d.g.s. |
| ,, | 3 | ,, | ,, | O 363 | ,, ,, | 54° 11¼′ N., 0° 44⅜′ E. | N.W. ¾ N. 2½ miles, W. by S. 7¼ miles, E. by N. 4 miles. | 54° 11⅜′ N., 0° 37′ E. | 30 | .. | 30 | f.d.g.s. | .. | f.d.g.s. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks. Trawlers Working, &c., Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 12.1 p.m. | 2.10 p.m. | 2 | Second to fourth hours ebb. | Moderately smooth. | N.E. by E. 5. | Cloudy, showery. | — | *Tubularia indivisa* f.c., *Sertularia abietina* .. *Flustra foliacea.* *Sabellaria spinulosa* c. **Loligo forbesi** v.c. *Porcellana longicornis* f.c., *Eupagurus bernhardus.* *Asterias rubens* f.c. | Four sailing trawlers about us. |
| 2.30 p.m. | 4.30 p.m. | 2 | Last 2 hours ebb. | Moderately smooth. | N.E. 4 | Cloudy, showery. | Trawl foul; no fish. | Nothing taken .. .. .. .. .. | Four sailing trawlers about us. |
| 8 a.m. | 1 p.m. | 5 | 3 hours flood; 2 hours ebb. | North East swell. | S.E. to N.E. 3. | Fine, cloudy. | — | **Sabellaria spinulosa** v.c. .. .. .. *Buccinum undatum* f.c. *Eupagurus bernhardus* f.c., *Portunus holsatus.* *Asterias rubens.* | Several sailing trawlers about us. |
| 1.30 p.m. | 6.30 p.m. | 5 | 3½ hours ebb; 1½ hours flood. | North East swell. | N.E. 4 | Fine, cloudy. | — | **Sabellaria spinulosa** v.c. .. .. .. *Loligo forbesi.* *Sepia officinalis.* *Eupagurus bernhardus* f.c., *Cancer pagurus.* *Asterias rubens* f.c. *Trachinus vipera.* | Several sailing trawlers about us. |
| 7 p.m. | 11.30 p.m. | 4½ | From 1½ hours flood to ½ hour ebb. | Rough | N.E. 6 | Cloudy. | — | *Hydractinia echinata* f.c. .. .. .. .. **Sabellaria spinulosa** v.c. *Buccinum undatum* c. *Eupagurus bernhardus* c., *Cancer pagurus.* | Several sailing trawlers about us. |
| 3 a.m. | 7 a.m. | 4 | ½ hour to 4½ hours ebb. | Smooth | N.W. 3 | Overcast | Ground rope parted, belly torn. | *Actinoloba dianthus* c. .. .. .. .. *Loligo forbesi.* *Eupagurus bernhardus* c., *Lithodes maia* c., *Nephrops norvegicus.* **Brissopsis lyrifera** abundant, *Hippasterias phrygiana* c., *Astropecten irregularis* f.c., *Echinus acutus.* | W. Garstang, W. Wallace, G. T. Atkinson. |
| 10 a.m. | 2 p.m. | 4 | First 4 hours flood. | Moderately smooth. | N.W. 3 | Fine, cloudy. | — | *Actinoloba dianthus* f.c., *Chondractinia digitata* f.c. *Fusus antiquus* f.c., *Fusus gracilis* f.c., *Pecten opercularis* f.c., *Buccinum undatum.* *Lithodes maia* c., *Eupagurus bernhardus.* *Brissopsis lyrifera* c., *Spatangus purpureus* c., *Asterias rubens*, *Astropecten irregularis*, *Hippasterias phrygiana* c., *Solaster endeca.* | |
| 2 a.m. | 7 a.m. | 5 | First 5 hours ebb. | Moderately rough. | N. 5 | Cloudy, showery. | Belly badly torn | Not recorded .. .. .. .. .. .. | Two steam trawlers and several Dutch drifters about us. |
| 10.45 a.m. | 3.45 p.m. | 5 | From first to sixth hours ebb. | Moderately smooth. | N.E. 4 | .. .. | — | **Loligo forbesi** abundant .. .. .. *Echinus esculentus*, c., *Asterias rubens* f.c. | Several steam trawlers about us and several Dutch drifters N.W. of us. |
| 4.20 p.m. | 8.20 p.m. | 4 | First 4 hours ebb. | Moderately smooth. | N.E. 4 | Cloudy, showery. | — | **Alcyonidium gelatinosum** v.c. .. **Pecten opercularis** abundant, **Loligo forbesi** v.c. *Asterias rubens* f.c. | One steam trawler with us. |
| 4 a.m. | 9 a.m. | 5 | First 5 hours flood. | Smooth | N.E. 4 | Fine, cloudy, showery. | — | **Pecten opercularis** v.c., *Loligo forbesi* f.c. *Portunus holsatus* f.c., *Eupagurus bernhardus.* **Asterias rubens** v.c. | Several steam trawlers and Dutch drifters about us; close to O. 82, Ostend steam trawler "Albert" when hauling. |
| 10.10 a.m. | 2.10 p.m. | 4 | First to fifth hours ebb. | Moderately smooth. | N.E. 5 | Cloudy, showery. | — | **Alcyonidium gelatinosum** v.c. .. *Loligo forbesi* c. *Asterias rubens* f.c. | Surrounded by Dutch drifters shooting their nets. |
| 4 a.m. | 9 a.m. | 5 | Nil. | Moderately smooth. | N. by E. 5 | Fine, cloudy, showery. | — | *Halichondria panicea* f.c. .. .. .. .. **Alcyonium digitatum** v.c. *Aphrodite aculeata.* *Fusus antiquus* f.c., *Fusus gracilis* f.c., *Loligo forbesi* f.c. *Ophiothrix fragilis* c. | Several steam trawlers about. |
| 9.40 a.m. | 2.40 p.m. | 5 | Nil. | Moderately smooth. | N. 5 | Overcast, cloudy. | — | *Obelia longissima* dead, surf-rolled .. .. **Alcyonidium gelatinosum** v.c. *Loligo forbesi* c. | One steam trawler with us. |
| 7 a.m. | 11 a.m. | 4 | 2 hours flood; 2 hours ebb. | Moderately rough. | N.E. 6 | Fine, cloudy, showery. | — | *Actinoloba dianthus* c., *Antennularia ramosa* c., *Hydrallmania falcata* c., *Sertularia abietina* c., *Tubularia indivisa* c., *Alcyonium digitatum.* *Gemellaria loricata* f.c. *Nereis pelagica* f.c. *Loligo forbesi* c., *Pecten opercularis* c., *Buccinum undatum* f.c. *Cancer pagurus* c., *Stenorhynchus longirostris* f.c., *Eupagurus bernhardus.* *Solaster papposus* c., *Asterias rubens*, *Ophiothrix fragilis.* *Botryllus* sp., c., *Callionymus lyra*, *Trachinus vipera.* | W. Garstang, W. Wallace, G. T. Atkinson. |
| Noon. | 4 p.m. | 4 | Second to sixth hours ebb. | Moderately rough. | N.E. 5 | Fine, cloudy, showery. | — | *Loligo forbesi* c., *Pecten opercularis.* | |
| 4.40 a.m. | 10 p.m. | 5½ | First 5 hours flood. | Moderately rough. | N.E. 4 | Fine, cloudy, showery. | — | Very little taken .. .. .. .. .. | One steam trawler with us. |

| Voyage. | Station. | Month. | Day. | Net and No. of Haul. | Name of Ground. | Position. | | | Depth (fathoms). | | | Bottom. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Shot. | Course. | Hauled. | Shoot-ing. | Towing. | Haul-ing. | Shoot-ing. | Towing. | Haul-ing. |
| LXVI | 4 | Oct. | 19-20 | O 364 | Flamborough Off .. | 54° 10⅝′ N., 0° 36¾′ E. | S.S.W. ½ W. 5⅜ miles. E. ½ N. 4⅞ miles, S.W. by W. ⅞ W. 3⅞ miles. | 54° 4½′ N., 0° 38′ E. | 30 | .. | 26 | f.d.g.s. | .. | f.g.s. |
| ,, | 5 | ,, | 20 | O 365 | Western Edge of Flamborough Off. | 54° 4½′ N., 0° 38′ E. | S.W. ¼ W. 7½ miles, E. by N. ⅝ N. 4⅓ miles, S.W. ⅞ W. 1¾ miles. | 53° 59¼′ N., 0° 36′ E. | 26 | .. | 26 | f.g.s. | .. | f.g.s. |
| ,, | 6 | ,, | 20 | O 366 | Flamborough Off .. | 53° 59¼′ N., 0° 36′ E. | E. ⅛ N. 11½ miles | 54° 3′ N., 0° 54¾′ E. | 26 | .. | 25 | f.g.s. | .. | f.d.g.s. |
| ,, | 7 | ,, | 24 | O 367 | Markham's Hole .. | 53° 43⅜′ N., 2° 40½′ E. | E. by N. 3⅛ miles, N. by E. 2⅛ miles, N.W. ⅞ W. 5⅝ miles. | 53° 49′ N., 2° 34½′ E. | 20 | 23, 23 | 33 | spk. s. | .. | s.m. |
| ,, | 8 | ,, | ,, | O 368 | Leman Ground .. | 53° 33⅜′ N., 2° 30½′ E. | S.W. by S. ⅞ S. 10 miles | 53° 23½′ N., 2° 28′ E. | 17 | 15 | 12 | gvl. | f.s. | f.s. |
| ,, | 9 | ,, | 25 | O 369 | ,, ,, .. | 53° 24⅝′ N., 2° 23½′ E. | S.E. by S. 5⅜ miles, N. ⅞ W. 5⅜ miles, S.W. ⅞ W. 2 miles. | 53° 24⅜′ N., 2° 24¼′ E. | 10 | 14 | 12 | f.g.s. | .. | f.g.s. |
| ,, | 10 | ,, | ,, | O 370 | ,, ,, .. | 53° 24⅜′ N., 2° 24¼′ E. | S.E. by S. 3 miles, S.E. by S. ½ S. 12½ miles. | 53° 13⅝′ N., 2° 42⅜′ E. | 12 | 14, 15 | 18 | f.g.s. | f.g.s. | f.g.s. |
| LXVII | 4 | ,, | 31 | B (c.) 398 | Margate Road .. | 51° 24⅝′ N., 1° 23′ E. | E. by S. 3¼ miles | 51° 25′ N., 1° 28′ E. | 7 | 8 | 8 | s.m. gvl. | .. | s.m. |
| ,, | 5 | ,, | ,, | B 399 | ,, ,, .. | 51° 24⅜′ N., 1° 23¼′ E. | E. ¼ N. 3¼ miles | 51° 25⅝′ N., 1° 28¼′ E. | 8 | 8, 9 | 9½ | s.m. | .. | s.m. |

| Duration of Haul. | | | Tide. | Sea. | Weather. | | Damage to Net, &c. | Bottom Fauna. | General Remarks, Trawlers Working, &c, Naturalist in Charge and Assistants. |
|---|---|---|---|---|---|---|---|---|---|
| Shot. | Hauled. | No. of Hours. | | | Wind and Force. | Sun, Rain, &c. | | | |
| 10.30 p.m. | 4 a.m. | 5½ | First 5 hours ebb. | Moderately rough. | N.E. 4 | Fine, cloudy. | — | Not recorded .. .. .. .. .. .. | One steam trawler with us. |
| 4.30 a.m. | 9.30 a.m. | 5 | First 5 hours flood. | Moderately smooth. | N.N.E. 4 | Fine, cloudy. | — | *Actinoloba dianthus* .. .. .. .. .. **Loligo forbesi** abundant, *Pecten opercularis* f.c. **Cancer pagurus** v.c., *Eupagurus bernhardus.* *Asterias rubens, Solaster papposus.* | One steam trawler. with us. |
| 10 p.m. | 2.45 p.m. | 4¾ | 5½ hours flood to 4¼ hours ebb. | Rough | N. 6 | Cloudy | — | *Actinoloba dianthus* .. .. .. .. .. *Buccinum undatum, Fusus antiquus, Loligo forbesi, Pecten opercularis.* | A large number of drifters about us. |
| 6.30 a.m. | 11.30 a.m. | 5 | 1 hour flood to 4 hours ebb. | Moderately smooth. | N.E. by E. 4 | Fine, cloudy, showery. | Belly torn; stone through cod end. | **Sertularia abietina** v.c. .. .. .. *Scrupocellaria reptans* f.c. *Loligo forbesi* c. **Ophiothrix fragilis** abundant, *Asterias rubens, Astropecten irregularis.* | Several Dutch drifters about us. |
| 2.30 p.m. | 6.30 p.m. | 4 | Second to sixth hour flood. | Moderately smooth. | N. 3 | Fine, cloudy, showery. | — | *Actinoloba dianthus* c., *Sertularia abietina* f.c., surf-rolled. **Loligo forbesi** v.c. *Eupagurus bernhardus, Portunus holsatus.* *Asterias rubens* f.c. | Several drifters about us. |
| 5 a.m. | 10 a.m. | 5 | 3 hours flood; 2 hours ebb. | Moderately smooth. | N.E. 3 | Fine, cloudy. | — | *Hydrallmania falcata* c., *Sertularia abietina* c., surf-rolled, *Actinoloba dianthus.* *Loligo forbesi* c. **Paratylus swammerdami** v.c., *Hyas coarctatus.* *Asterias rubens* c., *Astropecten irregularis* c. | Several Dutch drifters about us. |
| 10.30 a.m. | 4.30 p.m. | 6 | 3½ hours ebb and 2½ hours flood. | Moderately smooth. | N.E. 4 | Fine, cloudy. | — | *Hydrallmania falcata* and *Sertularia abietina* f.c., surf-rolled, *Actinoloba dianthus* f.c. *Loligo forbesi* f.c. *Eupagurus bernhardus.* *Asterias rubens* c., *Astropecten irregularis* f.c. | |
| 8.40 p.m. | 10.10 p.m. | 1½ | Slack to 1½ hours flood. | Smooth | S.W. 7 | Cloudy | — | *Hydrallmania falcata* c. .. .. .. .. *Rhizostoma* sp., several. *Buccinum undatum.* **Portunus depurator** v.c., *Pandalus montagui* c., *Hyas araneus* f.c., *Portunus puber* f.c., *Cancer pagurus, Eupagurus bernhardus, Homarus vulgaris.* *Echinus* sp., c., *Asterias rubens, Solaster papposus.* **Agonus cataphractus** v.c., *Callionymus lyra* c., *Gobius minutus* c. | Small mesh net round ordinary trawl. W. Wallace and D. J. Matthews. |
| 2 p.m. | 3.45 p.m. | 1¾ | Slack to 1¾ hours ebb. | Smooth | S.W. 7 | Cloudy | Belly and wings very badly torn. | Not recorded. | |

## II.—DETAILED MEASUREMENTS OF PLAICE CAUGHT AT

Throughout this table the Average Sizes are given as calculated from the figures recorded in the
In hauls distinguished as O(c). or B(c). the ordinary

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | 1904. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O 146§ | Jan. 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 1 | 3 | 8 | 8 | 13 | 5 | 3 | 6 | 4 | .. | 3 | .. |
| O 147 | „ 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 5 | 7 | 5 | 8 | 3 | 9 | 1 | 5 | 2 | 1 | 2 |
| O 148* | „ 5 | 6¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | .. | .. | .. | .. | .. |
| O 149 | „ 5 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 2 |
| O 150§ | „ 5 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 2 | .. | 1 | 1 | .. | .. |
| O 151 | „ 6 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 1 | 1 | .. | 2 |
| O 152 | „ 6 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 |
| O 153 | „ 6 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 154 | „ 6-7 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. |
| O 155 | „ 7 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | .. | 1 | 1 | .. | 1 |
| O 156 | „ 8 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | 1 | 3 | .. | 3 |
| O 157 | „ 8 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 3 | 3 |
| B 100 | „ 9 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | 1 | 1 | 1 |
| B 101 | „ 19 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| B 103§ | Feb. 26 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 3 | .. | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | 1 | 1 | 1 | 1 | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. |
| O 159 | „ 27 | 2½ | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | 2 | 1 | 5 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | .. | 2 | 2 | 2 | 1 | 1 | 3 | 3 | 3 | 4 | 5 | 2 | 6 | 2 | 4 | 1 | 3 | 1 |
| B 107 | Mar. 10 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 108 | „ 10 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 160§ | „ 11 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | 1 | .. | 1 | 1 | 1 | .. | 4 | 2 | .. | 1 | 1 | 1 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 1 | .. | 6 | 4 | 2 | 2 | 2 | 1 | 1 | 2 |
| O 161 | „ 11 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 4 | 1 | 1 | 1 | 2 | 2 | .. | 1 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 6 | 2 | .. | 3 | 1 | 1 | 4 | 2 | 2 |
| O 162 | „ 11-12 | 6¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 3 | .. | 5 | 1 | 4 | 1 | 3 | 6 | 3 | 2 | 6 |
| O 163§ | „ 12 | 2½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 1 | 1 | .. | 1 | 2 | 1 |
| O 164§ | „ 12 | 5⅔ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 1 | 6 | 2 | 2 | .. | 5 | .. | 2 | 1 | .. |
| O 165 | „ 12 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | 2 | |
| O 166§ | „ 12 | 6 | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 1 | 2 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 3 | 3 | 4 | 3 | .. | .. | 2 |
| B 109 | „ 14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | 1 | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | .. | 1 | 1 | 1 | .. |
| B 110 | „ 14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 3 | .. | 1 | 1 | .. | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. |
| B 111 | „ 14 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | 1 | .. | .. | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| B 112 | „ 15 | 2¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. |
| B 113 | „ 15 | 6 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | .. | 6 | 3 | 7 | 5 | 7 | 5 | 1 | 3 | 1 | .. | 1 | 2 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | 1 | 6 | 4 | 7 | 3 | 2 | 3 | 2 | 1 | .. | 3 | .. | 1 |
| B 114 | „ 15-16 | 7 | .. | .. | .. | .. | .. | 4 | 9 | 7 | 5 | 8 | 7 | 7 | 8 | 6 | 4 | 6 | 7 | 5 | 8 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | 5 | 7 | 4 | 5 | 5 | 3 | 6 | 3 | 9 | 4 | 7 | 5 | 2 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. |
| B 115 | „ 16 | 5¾ | .. | .. | .. | .. | 1 | 3 | 11 | 27 | 27 | 34 | 21 | 13 | 12 | 7 | 7 | 3 | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 7 | 15 | 29 | 30 | 36 | 31 | 32 | 17 | 18 | 9 | 8 | 7 | 4 | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 |

§ Accident to net probably did not influence catch
‡ Sex not determined.

## EACH HAUL OF THE COMMERCIAL TRAWLS (ss. *Huxley*).

table. A correction of +0·5 cm. should be applied in each case to obtain the true Average.
trawl net was covered by fine meshed netting.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | ‡ 65 | 29·8 |
| 3 | .. | 1 | .. | 3 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 60 | 30·1 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | ‡* 7 | 40·6 |
| .. | 1 | 1 | 1 | 2 | .. | 1 | 1 | .. | 1 | 1 | .. | 1 | .. | .. | 1 | 1 | 2 | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 20 | 44·8 |
| 1 | 2 | .. | .. | 1 | 1 | 2 | .. | 2 | 1 | 3 | 1 | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 25 | 39·4 |
| .. | .. | 2 | 2 | 1 | .. | .. | 5 | 1 | 1 | 2 | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | ‡ 25 | 41·0 |
| .. | 1 | .. | 1 | 2 | 2 | .. | 1 | 2 | 1 | 1 | .. | 2 | .. | 1 | 1 | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 22 | 43·1 |
| 1 | 1 | .. | .. | .. | 1 | 2 | 1 | .. | 1 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 10 | 43·1 |
| .. | 1 | 3 | .. | .. | 1 | 2 | 1 | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 16 | 39·2 |
| 1 | 2 | .. | 2 | 1 | .. | .. | .. | 1 | 1 | 1 | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | ‡ 22 | 40·5 |
| 3 | 2 | 3 | 6 | 1 | 2 | 2 | 3 | 1 | 2 | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 38 | 38·6 |
| 4 | 4 | 7 | 5 | 8 | 7 | 2 | 6 | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 56 | 39·2 |
| 5 | 2 | 3 | 5 | 3 | 5 | 1 | 2 | 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 40 | 38·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 43·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 24·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 41 | 26·8 |
| .. | .. | 2 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 55 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | .. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 18·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | |
| .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 17 | 32·0 |
| 1 | 1 | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 35 | |
| 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 20 | 36·8 |
| 2 | 2 | 3 | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 4 | 1 | 3 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | F. 60 | |
| 2 | 1 | 1 | 2 | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 24 | 35·8 |
| 5 | .. | 4 | 5 | .. | 4 | 4 | 1 | 2 | 1 | 2 | 3 | 2 | 1 | 4 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 76 | |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 37 5 |
| .. | 4 | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 34·7 |
| .. | 3 | 1 | .. | .. | 2 | 1 | 5 | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | 1 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 41 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 40·3 |
| .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | F. 13 | |
| . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | M. 7 | 37·8 |
| .. | 1 | .. | 1 | .. | 1 | .. | 1 | 1 | 3 | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | F. 35 | |
| .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 9 | 32·4 |
| .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 31·2 |
| .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 29·5 |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | |
| .. | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 32·8 |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 3 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 45 | 25·3 |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 38 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 94 | 18·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 69 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 169 | 16·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 248 | |

* Accident to net probably influenced catch. *See* Table III.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | 1904. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B 116 | Mar. 16 | 3 | .. | .. | .. | .. | .. | 4 | 3 | 26 | 24 | 27 | 16 | 13 | 9 | 5 | 3 | 3 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | 1 | .. | 5 | 10 | 36 | 26 | 26 | 20 | 26 | 19 | 12 | 11 | 9 | 3 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| B 117 | „ 16 | 2¼ | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 4 | .. | .. | .. | 3 | 2 | 4 | 5 | 2 | 3 | 3 | 3 | 3 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | 6 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 1 | .. | .. | 2 |
| O 167†† | „ 22 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 5 | 5 | 5 | 4 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 9 | 5 | 7 | 4 | 2 | 3 | 4 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 168†† | „ 22 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | 2 | 3 | 4 | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 5 | 8 | 1 | 1 | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 169†† | „ 22 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15 | 16 | 8 | 4 | 1 | 4 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | . | .. | .. | .. | .. | .. | .. | .. | 16 | 14 | 13 | 14 | 7 | 2 | 2 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 170†† | „ 22 | 2 | . | .. | .. | 1 | .. | .. | .. | .. | .. | 6 | 14 | 10 | 6 | 6 | 1 | .. | 2 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 10 | 14 | 8 | 4 | 4 | 5 | 7 | 1 | .. | .. | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. |
| O 171†† | „ 22 | 1¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 4 | 2 | 1 | 3 | 2 | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 5 | 12 | 5 | 7 | 5 | 2 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 172§ | „ 24 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | 2 | .. | 3 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 3 | .. | 1 | .. | 1 | 1 | 2 | 1 | .. |
| O 173 | „ 24 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | 2 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | .. | 2 | .. | .. |
| O 174 | „ 24 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | 1 | 1 | 1 | .. | 2 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 3 | 1 | 1 | 2 |
| O 175 | „ 26 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 3 | 3 | 3 | 1 | .. | 2 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 4 | 2 | .. | 3 | 2 | .. | .. | .. | .. |
| O 176 | „ 26–27 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| O 177 | „ 27 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 1 | .. | .. |
| O 178 | „ 27 | 7½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 1 | 1 | 1 | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| O 179 | „ 27 | 7½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | 2 | 1 | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. |
| O 180 | „ 28 | 6 11/12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 1 | 1 | 1 | 2 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | 1 | 2 | .. | .. | 1 | .. |
| O 181 | „ 28 | 7½ | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 2 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| O 182 | „ 28 | 6½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. |
| O 183 | „ 29–30 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 3 | 2 | 2 | 3 | .. | 2 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 4 | 2 | 1 | 3 | 1 | 7 | 2 | 2 | .. |
| O 184 | „ 30 | 5¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 2 | 2 | 2 | 2 | 2 | .. | 2 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | .. | .. | 1 | 2 | 2 | .. | 3 | .. | 3 |
| O 185 | „ 30 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | .. | 1 | 1 | 2 | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 2 | 2 | 2 | 1 | 1 | .. | 1 | 1 | 3 |
| B 119 | April 9 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 120 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B *122 | „ 11 | 1¼ | .. | .. | .. | .. | 1 | 1 | 2 | 2 | 4 | 6 | 6 | 5 | 10 | 12 | 4 | 5 | 1 | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 2 | 6 | 3 | 8 | 5 | 11 | 8 | 3 | 6 | 1 | 3 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| B 123§ | „ 11 | 1¼ | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 8 | 12 | 15 | 12 | 17 | 13 | 13 | 9 | 6 | 4 | 3 | 4 | 2 | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | .. | 2 | 6 | 5 | 3 | 8 | 9 | 17 | 11 | 10 | 6 | 6 | 6 | 2 | 4 | 2 | .. | .. | 1 | .. | .. | .. | .. |
| B 124 | „ 12 | 1 | .. | .. | .. | .. | 2 | 1 | 4 | 7 | 13 | 13 | 10 | 24 | 24 | 17 | 15 | 13 | 6 | 4 | 5 | 1 | 2 | 3 | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | 1 | 10 | 11 | 9 | 12 | 13 | 13 | 10 | 11 | 7 | 12 | 4 | 2 | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. |
| O 186 | „ 14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 187 | „ 14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. |
| B 125 | „ 15 | 3 | .. | .. | .. | .. | .. | 1 | .. | 2 | 8 | 12 | 23 | 25 | 20 | 26 | 28 | 25 | 35 | 20 | 34 | 13 | 7 | 6 | 4 | 2 | 1 | 1 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 3 | 10 | 4 | 18 | 13 | 24 | 18 | 22 | 18 | 23 | 21 | 7 | 4 | 3 | 3 | 2 | 2 | 1 | 1 | .. |

†† Samples selected for transplantation ; probably not representative.
§ Accident to net probably did not influence catch.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 135 | 16·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 207 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 33 | 25·8 |
| .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 38 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 21 | 18·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 42 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 20 | 18·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 22 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 51 | 18·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 70 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 48 | 19·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 60 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 18 | 20·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 42 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 32·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | F. 13 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 35·9 |
| 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 12 | |
| .. | 1 | 1 | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | M. 14 | 36·2 |
| 1 | .. | 1 | 2 | 1 | .. | 1 | 1 | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 21 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 15 | 29·1 |
| 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14 | |
| .. | 2 | 1 | 1 | 1 | 1 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 12 | 38·3 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | 1 | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 36·8 |
| .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 9 | 35·1 |
| .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 33·1 |
| .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | 2 | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 14 | 32·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 38·7 |
| .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | 1 | 1 | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 41·2 |
| .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | 1 | .. | .. | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 22 | 33·4 |
| 2 | 2 | 1 | 2 | 3 | .. | .. | .. | 2 | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 40 | |
| 1 | .. | 2 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 23 | 34·1 |
| 2 | 1 | .. | 1 | 2 | 1 | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| .. | 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 34·1 |
| 3 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 29 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | .. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | 17·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 63* | 18·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 57* | |
| .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 124 | 20·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 99 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 155 | 19·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 120 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 32·8 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | |
| .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 26·9 |
| .. | 1 | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 5 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 294 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 202 | 22·0 |

* Accident to net probably influenced catch. *See* Table III.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | 1904. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B 126 | April 15 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 2 | 3 | 2 | 4 | 3 | 4 | 5 | 5 | 5 | 1 | 2 | 1 | 2 | 1 |
| | | | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 3 | 1 | 1 | 2 | 4 | 1 | 2 | 3 | 3 | 2 |
| B 127 | May 11 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 1 | 3 | .. | .. | 2 | .. | 1 | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. |
| B 128 | „ 12 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 129 | „ 12 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| B 130 | „ 12 | 3 | .. | .. | .. | .. | .. | 3 | 12 | 16 | 20 | 19 | 10 | 10 | 5 | 6 | 4 | 4 | 2 | 4 | 3 | 5 | 1 | 2 | 1 | 1 | .. | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 10 | 12 | 5 | 7 | 7 | 2 | 4 | 5 | .. | 2 | .. | .. | 1 | 1 | .. | 2 | 2 | .. | 1 | .. | 1 | .. |
| B 131 | „ 12 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 4 | 3 | .. | 1 | 1 | .. | 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | 2 | 3 | 2 | 3 | 2 | 1 | 2 | 1 | 2 | .. | .. | .. |
| O 188 | „ 13 | 2 | .. | .. | .. | 1 | 1 | 1 | 12 | 9 | 7 | 10 | 21 | 25 | 21 | 15 | 8 | 5 | 5 | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 4 | 4 | 9 | 10 | 17 | 9 | 14 | 20 | 9 | 5 | 4 | 5 | 7 | 2 | 1 | 6 | 1 | .. | .. | .. | .. | .. | .. | .. |
| B 132 | „ 13 | 2 | .. | .. | 1 | 6 | 19 | 27 | 28 | 25 | 19 | 35 | 49 | 67 | 51 | 34 | 12 | 6 | 5 | 7 | 5 | 2 | 3 | 4 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | 1 | 1 | 9 | 17 | 20 | 15 | 17 | 19 | 35 | 39 | 41 | 48 | 33 | 19 | 12 | 11 | 12 | 6 | 3 | 5 | .. | .. | .. | .. | .. | .. | .. |
| B 133 | „ 13 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 5 | 5 | 4 | 6 | 3 | 3 | 4 | 1 | 3 | 7 | 7 | 9 | 3 | 5 | 4 | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 4 | 3 | 3 | 3 | 2 | .. | 2 | 3 | .. | 3 | 2 | 9 | 9 | 8 | 7 | 5 | 4 | |
| B 134¶ | „ 17 | 2 | .. | .. | .. | .. | 3 | 1 | 5 | 1 | 2 | 10 | 14 | 16 | 12 | 16 | 17 | 9 | 11 | 2 | 3 | 2 | 4 | 1 | 1 | .. | 1 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | 2 | 1 | 1 | 2 | 2 | 9 | 5 | 7 | 13 | 9 | 6 | 7 | 5 | .. | 3 | 3 | 2 | 4 | 7 | .. | 3 | .. | .. | |
| B 136 | „ 18 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. |
| B 137§§ | „ 18 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 |
| B 138§§ | „ 21-22 | 3 | .. | .. | .. | .. | .. | 12 | 18 | 18 | 15 | 28 | 36 | 36 | 42 | 32 | 33 | 24 | 8 | 19 | 20 | 17 | 17 | 21 | 9 | 3 | .. | 4 | 1 | .. |
| | | | .. | .. | .. | .. | .. | 1 | 7 | 7 | 20 | 4 | 11 | 21 | 29 | 23 | 13 | 13 | 8 | 16 | 13 | 13 | 18 | 18 | 13 | 20 | 13 | 8 | 3 | 2 | 1 |
| B 139§§ | „ 23 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 1 | .. | 1 | 1 | .. | 3 | 1 | 4 | 8 | 11 | 5 | 2 | 3 | 5 |
| | | | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 4 | 6 | 14 | 11 | 14 | 6 |
| B 140§§ | „ 24 | 1 | .. | .. | .. | .. | 1 | 6 | 30 | 55 | 53 | 74 | 141 | 194 | 224 | 224 | 144 | 89 | 75 | 37 | 30 | 11 | 7 | 2 | 6 | 4 | 1 | .. | .. | .. | .. |
| B 141§§ | „ 24 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | 3 | 3 | 10 | 20 | 32 | 34 | 24 | 27 | 8 | 6 | 4 | 2 | 1 | 3 | 1 | 4 | 2 | .. | 1 | .. | 1 |
| B 142§§ | „ 25 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. |
| B 143§§ | „ 26 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | 1 |
| B 144§ §§ | „ 26 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 1 | .. | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | |
| B 145§§ | „ 27 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 3 |
| B 146§§ | „ 27 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 4 | 5 | 1 | 5 | 5 | 4 | 3 | 5 | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 7 | 7 | 4 | 3 | 3 | 2 | 2 | 1 | 1 | 2 | .. | .. | .. | 1 | .. | .. | .. | .. |
| B (c.) 147§§ | „ 27 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 4 | 8 | 4 | 5 | 3 | 4 | 2 | 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | 3 | 4 | 1 | 7 | 5 | 2 | 4 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| B 150§ | June 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 3 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 152 | „ 17 | 3 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 153* | „ 18 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 154* | „ 18 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 4 | 2 | 3 | 5 | 1 | 4 | 3 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 6 | 1 | 2 | . | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| O 189 | „ 28 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | 1 | .. | 1 | 1 | 6 | 2 | 9 | 4 | 2 | 2 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 2 | 4 | 3 | 1 | 4 | 3 | 2 | 4 | 2 |
| O 190§ | „ 28 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 7 | .. | 5 | 1 | 4 | 3 | 1 | 2 | 4 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | 3 | 2 | 2 | 5 | 2 | 1 | 4 | 5 | 1 | 2 |
| O 191 | July 2 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 3 | .. | .. | .. | .. | .. | 1 | .. | 1 | 5 |
| O 192 | „ 2-3 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 3 | 1 | .. | 2 | 2 | 7 | 12 | 14 |
| O 193 | „ 3 | 5¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 3 | 5 | 14 |
| O 194 | „ 3 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 12 |

¶ Only part of catch measured.
§§ Trawling with chain round the ground rope.
§ Accident to net probably did not influence catch.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 44 | 28·6 |
| 2 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 25·8 |
| .. | .. | 1 | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 37·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | F. 2 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | 28·5 |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 130 | 18·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 62 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 15 | 25·8 |
| 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 24 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 145 | 19·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 127 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 405 | 18·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 363 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 73 | 27·3 |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 72 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 132 | 21·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 91 | |
| .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 34·5 |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 36·4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 413 | 21·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 295 | |
| .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 50 | 31·2 |
| 5 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 72 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡1408 | 19·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 188 | 20·8 |
| .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 36·1 |
| 2 | .. | 2 | 1 | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 11 | |
| 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 35·5 |
| 5 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 13 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 36·9 |
| 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | |
| 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 2 | 40·1 |
| 3 | 3 | 2 | 3 | .. | 1 | .. | .. | 1 | 1 | 1 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 25 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 37 | 20·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 36 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 39 | 19·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 31 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 19·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 17·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1* | .. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 27 | 19·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 17 | |
| .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 34 | 31·4 |
| 1 | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | F. 36 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 28 | 31·6 |
| .. | 2 | 3 | .. | .. | 2 | 1 | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 44 | |
| 3 | 3 | 1 | 1 | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 25 | 35·2 |
| 7 | 15 | 17 | 9 | 8 | 2 | 3 | 2 | 1 | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 111 | 36·5 |
| 10 | 13 | 7 | 5 | 4 | 1 | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 69 | 36·6 |
| 6 | 9 | 10 | 7 | 3 | 1 | 2 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 60 | 38·1 |

* Accident to net probably influenced catch. *See* Table III.
‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O 195 | 1904. July 3 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | ... | 1 | .. | 2 | 3 | 5 | 5 |
| O 196 | „ 3-4 | 6½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 | 3 | 5 | 10 |
| O 197 | „ 4 | 5⅔ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 3 | 12 |
| O 198 | „ 4 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | 1 | .. | .. | ... | .. | 1 | 2 | 4 | 5 | 6 |
| O 199§ | „ 4 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 1 | 1 | 1 | 1 | 2 | .. | .. | .. | 1 | 2 | 1 | 1 |
| O 200 | „ 4-5 | 5¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ... | 1 | 2 | 4 | 7 |
| O 201 | „ 5 | 5¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | 1 |
| O 202§ | „ 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| O 203 | „ 5 | 3½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | 1 |
| O 204 | „ 5-6 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 4 | 5 |
| O 205 | „ 6 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 3 | 3 | 7 |
| O 206 | „ 6 | 5⅓ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 2 | 2 |
| O 207 | „ 6 | 4 11/12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 4 |
| O 208 | „ 6-7 | 5¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | .. | 2 | 3 | 6 |
| O 209 | „ 7 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | .. | 1 | 1 | 1 | 2 |
| O 210* | „ 7 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 1 | .. | .. | 1 | 2 | 2 | .. | 1 | 1 | .. | 2 | 2 |
| O 211 | „ 7 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | .. | .. | 1 | 1 | .. | 3 | .. | 1 |
| O 212 | „ 7-8 | 5⅔ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | 1 | .. | .. | 1 | .. | .. | 2 | 1 |
| B (c.) 155 | „ 20 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 213 | „ 20 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | . | ... | 2 | .. |
| O 214 | „ 20 | 6½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | 1 | 1 |
| O 215 | „ 20-21 | 7⅙ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | 1 | 1 | .. | 1 |
| B (c.) 156 | „ 21 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | ... | .. | 1 | .. | .. | .. | .. | .. | .. |
| O 216 | „ 21 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 5 | 4 | 2 | 1 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 4 | 3 | .. | 2 | 4 | 3 |
| B 157§ | „ 22 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | 2 | 3 | 1 | 2 | 4 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. | 1 | 3 | 6 | 1 | 4 |
| B 158 | „ 22 | 4¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | 2 | 4 | 2 | 4 | 5 | 3 | 5 | 2 | 3 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 2 | .. | 3 | 3 | 1 | 3 | 3 | 3 | 6 | 4 | 6 | 5 |
| O 217 | „ 22 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 | 3 | 1 | .. | 1 | 3 | 3 | 3 | 4 | 5 | 6 | 4 | 11 | 11 | 5 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | 1 | 2 | 5 | 7 | 2 | 1 | 7 | 7 | 5 | 4 |
| O 218* | „ 22-23 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | 3 | 2 | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 1 |
| O 219* | „ 23 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | 1 | 1 | 2 | 2 | 2 | 1 | 6 | 6 | 3 | 4 | 1 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 3 | 4 | 2 | 1 | 4 | 5 | 5 | 5 |
| O 220 | „ 23 | 4⅘ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 2 | 1 | 5 | 1 | 6 | 5 | 9 | 7 | 3 | 5 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 | 3 | 7 | .. | 4 | 4 | ... |
| O 221 | „ 23-24 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 2 | 7 | 8 | 6 | 11 | 19 | 17 | 7 | 6 | 4 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ... | 1 | 1 | 2 | 2 | 3 | 7 | 7 | 8 | 8 | 9 | 6 | 7 | 7 |
| O 222 | „ 24 | 6¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 4 | 4 | 16 | 16 | 23 | 24 | 26 | 27 | 27 | 13 | 7 | 5 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 2 | 6 | 17 | 18 | 13 | 25 | 17 | 19 | 18 | 15 | 11 |
| O 223 | „ 24 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 5 | .. | 8 | 13 | 21 | 21 | 26 | 33 | 25 | 16 | 15 | 6 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 2 | 6 | 10 | 24 | 25 | 27 | 16 | 19 | 11 | 7 | 6 |
| O 224§ | „ 24-25 | 6⅔ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | ... | .. | 5 | 6 | 10 | 15 | 34 | 17 | 17 | 13 | 11 | 5 | 5 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | 5 | 5 | 9 | 22 | 18 | 17 | 14 | 12 | 8 | 3 | 2 |
| O 225§ | „ 25 | 5½ | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 8 | 9 | 9 | 10 | 12 | 11 | 6 | 5 | 3 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 2 | 8 | 12 | 10 | 12 | 5 | 7 | 3 | 1 | 1 |
| O 226* | „ 25 | 5½ | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 8 | 6 | 11 | 5 | 10 | .. | 7 | 2 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 2 | 4 | 7 | 4 | 14 | 5 | 4 | 3 | 3 | 2 |
| O 227* | „ 25 | 1⅔ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 5 | 3 | 2 | .. | 3 | 2 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | .. | 4 | 4 | 2 | 4 | .. | 1 | 1 | .. |

§ Accident to net probably did not influence catch.
‡ Sex not determined.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| 6 | 5 | 8 | 8 | 3 | 2 | 3 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 54 | 36·9 |
| 10 | 10 | 11 | 4 | 3 | 1 | 5 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | ‡ 71 | 37·5 |
| 15 | 9 | 15 | 5 | 5 | 1 | .. | .. | 2 | .. | .. | .. | .. | 1 | 1 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 76 | 37·8 |
| 4 | 3 | 1 | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 34 | 34·5 |
| 1 | 2 | 5 | 4 | .. | 1 | 2 | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 31 | 34·9 |
| 3 | 7 | 6 | 10 | 2 | 3 | 3 | .. | 2 | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 54 | 38·3 |
| 5 | 1 | 3 | 2 | 4 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 22 | 37·4 |
| .. | 1 | 1 | 1 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 6 | 31·0 |
| 1 | 3 | 6 | 5 | 3 | 2 | 2 | .. | 1 | 3 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 33 | 39·3 |
| 5 | 6 | 3 | 4 | 1 | 1 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 34 | 37·4 |
| 7 | 5 | 3 | 2 | 1 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 38 | 36·1 |
| 5 | 6 | 3 | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 25 | 36·3 |
| 6 | 6 | 6 | 5 | 3 | 6 | 3 | 1 | .. | 1 | 2 | .. | .. | 1 | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 53 | 39·1 |
| 11 | 6 | 3 | 5 | 3 | 1 | 2 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 62 | 35·8 |
| 1 | 2 | 3 | 3 | 2 | .. | 1 | .. | .. | .. | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 38 | 33·3 |
| 6 | 3 | 1 | 2 | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 31* | 33·0 |
| 1 | 1 | 1 | 3 | 3 | .. | 1 | 2 | 1 | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 26 | 37·0 |
| 2 | .. | 2 | 3 | 3 | 4 | 1 | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 27 | 36·4 |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 2 | 36·5 |
| 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 37·8 |
| 1 | 3 | 3 | .. | 3 | .. | 1 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 18 | |
| 1 | 3 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 35·7 |
| 1 | 3 | .. | 3 | 4 | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 23 | |
| 4 | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 38·3 |
| .. | 4 | 2 | 4 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 38·0 |
| .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 3 | |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 20 | 33·5 |
| 3 | 6 | 2 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 32 | |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 17 | 34·2 |
| 2 | .. | 2 | .. | 3 | .. | .. | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 31 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 36 | 31·5 |
| 2 | 1 | .. | 2 | 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 53 | |
| 2 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 73 | 31·3 |
| 1 | 3 | 1 | 1 | 4 | 4 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 60 | |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 12* | 36·3 |
| 3 | 4 | 3 | 3 | 2 | 1 | 2 | 1 | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 38* | |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 37* | 32·5 |
| 3 | 2 | 1 | 2 | 1 | 1 | .. | 1 | .. | 1 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 48* | |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 50 | 32·2 |
| .. | .. | 1 | 1 | .. | .. | 1 | .. | 3 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 30 | |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 94 | 31·3 |
| 4 | 1 | 4 | 3 | 1 | 3 | 3 | 1 | .. | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 91 | |
| 3 | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 202 | 31·1 |
| 8 | 10 | 7 | 4 | 1 | 1 | 4 | 3 | 2 | 1 | 2 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 210 | |
| 2 | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 199 | 30·7 |
| 5 | 2 | 1 | 2 | 2 | 1 | 4 | 3 | 1 | .. | 1 | 1 | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 185 | |
| .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 141 | 29·6 |
| 3 | .. | 1 | .. | 4 | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 130 | |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 80 | 29·9 |
| 6 | .. | 1 | .. | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 77 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 56* | 29·4 |
| .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 56* | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 19* | 28·9 |
| .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 25* | |

* Accident to net probably influenced catch. *See* Table III.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| O 228 | July 26 | 3½ | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 5 | 16 | 27 | 42 | 37 | 40 | 14 | 9 | 6 | 2 | 1 | .. | 2 | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 9 | 20 | 40 | 55 | 36 | 23 | 14 | 4 | 5 | .. | .. | 1 | .. | 1 | 1 |
| O 229 | „ 26 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 9 | 15 | 26 | 34 | 21 | 21 | 17 | 10 | 10 | 1 | 1 | 1 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 6 | 8 | 24 | 29 | 30 | 24 | 14 | 12 | 6 | 4 | 1 | 1 | 1 | .. | .. |
| O 230 | „ 26–27 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 6 | 11 | 33 | 33 | 50 | 25 | 19 | 6 | 5 | 2 | 3 | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 1 | 11 | 24 | 35 | 58 | 48 | 29 | 8 | 14 | 3 | 2 | .. | 3 | .. | .. | .. |
| B 159 | „ 27 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | 8 | 7 | 28 | 36 | 34 | 26 | 18 | 17 | 10 | 2 | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | 3 | 3 | 9 | 11 | 22 | 43 | 30 | 28 | 11 | 8 | 6 | 6 | .. | 1 | .. | 1 | 1 |
| B 160 | „ 27 | 5¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 7 | 6 | 14 | 28 | 23 | 22 | 10 | 11 | 3 | 2 | .. | 1 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 8 | 20 | 32 | 40 | 18 | 8 | 5 | 3 | 2 | .. | .. | .. | .. | .. |
| B 161 | „ 27 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 9 | 23 | 27 | 42 | 28 | 15 | 7 | 5 | 1 | 9 | .. | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 18 | 26 | 34 | 43 | 23 | 9 | 6 | 2 | 3 | 1 | .. | 1 | .. | .. |
| B (c.) 162 | Aug. 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | 5 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 3 | 6 | 4 | 3 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 231 | „ 3 | 4 | .. | .. | .. | .. | .. | .. | 1 | 13 | 26 | 42 | 42 | 20 | 13 | 6 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | 5 | 23 | 32 | 32 | 22 | 14 | 3 | 7 | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B (c.) 163 | „ 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 2 | 1 | .. | 1 | .. | 1 | .. | .. | 2 | .. | 1 | .. |
| O 232 | „ 3 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 15 | 30 | 32 | 53 | 52 | 32 | 16 | 3 | 3 | 4 | 1 | 1 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 6 | 27 | 33 | 51 | 55 | 35 | 30 | 11 | 8 | 7 | 2 | 2 | 3 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 11 | 21 | 43 | 63 | 77 | 87 | 66 | 31 | 20 | 17 | 4 | 2 | 5 | 1 | .. | .. |
| B 166 | „ 9 | 3⅝ | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 1 | 1 | .. | 2 | 4 | 7 | 5 | 2 | .. | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 3 | 1 | 6 | 2 | 2 | 3 | 3 | 1 | 2 |
| B 167 | „ 9–10 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | 6 | 6 | 9 | 12 | 5 | 6 | 3 | 3 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 5 | 10 | 7 | 21 | 13 | 9 | 6 | 6 |
| B 168§ | „ 16 | ¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 169 | „ 16 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 2 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 2 | 2 | 1 | 2 | 1 | .. | 1 | 1 | 1 | .. | 1 | .. | .. |
| B 171 | „ 17 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 2 | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | 2 | 1 | 2 | 1 |
| B 172 | „ 17 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | 1 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 |
| B 174 | „ 20 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| B 175 | „ 20 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 5 | 11 | 11 | 18 | 8 | 17 | 7 | 11 | 3 | 4 | 4 | .. | .. | .. | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 5 | 7 | 7 | 13 | 8 | 3 | 5 | 3 | 2 | 2 | 2 | 2 | .. | 3 | |
| B 176 | „ 21 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 3 | 1 | 3 | 2 | 1 | 1 | 2 | 1 | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | 2 | 1 | 2 | 1 | 1 | 1 | 1 | .. |
| B 177 | „ 21 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 4 | 12 | 28 | 26 | 25 | 22 | 12 | 4 | 3 | 1 | .. | .. | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 18 | 30 | 32 | 32 | 19 | 14 | 7 | 6 | .. | 1 | 1 | .. | .. | .. | 1 | .. | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 5 | 30 | 62 | 74 | 67 | 49 | 37 | 34 | 18 | 13 | 9 | 6 | 1 | 2 | 2 | 2 | 2 |
| B 178 | „ 21 | 2 | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 20 | 45 | 51 | 22 | 17 | 8 | 8 | 6 | 2 | 5 | 2 | 1 | .. | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 16 | 21 | 47 | 32 | 23 | 8 | 4 | 3 | 2 | 2 | 2 | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 7 | 2 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 179¶ | „ 21–22 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 17 | 73 | 156 | 163 | 170 | 110 | 90 | 62 | 38 | 26 | 15 | 24 | 18 | 3 | 1 | 2 | .. | 2 |
| B 180 | „ 22 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 13 | 33 | 40 | 34 | 32 | 23 | 11 | 13 | 4 | 4 | 2 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 24 | 22 | 23 | 25 | 22 | 7 | 5 | 7 | 2 | 3 | 3 | .. | .. | .. | 1 | 1 |
| B 181§ | „ 22 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| B 182 | „ 22 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 6 | 7 | .. | 3 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| B 183 | „ 28 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 |
| B 185 | „ 28 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 2 | .. | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | 2 | 3 | 2 |

§ Accident to net probably did not influence catch.
¶ Only part of catch measured.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 205 | 24·2 |
| 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 215 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 173 | 25·0 |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 167 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 195 | 24·2 |
| 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 244 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 191 | 24·6 |
| 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 191 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 129 | 24 5 |
| 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 144 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 170 | 24·8 |
| .. | 2 | .. | 2 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 176 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 12 | 16·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 165 | 16·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 142 | |
| .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 26·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 11 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 250 | |
| 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 279 | 24·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 450 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 30 | 30·3 |
| 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 30 | |
| 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 60 | 31·5 |
| 5 | 5 | 4 | 2 | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 103 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 22·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 25·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 33·8 |
| 3 | 3 | 2 | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 21 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 32·6 |
| .. | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 25·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 5 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 102 | 26·3 |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 65 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 18 | 29·8 |
| 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 142 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 163 | 23·2 |
| .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 416 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 193 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 166 | 21·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 12 | |
| .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 979 | 22·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 212 | 22·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 152 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 22·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 22 | 22·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| 3 | .. | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 9 | 40·2 |
| 1 | 1 | 1 | 2 | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | F. 16 | |
| 2 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 12 | 35·7 |
| .. | .. | 1 | 2 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | . | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 17 | |

‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| B 186 | 1904. Aug. 28-29 | 5 | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 4 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 4 |
| B 187 | „ 29 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B (c.) 188 | „ 29 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 189 | „ 29 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 2 |
| B 190 | „ 29-30 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 192 | „ 30 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 196 | „ 31 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 197 | Sept. 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| B 198 | „ 1 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 200 | „ 2 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 1 | .. | 3 | 1 | 2 | 4 | 2 | .. | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | 1 | 2 | .. | 2 | .. | 1 | 1 | .. | .. | 1 | 2 |
| B 201 | „ 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 4 | 2 | 4 | 3 | 7 | 4 | 4 | 4 | 4 | 2 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 3 | 4 | 6 | 4 | 3 | 2 | 4 | 1 | 2 | 1 | 1 | 3 |
| B 202 | „ 2-3 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 3 | 4 | 2 | 10 | 10 | 4 | 11 | 6 | 8 | 3 | 1 | 3 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 5 | 4 | 6 | 10 | 4 | 8 | 7 | 4 | 4 | 3 | 3 | 3 | .. |
| B (c.) 203 | „ 3 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | 2 | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 1 | .. | .. | 1 | 1 | 1 | .. | .. | .. | 1 | .. | .. |
| B 204 | „ 15 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | 46 | 160 | 190 | 166 | 85 | 42 | 29 | 23 | 16 | 4 | 1 | 2 | 2 | 1 | .. | 1 | .. | .. | .. |
| B 205¶ | „ 15 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 7 | 35 | 85 | 72 | 56 | 67 | 91 | 42 | 45 | 23 | 18 | 9 | 6 | 2 | 4 | 4 | 1 | .. | .. | .. |
| B 206 | „ 16 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | 2 | 4 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. |
| O 233 | „ 16 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 10 | 13 | 15 | 18 | 13 | 7 | 2 | 5 | .. | 1 | 2 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 4 | 10 | 12 | 12 | 14 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | .. |
| O 234 | „ 16 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | 2 | 6 | 11 | 19 | 20 | 24 | 14 | 9 | 5 | 4 | 1 | .. | .. | 1 |
| | | | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | 3 | 10 | 15 | 21 | 24 | 21 | 15 | 7 | 2 | 6 | 2 | 2 | .. |
| O 235 | „ 16 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 11 | 16 | 21 | 7 | 14 | 15 | 12 | 10 | 4 | 5 | 6 |
| O 236 | „ 17 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 4 | 14 | 7 | 14 | 22 | 15 | 18 | 5 | 7 | 6 | 6 | 2 |
| O 237§ | „ 17 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 8 | 8 | 26 | 14 | 16 | 16 | 10 | 4 | 5 | 3 | 4 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 6 | 5 | 15 | 13 | 8 | 17 | 10 | 5 | 6 | 4 | 1 | 3 |
| O 238 | „ 17 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 4 | 5 | 9 | 4 | 3 | 7 | 3 | 3 | 3 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 5 | 8 | 8 | 2 | 5 | 3 | 4 | 1 | 2 |
| O 239 | „ 17 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 5 | 5 | 10 | 7 | 7 | 5 | 4 | 2 | 3 | .. | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 5 | 7 | 3 | 5 | 5 | 3 | 3 | .. | 2 |
| O 240 | „ 17 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 4 | 8 | 12 | 13 | 14 | 8 | 12 | 6 | 9 | 11 | 6 | 11 |
| O 241 | „ 18 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 11 | 5 | 15 | 10 | 12 | 7 | 11 | 11 | 4 | 10 | 7 |
| O 242§ | „ 18 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 10 | 6 | 3 | 1 | 6 | 1 | .. | 3 | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 2 | 6 | 4 | 4 | 6 | 3 | 3 | 4 | 4 | 2 |
| O 243§ | „ 18 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 2 | 7 | 5 | 5 | 11 | 1 | 4 | 2 | 6 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 5 | 3 | 7 | 2 | 7 | 3 | 8 | 6 | 1 | 1 |
| O 244§ | „ 18 | 4¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 4 | .. | 1 | 2 | .. | 2 | 3 | 2 | 5 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 3 | 1 | 3 | 5 | 1 | 3 | 4 | .. |
| O 245§ | „ 19 | 3½ | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 1 | 4 | 2 | .. | 1 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| O 246§ | „ 19 | 4¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | 5 | 5 | 2 | .. | 2 | 3 | .. | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 3 | 1 | 3 | 1 | 1 | .. | .. | 2 |
| B 207 | „ 19 | 5¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 5 | 7 | 8 | 3 | 2 | 2 | 7 | 2 | 5 | 6 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 2 | 3 | 1 | 3 | 5 | 5 | 4 | 4 | 1 | 1 |
| B 209 | „ 20 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 6 | 3 | .. | .. | 1 | 2 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 2 | .. | .. | .. | 1 | 1 | 1 | .. |

§ Accident to net probably did not influence catch.
¶ Only part of catch measured.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| 3 | .. | 5 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 16 | 38·0 |
| 2 | 2 | 1 | 1 | 2 | .. | 3 | 3 | 1 | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 26 | |
| 1 | 2 | .. | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 39·4 |
| .. | .. | 1 | .. | 2 | .. | .. | 1 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 40·2 |
| .. | 2 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| 1 | 2 | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 38·8 |
| .. | 2 | 2 | .. | 4 | 2 | 2 | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 2 | 42·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | F. 2 | 65·5 |
| .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 39·1 |
| .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 3 | |
| .. | 1 | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 44·7 |
| .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | F. 3 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 46·5 |
| . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | |
| 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 21 | 31·2 |
| 1 | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 18 | |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 45 | 30·3 |
| 2 | .. | 3 | 2 | 2 | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F 50 | |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 70 | 28·1 |
| 1 | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 69 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 29·7 |
| .. | .. | 1 | 2 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 780 | 19·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 569 | 21·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 14 | 26·7 |
| .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 93 | 26·2 |
| .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 69 | |
| 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 120 | 27·5 |
| 3 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 134 | |
| 4 | 4 | 6 | .. | 1 | 3 | .. | 1 | .. | .. | 1 | 2 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 150 | 30·5 |
| 4 | 1 | .. | 2 | 5 | .. | .. | 1 | .. | 2 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 139 | 30·1 |
| 4 | .. | 1 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 127 | 29·2 |
| 1 | 1 | 2 | .. | .. | .. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 108 | |
| .. | 2 | 2 | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 54 | 31·1 |
| 6 | 3 | 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 56 | |
| 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 56 | 30·6 |
| 3 | .. | .. | 1 | .. | 1 | .. | .. | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 46 | |
| 6 | 7 | 3 | 4 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 146 | 31·5 |
| 6 | 3 | 1 | 3 | .. | 3 | 1 | 2 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 131 | 31·4 |
| 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 39 | 30·2 |
| .. | 1 | .. | 2 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 47 | |
| 2 | 2 | 3 | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | M. 61 | 31·3 |
| 4 | 2 | 1 | .. | 1 | 3 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 60 | |
| 2 | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 25 | 32·5 |
| 3 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 29 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 15 | 29·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 24 | 30·3 |
| 1 | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 18 | |
| 2 | 1 | 3 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 59 | 31·3 |
| 1 | .. | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | . | . | .. | .. | .. | .. | .. | .. | .. | F. 38 | |
| 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 23 | 32·2 |
| 1 | 3 | 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 17 | |

‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| B 210 | 1904. Sept. 20 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 1 | 1 | 1 | 3 |
| B 211 | „ 20 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 3 | 2 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. |
| B 212 | „ 20 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 3 | 6 | 7 | 7 | 11 |
| B 213 | „ 27 | 1¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | 1 |
| B 214 | „ 27–28 | 4½ | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 2 | 2 | 2 | 4 | 4 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | 1 | 2 | 2 | 1 |
| B 215 | „ 28 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | .. | 1 | 1 | .. | 3 | 1 | 4 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 2 | 2 | 1 | .. | .. |
| B 216 | „ 28 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | 1 |
| B 217 | „ 28 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 2 | 2 | 4 | 6 | 4 | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | 1 | 2 | .. | .. | 1 | 1 |
| B 218 | „ 28 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 1 | 4 | 1 | 3 | 5 | 7 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | .. | .. | .. | .. | 3 | 2 | 4 | 5 | 2 | 2 | .. | 2 | 2 |
| B 219¶¶ | „ 28 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | 4 | 2 | 3 | 2 | 2 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 220 | „ 29 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 | .. | 1 | 2 | 1 | 7 | 1 | 3 | 2 | 4 |
| | | | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 3 | 2 | 1 | .. | 1 | .. | 5 | 3 | .. | .. | 4 | 2 | .. | 4 |
| B 221 | „ 29 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 1 | .. | 7 | 6 | 7 | 4 | 6 | 7 | 4 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | . | .. | .. | 3 | 2 | 1 | 4 | 4 | 4 | 5 | 3 | 6 | 3 |
| B 224§ | Oct. 4 | 1⅝ | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 225 | „ 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 226 | „ 5 | 2 | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 5 | 2 | 1 | 1 | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 227 | „ 5 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 2 | 2 | 1 | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 229† | „ 15 | 1¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 230§ | „ 16 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| B 231 | „ 16 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| B 232 | „ 16 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| B 235§ | „ 18 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 |
| B 236 | „ 18 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 |
| B 237 | „ 18 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| B 238 | „ 19 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 6 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 2 | |
| B 239 | „ 19 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | |
| O 247 | „ 19 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | .. | 1 | 6 | 6 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | | 1 | 1 | 1 | 2 |
| O 248 | „ 20 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | 1 | .. | . | .. | 1 | 2 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 |
| O 249 | „ 20 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. |

¶¶ One fish not measured.
§ Accident to net probably did not influence catch.

| Centimetres | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | | |
| 1 | 1 | 1 | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 35·6 |
| 1 | 1 | .. | .. | 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 15 | 36·1 |
| .. | 4 | 4 | 3 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14 | |
| 6 | 3 | 4 | 2 | 1 | 1 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 56 | 34·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 31·1 |
| . | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 17 | 30·4 |
| 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 16 | 33·1 |
| 3 | 2 | 1 | 1 | 1 | . | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | F. 17 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 36·3 |
| 1 | .. | .. | 2 | 2 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 11 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 23 | 30·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 27 | 31·8 |
| 2 | 1 | 1 | 3 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 37 | |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 20 | |
| 2 | 3 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 3 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 17 | 34·9 |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1 | |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 27 | 32·2 |
| 4 | 3 | 3 | 2 | 1 | 1 | .. | .. | 2 | 1 | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 48 | |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 47 | 32·5 |
| 2 | 2 | 1 | 3 | 3 | .. | .. | 1 | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 51 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 5 | 15·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 17 | 17·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 12 | 20·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | — |
| .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 40·1 |
| .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | .. | 1 | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 2 | |
| 1 | .. | .. | 2 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | 38·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1 | |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 39·8 |
| .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| 3 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 36·5 |
| 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 36·1 |
| 2 | .. | 1 | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | |
| .. | 2 | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | 39·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1 | |
| 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 11 | 35·6 |
| 1 | 1 | 2 | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 12 | |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | |
| 4 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | 37·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1 | |
| 2 | 4 | 2 | 3 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 32 | 38·3 |
| 4 | 2 | 1 | 1 | 6 | 4 | .. | 3 | 3 | 1 | .. | 1 | .. | 2 | .. | 1 | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 40 | |
| 2 | 1 | 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 37·8 |
| .. | 3 | 1 | .. | 2 | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 13 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M 2 | 40 7 |
| 1 | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F . 10 | |

† Accident to net which may or may not have influenced catch.
‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| O 250 | 1904. Oct. 20 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | 1 |
| O 251 | „ 20 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 |
| O 252† | „ 21 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 2 | .. | .. | .. | .. | 4 | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 2 | 3 | 1 | 2 | |
| O 253 | „ 21 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 3 | .. | .. | 1 | 1 | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 1 | 1 | 1 | .. | |
| O 254 | „ 21 | 2¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. |
| O 255 | „ 22 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 8 | 4 | 9 | 12 | 14 | 2 | 2 | 4 | 2 | 3 | 1 | 1 | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 4 | 4 | 7 | 11 | 16 | 15 | 14 | 10 | 6 | 4 | .. | .. | 2 | 2 | 1 | 1 |
| O 256 | „ 22 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 11 | 6 | 11 | 9 | 4 | 6 | 4 | 1 | 1 | 1 | .. | 1 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 9 | 10 | 8 | 12 | 11 | 11 | 8 | 3 | 5 | 1 | .. | .. | 3 | 1 |
| O 257 | „ 22 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 8 | 4 | 10 | 14 | 18 | 6 | 4 | 6 | 5 | 5 | 3 | 1 | 3 | .. | 1 | .. | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 5 | 24 | 10 | 7 | 6 | 10 | 2 | 8 | 3 | 5 | 8 | .. | 2 | 1 | 2 |
| O 258 | „ 23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 5 | 12 | 9 | 15 | 16 | 8 | 4 | 3 | 2 | 3 | 4 | 2 | 1 | 2 | 3 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 11 | 7 | 12 | 14 | 13 | 4 | 5 | 10 | 5 | 5 | 2 | .. | 1 | 1 | 1 |
| O 259 | „ 23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 7 | 9 | 9 | 9 | 6 | 6 | 5 | .. | 3 | 2 | 4 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 5 | 7 | 10 | 4 | 6 | 7 | 9 | 3 | 8 | 5 | 5 | 5 | 3 | 7 |
| O 260 | „ 23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 4 | 1 | 3 | .. | 3 | 3 | 3 | 1 | 3 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 4 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | .. | 4 | 2 |
| O 261 | „ 23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 2 | 7 | 2 | 1 | 3 | 2 | 1 | .. | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | .. | .. | 1 | 1 | 4 | 1 | 3 | 3 | 2 | 4 | 1 | 3 |
| O 262 | „ 23-24 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | 12 | 13 | 9 | 5 | 4 | 4 | 3 | 3 | 1 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 9 | 10 | 12 | 5 | 5 | 1 | 2 | 1 | 3 | .. | 3 | 1 | .. |
| B 240 | „ 28 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| B 241 | „ 28 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| B (c.) 242¶¶ | Nov. 11 | 1¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | .. | .. | 2 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 2 | 1 | .. | 1 | 1 | .. | .. |
| B 243 | „ 11 | 2¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 1 | .. | 5 | 3 | 1 | 2 | 2 | .. | 2 | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | 3 | 4 | 1 | .. | 3 | 3 | 2 | 3 | 2 |
| B 244 | „ 17 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 4 | 7 | 8 | .. | 1 | 1 | 4 | 2 | 2 | 3 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | .. | 3 | .. | 2 | .. | .. | 2 | .. |
| B 245 | „ 17 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 1 | 3 | 4 | 1 | 1 | 1 | 2 | .. | 3 | 2 | 2 | . | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 1 | .. | .. | 3 | .. | 3 | 3 | .. | .. | . | .. |
| B 247 | „ 26 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 5 | 3 | 3 | 4 | 5 | 6 | 6 | 8 | 7 | 11 | 10 | 6 | 5 | 5 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 1 | 1 |
| B 248 | „ 26 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 1 | .. | 1 | 4 | 4 | 11 | 12 | 8 | 5 | 6 | 6 | 6 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 |
| B 250 | Dec. 1 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 251 | „ 2 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | 1 |
| O 263** | „ 8 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | |
| O 264** | „ 8 | 2½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | |
| B 253** | „ 9 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 2 | .. | .. | .. | 1 | 1 | .. | .. | 1 | .. |
| B 254** | „ 9 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 255§** | „ 9-10 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 256** | „ 10 | 5½ | .. | .. | .. | .. | .. | .. | 2 | 6 | 4 | 7 | 8 | 7 | 5 | 7 | .. | 2 | 4 | 5 | 5 | 8 | 12 | 9 | 10 | 9 | 5 | 5 | 2 | 3 | 2 |
| B 257** | „ 10 | 5½ | .. | .. | .. | .. | .. | .. | 1 | 2 | 5 | 7 | 7 | 10 | 16 | 13 | 7 | 14 | 5 | 6 | 7 | 5 | 13 | 9 | 6 | 12 | 13 | 14 | 12 | 10 | 5 |
| B 258** | „ 10-11 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 2 | 3 | 5 | 4 | 3 | 2 | 4 | 3 | 8 | 9 | 7 | 15 | 9 | 18 | 19 | 13 | 10 |
| B 259** | „ 11 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 5 | 2 | 4 | .. | 1 | 2 | 6 | 3 | 5 | 9 | 17 | 12 | 13 | 16 | 6 | 5 | 8 |
| B 260** | „ 11 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 1 | 1 | 2 | 5 | .. | 3 | 4 | 3 | 9 | 8 | 8 | 7 | 7 | 7 |
| B 261** | „ 11 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 3 | 2 | 2 | 3 | 1 | 5 | 3 | 11 | 9 | 17 | 7 | 8 | 6 | 8 | 6 |

† Accident to net which may or may not have influenced catch.
¶¶ One fish not measured.
** Measurements made by chief steward.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 37·3 |
| .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| 1 | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 38·7 |
| 1 | 1 | .. | .. | 2 | 1 | 1 | 1 | .. | 1 | 2 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14 | |
| 2 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 34·8 |
| 2 | .. | 2 | 1 | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| .. | .. | 2 | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 38·6 |
| 1 | 2 | 3 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | 2 | .. | 1 | .. | .. | 1 | . | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | F. 22 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M 1 | 29·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 67 | 24·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 98 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 59 | 25·4 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 87 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 92 | 25·0 |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 98 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 91 | 25·0 |
| 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 95 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 67 | 27·8 |
| 3 | 1 | 1 | .. | 1 | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 92 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 25 | 29·2 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 32 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 24 | 28·4 |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 29 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 65 | 25·7 |
| 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 59 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 30·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 22 | 29·6 |
| 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 26 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 37 | 28·0 |
| .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 13 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 24 | 27·2 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 88 | 29·8 |
| 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| 4 | .. | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 77 | 30·5 |
| 2 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 41·6 |
| .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 5 | |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 37·6 |
| .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | ‡ 8 | 39·5 |
| .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 6 | 41·7 |
| 2 | .. | .. | 2 | .. | 2 | .. | .. | 1 | 2 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 19 | 35·9 |
| .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 6 | 42·2 |
| 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 8 | 41·4 |
| 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 130 | 24·4 |
| 7 | 1 | 4 | 3 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 217 | 26·2 |
| 5 | 6 | 3 | 8 | 2 | .. | 2 | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 167 | 31·0 |
| 1 | 5 | 5 | 3 | .. | .. | .. | .. | 3 | 1 | 1 | 1 | .. | 2 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 140 | 31·1 |
| 1 | 3 | .. | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 77 | 31·3 |
| 3 | 4 | 5 | 1 | 1 | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | ‡ 111 | 31·1 |

§ Accident to net probably did not influence catch
‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| B 262** | 1904. Dec. 11-12 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 2 | 2 | 7 | 6 | 6 | 19 | 12 | 5 | 6 | 12 | 14 | 4 |
| B 263** | „ 13 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 3 | 5 | 3 | 6 | 8 | 13 | 13 | 12 | 19 | 13 | 13 | 16 | 8 | 3 | 13 | 4 | 4 | 3 |
| B 264** | „ 13 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 2 | 6 | 4 | 6 | 8 | 6 | 3 | 7 | 8 | 2 |
| B 265** | „ 13-14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | 5 | 4 | 14 | 11 | 17 | 11 | 18 | 12 | 25 | 19 |
| B 266** | „ 14 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | 1 | 1 | 2 | 2 | 2 | 3 | 6 | 4 | 5 | 9 | 10 | 9 | 8 |
| B 267** | „ 14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 1 | 1 | 2 | 3 | 3 | 4 | 2 | 8 | 3 | 5 | 2 | 8 |
| B 268* ** | „ 17 | 4¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 3 | .. | 1 | 2 | 1 | 2 | .. | 2 |
| B 269** | „ 17-18 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | 4 | 3 | 3 | 2 | 2 | 3 | 4 | 2 |
| B 270** | „ 18 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 1 | 2 | 5 | 6 | 6 | 4 | 2 | 3 | 2 | 12 | 5 | 4 |
| B 271** | „ 18 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 5 | 2 | 5 | 2 | 1 | 2 | 6 | 3 |
| B 272** | „ 18-19 | 6½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 3 | .. | 4 | 4 | 3 | 1 | 5 | 5 | 4 | 1 | 7 |
| B 273** | „ 19 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 4 | 1 | 6 | 10 | 12 | 10 | 6 | 4 | 4 | 5 | 5 | 2 |
| B 274** | „ 19 | 6¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 7 | 9 | 3 | 3 | 3 | 3 | 6 | 2 | 5 | 5 |
| B 275** | „ 19 | 7½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 4 | 4 | 7 | 6 | 5 | 1 | 8 | 5 | 5 |
| B 276 | 1905. Jan. 9 | ½ | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 1 | 2 | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. | 1 | .. | 2 | .. | 1 | .. | .. | .. |
| B 277§ | „ 13 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | 1 | 1 | 2 | 2 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. |
| O 266 | „ 13-14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 | 3 | 1 | 4 | 1 | 2 | 1 | 2 | 4 | 2 | 1 | 4 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | 1 | .. |
| O 267 | „ 14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 2 | 1 | 1 | .. | 2 | 1 | 3 | 5 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| O 268 | „ 20 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | 1 | .. | .. | 1 | 5 | 2 | 2 | 1 | 7 | 4 | 3 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 1 | 1 | 1 | .. | .. | .. | 2 | 2 |
| O 269* | „ 21 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 | .. | 2 | 2 | 1 | 1 | .. |
| O 270 | „ 22 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | 2 | 1 | 1 | 2 | .. |
| O 271 | „ 22 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 | .. | 1 | .. | .. | 1 | 2 |
| O 272 | „ 22-23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | 2 | .. | 1 | 1 |
| O 273 | „ 23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 1 | .. |
| O 274 | „ 23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. |
| O 275 | „ 23 | 2¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 3 | 1 |
| O 276 | „ 25 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 3 | 3 | 1 | 3 | .. | 1 | 2 | .. | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | 3 | 4 | 5 | 7 | 3 | 4 | 1 | 2 | 1 | 2 | .. |
| O 277 | „ 25 | 2½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 278 | Feb. 14 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 | 3 | 2 | 2 | 1 | 2 | 5 | 1 | 4 | 1 | .. | 1 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. | 1 | .. | 4 | 6 | 4 | 2 | 8 | 7 | 11 | 3 | 2 | 2 | 2 | 1 | 2 |
| B 279 | „ 14-15 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | 1 | 1 | 1 | .. | .. | 1 | .. | .. |
| B 280 | „ 15 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 2 | 1 | .. | .. | 2 | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. |
| B 281 | „ 15 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. | 1 | 2 | 1 | .. | .. | .. | .. | 2 | 2 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 2 | 6 | .. | 2 | 4 | .. | 1 | 2 | .. | 2 | .. | .. |
| B 282 | „ 15 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 3 | 1 | 4 | 1 | 5 | 4 | 4 | 2 | 1 | 1 | 1 | .. | 1 | 1 | 1 | .. | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | 2 | 1 | 3 | 2 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 3 | 2 | 2 | 2 |
| B 283 | „ 16 | 5 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 3 | 2 | 2 | 4 | 2 | 4 | 4 | 1 | 2 | 6 | 1 | 1 | 2 | .. | 1 | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 1 | 1 | .. | .. | 1 | 3 | 3 | 3 | 3 | .. | .. | 1 | 2 | 1 | 2 | 1 |
| B 284† | „ 16 | 3½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | 2 | .. | 2 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. |

** Measurements made by chief steward.
* Accident to net probably influenced catch. *See* Table III.
§ Accident to net probably did not influence catch.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| 5 | 6 | 4 | .. | 3 | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 120 | 31·5 |
| 4 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 168 | 26·9 |
| 5 | .. | .. | .. | 1 | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 67 | 32·2 |
| 14 | 3 | 1 | 6 | 5 | 1 | 1 | 2 | 1 | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 177 | 32·9 |
| 3 | 5 | 4 | 6 | 3 | 1 | 3 | 1 | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | ‡ 100 | 34·6 |
| 6 | 1 | 3 | 1 | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 58 | 32·2 |
| 4 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡* 21 | 34·0 |
| .. | .. | 3 | 3 | .. | .. | 1 | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 36 | 33·4 |
| 10 | 4 | 6 | 4 | .. | 1 | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | ‡ 87 | 33·3 |
| 1 | 2 | 3 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 38 | 32·9 |
| 5 | 3 | 1 | 4 | 1 | 2 | 2 | .. | 1 | 2 | 1 | .. | 1 | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 68 | 34·2 |
| 2 | 4 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 80 | 29·8 |
| 3 | 1 | 2 | .. | 2 | 1 | 2 | .. | 1 | 1 | 3 | .. | 3 | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 73 | 33·9 |
| 5 | 3 | 2 | .. | 1 | 2 | 4 | 1 | .. | 1 | 1 | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 72 | 34·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 9 | 24·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | |
| 4 | 4 | 1 | 4 | 2 | 1 | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 30 | 37·5 |
| 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| 4 | 4 | 4 | 4 | 6 | 3 | 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 59 | 35·6 |
| 3 | .. | .. | 1 | .. | 1 | 1 | .. | .. | 1 | 1 | .. | 3 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 16 | |
| 10 | 2 | 4 | 5 | 4 | 6 | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 53 | 38·1 |
| 2 | 2 | .. | 2 | 2 | 2 | 1 | 3 | 2 | .. | 1 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | F. 23 | |
| 1 | 1 | 3 | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 40 | 32·0 |
| 1 | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 2 | 32·2 |
| 1 | .. | 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14* | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 33·3 |
| .. | 3 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 32·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 36·2 |
| 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | F. 12 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 33·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 2 | 34·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | |
| .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | 35·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 19 | 31·6 |
| .. | 3 | .. | 2 | 1 | .. | .. | 3 | 2 | 1 | 1 | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 51 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 28·2 |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 27 | 27·3 |
| 1 | 1 | .. | .. | .. | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 66 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 31·1 |
| .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 29·8 |
| .. | 1 | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 12 | 28·1 |
| .. | .. | 1 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 25 | |
| .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 37 | 27·4 |
| .. | 3 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 47 | |
| .. | .. | 1 | 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 43 | 26·8 |
| .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 30 | |
| 1 | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 31·0 |
| 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | |

† Accident to net which may or may not have influenced catch.
‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| B 285† | 1905. Feb. 16 | 4 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 3 | .. | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | .. | 4 | .. | 1 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | .. | .. | 1 | .. | 2 | .. | 1 | 2 | 4 | 3 | 2 | 1 | .. | .. | ... | .. |
| B 286 | „ 17 | 5 | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 2 | 6 | 7 | 12 | 9 | 7 | 6 | 4 | 10 | 7 | 10 | 3 | 6 | 6 | 2 | 4 | 2 | 3 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | 1 | 3 | .. | 3 | 2 | 7 | 1 | 1 | .. | .. | 1 | 1 | 1 | .. |
| B 287 | „ 17 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. |
| B 288* | „ 28 | ¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 289 | Mar. 1 | 4 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 5 | 4 | 2 | 5 | 6 | 6 | 6 | 5 | 6 | 4 | 8 | 3 | .. | 2 | .. | 1 | 1 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | 2 | 1 | 4 | 1 | 3 | 2 | 3 | 3 | 1 | .. | 1 | .. | .. | 1 |
| B 290 | „ 1-2 | 5 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | 1 | 1 | 1 | 3 | 2 | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 1 | 1 | 1 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | 1 | 1 | .. | .. | 1 | 3 | .. | .. | 1 | .. | .. | .. | .. | .. |
| B 291 | „ 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | .. | .. | 1 | 2 | 2 | 2 | 2 | 5 | 2 | 3 | 4 | 5 | 6 | 2 | 7 | 6 | 6 | 4 | 2 |
| | | | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 1 | 1 | 1 | 2 | .. | 4 | 4 | .. | 2 | 5 | 4 | 4 | 6 | 6 | 4 | 9 | 1 | 7 | 6 |
| B 292 | „ 2-3 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. | 4 | 3 | 2 | 2 | 2 | .. | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | 2 | 1 | 1 | 4 | 4 | 3 | 6 | 3 | 4 | 2 | 2 |
| O 278§ | „ 3 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 279 | „ 4 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | 2 | 1 | 1 | 1 | .. | 2 |
| O 280 | „ 4 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | 2 | 1 | .. | 5 | .. | 5 | 2 | 1 |
| B 294§ | „ 10 | 5 | .. | .. | .. | .. | .. | .. | 1 | 3 | 4 | 2 | 3 | 3 | .. | 5 | 1 | .. | 3 | 3 | 3 | 2 | 1 | 6 | 1 | 4 | 1 | 4 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | 3 | 4 | 6 | 2 | 1 | 5 | 1 | .. | 1 | .. | 3 | 2 | 3 | 4 | 3 | 2 | 1 | 1 | .. | .. | 1 | 2 |
| O 281§ | „ 17 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| O 282 | „ 17 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 283 | „ 17 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. |
| O 284 | „ 17-18 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | 2 | 1 | 2 | 3 | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. |
| O 285 | „ 18 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| O 289§ | „ 19 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | 1 | 1 | .. | .. | |
| B 295 | „ 31 | 2 | .. | .. | .. | .. | 5 | 5 | 7 | 6 | 4 | 4 | 4 | 8 | 3 | 2 | 4 | 2 | 1 | 4 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | 1 | 1 | .. | 3 | 2 | 8 | 11 | 4 | 8 | 2 | 4 | 3 | 2 | 2 | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| B 296 | „ 31 | 2 | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 1 | . | 2 | .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 297 | „ 31 | 2 | .. | .. | .. | .. | 2 | 5 | 15 | 8 | 14 | 10 | 25 | 27 | 19 | 24 | 19 | 18 | 4 | 7 | 3 | 2 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | 1 | 1 | 4 | 12 | 11 | 12 | 15 | 22 | 22 | 31 | 16 | 15 | 13 | 5 | 4 | 5 | 4 | 1 | .. | 1 | .. | .. | .. | .. | .. |
| B 298 | „ 31 | 2 | .. | .. | .. | .. | 2 | 7 | 14 | 20 | 17 | 18 | 33 | 29 | 19 | 19 | 16 | 8 | 6 | 5 | 5 | 5 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | 3 | 8 | 4 | 15 | 25 | 21 | 29 | 15 | 20 | 36 | 17 | 21 | 15 | 11 | 8 | 3 | 2 | 3 | 2 | .. | .. | 1 | .. | .. | .. |
| O 290 | April 18 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 2 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | .. | 1 | 3 | 3 | 3 | 3 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 291 | „ 18 | 1 | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | 4 | 3 | 5 | 5 | 3 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | 4 | 3 | 2 | 3 | 8 | 5 | 5 | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 292 | „ 18 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 6 | 7 | 11 | 9 | 7 | 2 | 6 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 5 | 6 | 14 | 12 | 16 | 6 | 9 | 11 | 3 | 1 | 2 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | .. | .. | .. | .. | 1 | 3 | 12 | 32 | 33 | 40 | 31 | 33 | 11 | 5 | 3 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 293¶ | „ 19 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 6 | 7 | 11 | 7 | 3 | 4 | 6 | 5 | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 6 | 8 | 6 | 11 | 7 | 5 | 1 | 4 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| O 294 | „ 19 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 6 | 6 | 6 | .. | 6 | 1 | 4 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 3 | 9 | 4 | 5 | 3 | 2 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 3 | 11 | 17 | 16 | 12 | 2 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| O 95 | „ 19 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 6 | 10 | 12 | 7 | 12 | 12 | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 4 | 4 | 3 | 11 | 13 | 11 | 6 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |

† Accident to net which may or may not have influenced catch.
* Accident to net probably influenced catch. *See* Table III.
§ Accident to net probably did not influence catch.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 30 | 27·8 |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| 2 | .. | 1 | 2 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 120 | 24·6 |
| .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 31·5 |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1* | — |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 69 | 24·0 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 22 | 25·7 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 11 | |
| 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 68 | 29·5 |
| 4 | 6 | .. | 2 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 88 | |
| 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 26 | 33·2 |
| 4 | 1 | 2 | 3 | 3 | 2 | 3 | 3 | .. | .. | 3 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 62 | |
| 1 | 2 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | 39·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 37·7 |
| .. | 1 | 3 | 4 | 1 | 1 | 2 | 1 | .. | 3 | 1 | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 31 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 33·9 |
| 2 | .. | 1 | 1 | 1 | 1 | 1 | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 31 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 51 | 22·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 46 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 31·2 |
| 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 41·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | |
| 1 | 1 | 1 | .. | 2 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 9 | 35·4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | |
| 1 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 19 | 34·5 |
| .. | 2 | 2 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 41·0 |
| 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 38·9 |
| .. | 1 | 1 | 2 | .. | .. | 1 | 1 | 1 | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 16 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 62 | 17·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 54 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 18·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 205 | 18·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 195 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 225 | 18 4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 259 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 17·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 17 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 28 | 16·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 40 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 54 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 90 | 18·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 209 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 58 | 21·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 54 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 36 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 33 | 18·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 64 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 71 | 22·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 56 | |

¶ Only part of catch measured
Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | 1905. | | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | 1 | 5 | 8 | 14 | 13 | 13 | 9 | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| O 296 | April 19 | 1 7/12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 5 | 7 | 8 | 10 | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 3 | 9 | 11 | 11 | 12 | 12 | 12 | 11 | 18 | 17 | 30 | 35 | 30 | 27 | 28 | 18 | 4 | 5 | 1 | .. | .. | .. | 2 |
| O 297 | „ 28 | 2 | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | 1 | 2 | 2 | 3 | 3 | 2 | .. | .. | 3 | 3 | .. | 1 | 2 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 2 | 1 | 2 | 4 | 1 | 3 | 3 | 1 | 2 | 1 | .. | .. | .. | .. | .. |
| O 298 | „ 28 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | 1 | 1 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | 1 |
| O 299 | „ 28 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 5 | 8 | 8 | 8 | 3 | 4 | 12 | 9 | 8 | 6 | 2 | 4 | 4 | 2 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 2 | 2 | 5 | 5 | 3 | 5 | 2 | 5 | 3 | .. | 2 | .. | 1 | .. | 1 |
| O 301 | May 10 | 4 | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 3 | .. | 2 | 2 | 3 | 4 | 4 | 5 | 3 | 3 | 4 | 4 | .. | 3 | 2 | .. | 2 | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 1 | .. | 7 | 1 | 1 | 2 | 2 | 6 | 1 | 2 | 1 | 4 | 3 | 2 | 3 | .. | 3 |
| O 302 | „ 10 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | 3 | 1 | 1 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | 1 | 1 | 1 | .. | .. |
| O 303 | „ 10 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | . | .. | .. | .. | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 3 | 2 | 4 |
| | | | .. | .. | .. | .. | . | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | 2 | 2 | 2 | 2 | 6 | .. | 1 | .. |
| O 304 | „ 10 | 4½ | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 7 | 4 | 7 | 5 | 8 | 1 | 1 | 2 | 4 | 5 | 3 | 12 | 13 | 5 | 15 | 13 | 15 | 10 | 4 | 4 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | .. | 6 | 2 | 4 | 4 | 1 | 1 | 5 | 6 | 3 | 5 | 6 | 9 | 8 | 5 | 10 | 7 | 8 | 1 |
| O 305 | „ 11 | 4½ | .. | .. | .. | .. | .. | .. | 1 | .. | 4 | 5 | 11 | 16 | 20 | 12 | 18 | 12 | 26 | 19 | 21 | 28 | 33 | 10 | 18 | 7 | 1 | 4 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 2 | 4 | 7 | 8 | 5 | 4 | 7 | 13 | 11 | 27 | 32 | 21 | 20 | 17 | 15 | 9 | 7 | 4 | 1 | 1 |
| O 306 | „ 11 | 4½ | .. | .. | .. | .. | .. | 1 | 1 | 2 | 9 | 12 | 12 | 10 | 7 | 9 | 21 | 24 | 25 | 34 | 34 | 14 | 14 | 8 | 4 | 1 | 1 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 5 | 6 | 7 | 7 | 10 | 7 | 24 | 19 | 33 | 31 | 34 | 17 | 20 | 9 | 8 | 5 | 2 | 4 | 1 | 1 |
| O 307¶ | „ 11 | 4½ | .. | .. | .. | .. | 1 | 4 | 8 | 11 | 36 | 28 | 29 | 13 | 21 | 28 | 17 | 12 | 9 | 13 | 11 | 6 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 2 | 3 | 12 | 12 | 16 | 26 | 14 | 16 | 14 | 12 | 14 | 11 | 12 | 10 | 9 | 4 | 2 | 1 | 1 | .. | .. | .. | .. | .. |
| O 308¶ | „ 11 | 4 | .. | .. | .. | .. | .. | 2 | 3 | 16 | 18 | 21 | 12 | 11 | 6 | 9 | 2 | 4 | 9 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 4 | 6 | 9 | 12 | 9 | 12 | 6 | 5 | 6 | 2 | 5 | 5 | 2 | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| O 309¶ | „ 11 | 4 | .. | .. | .. | .. | 3 | 9 | 12 | 27 | 18 | 11 | 9 | 10 | 2 | 4 | 3 | 3 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 3 | 4 | 19 | 13 | 6 | 10 | 6 | 5 | 2 | 4 | 4 | 6 | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| B (c.) 300 | „ 12 | 1½ | .. | 2 | 3 | .. | 6 | 8 | 3 | 10 | 12 | 10 | 8 | 5 | 5 | 1 | 2 | 2 | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | 1 | 3 | 2 | 9 | 8 | 14 | 20 | 8 | 14 | 10 | 5 | 5 | 3 | 2 | 4 | 6 | .. | 3 | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. |
| B (c.) 301 | „ 15 | 2 | .. | 3 | 1 | 6 | 6 | 6 | 21 | 19 | 37 | 38 | 39 | 31 | 20 | 17 | 15 | 8 | 4 | 2 | 7 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | 2 | 3 | 4 | 7 | 14 | 37 | 40 | 45 | 50 | 35 | 32 | 35 | 29 | 28 | 14 | 14 | 15 | 12 | 8 | 4 | 2 | .. | 5 | 1 | .. | .. | .. |
| O 310 | „ 16 | 4⅓ | .. | .. | .. | .. | . | .. | .. | .. | 1 | 1 | 4 | 3 | 12 | 15 | 18 | 21 | 11 | 13 | 14 | 19 | 9 | 13 | 13 | 8 | 10 | 4 | 1 | 5 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 4 | 2 | 1 | 2 | 2 | 4 | 6 | 9 | 5 | 8 | 12 | 13 | 9 | 11 | 8 | 5 | 2 | 1 |
| O 311 | „ 16 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 6 | 9 | 10 | 19 | 18 | 12 | 27 | 22 | 13 | 9 | 20 | 17 | 17 | 16 | 19 | 7 | 6 | 5 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 5 | 2 | 4 | 5 | 6 | 8 | 7 | 6 | 9 | 12 | 3 | 7 | 5 | 8 | 10 | 4 | 1 | 1 |
| B 302 | „ 24 | 1 | .. | .. | .. | .. | .. | .. | 2 | 5 | 2 | 1 | 1 | 4 | 3 | 2 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | 3 | 3 | 3 | .. | 2 | 1 | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 303 | „ 24 | 1 | .. | .. | .. | .. | 1 | .. | 1 | 2 | 2 | 1 | 1 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 1 | 1 | 1 | .. | 1 | 3 | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 304 | „ 24 | 1 | .. | .. | .. | .. | .. | 2 | .. | 3 | 1 | 3 | 1 | 2 | 2 | 1 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | 1 | 3 | 1 | 1 | 1 | 4 | 3 | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 305 | „ 25 | 1¼ | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | 1 | .. | 2 | .. | 2 | 2 | 2 | 6 | .. | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 7 | 5 | 3 | 2 | 3 | .. | 1 | .. | .. | .. | .. |
| B 306 | „ 25 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15 | 12 | 14 | 4 | 4 | 6 | 2 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 9 | 10 | 7 | 4 | 2 | 7 | 1 | .. | 2 | 2 | .. | .. | 1 | .. | .. | . | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | .. | 3 | 6 | 15 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 307 | „ 25 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 10 | 2 | 4 | 3 | 2 | 3 | 4 | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 8 | 1 | 6 | 10 | 8 | 4 | 4 | 5 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 3 | 5 | 13 | 28 | 15 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 308 | „ 25 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 2 | 3 | 3 | 4 | 1 | 3 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | 3 | 4 | 1 | 2 | .. | 4 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 5 | 4 | 6 | 7 | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 309 | „ 25 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 9 | 5 | 3 | 1 | 3 | 1 | 2 | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 2 | .. | 5 | .. | 4 | 2 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 1 | 5 | 9 | 4 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

¶ Only part of catch measured.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 69 | 22·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 38 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 296 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 28 | 26·1 |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 23 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 28·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 5 | |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 88 | 24·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 40 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M 5 | 27·7 |
| 1 | 3 | 2 | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 59 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 11 | 36·1 |
| .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 2 | 1 | .. | .. | 2 | 1 | .. | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 22 | 34·9 |
| .. | 2 | 1 | .. | 1 | 2 | .. | 1 | 1 | 1 | 3 | .. | 2 | .. | 2 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 37 | |
| 4 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 149 | 27·6 |
| 4 | 1 | 2 | 2 | .. | 2 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 109 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 266 | 24·5 |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 222 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 243 | 23·4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 255 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 250 | 19·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 191 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 114 | 17·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 86 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 114 | 16·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 86 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 80 | 16·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 120 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 284 | 17·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 436 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 196 | 25·7 |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 108 | |
| 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 256 | 25·5 |
| 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 110 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 22 | 18·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 20 | 18·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 18 | 17·4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 19 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 21 | 25·4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F 22 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 80 | 18·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 49 | |
| .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 32 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 36 | 18·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 54 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 66 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 22 | 19·4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 21 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 25 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 28 | 19·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 23 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 20 | |

‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | 1905. | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 9 | 14 | 7 | 2 | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 310 | May 25 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 6 | 10 | 5 | 3 | 2 | 1 | 2 | 1 | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 311 | „ 25 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 2 | 1 | .. | 1 | 2 | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | 1 | 4 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| B 312 | „ 25 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 1 | 3 | 10 | 3 | 12 | 7 | 10 | 7 | 4 | 3 | 1 | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | 1 | 1 | 5 | 5 | 8 | 11 | 14 | 8 | 6 | 1 | 2 | .. | .. | .. | .. | .. | .. |
| B (c.) 313 | „ 26 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 314 | „ 29 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 315 | „ 29 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 317 | „ 30 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. |
| B 318 | „ 30 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| O 312* | „ 30 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B (c.) 319 | „ 30 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 313 | „ 30 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | .. | .. | 2 | |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | .. | 1 | .. | 1 | 2 | 4 | 1 | 1 |
| O 314 | „ 31 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 |
| B (c.) 320 | „ 31 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 315 | „ 31 | 4 | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 |
| O 316 | „ 31 | 3 | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | .. | .. | 3 |
| O 317 | June 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 3 | 1 | 3 | 3 | 4 | 1 | 3 | 3 | 1 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 3 | 5 | 2 | 2 | 3 | 2 | 2 |
| B 321 | „ 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| B 322 | „ 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 2 | 1 | .. | .. | 3 | 1 | .. | 1 | .. | 3 | .. | 1 | 2 | 2 | 4 | 1 | 2 | 1 |
| | | | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | 4 | 2 | 3 | 3 | 5 | 5 | 2 |
| B 323 | „ 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | 1 | 2 | 1 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | .. | 1 |
| B 324 | „ 16 | 1½ | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 325 | „ 16 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 326 | „ 16 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 328 | „ 20 | 3½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 3 | 1 | 2 | 1 | 4 | .. | 1 | .. | .. | 2 | 1 | 3 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | 3 | 1 | 2 | 1 | 1 | 1 | .. | .. | 1 | .. | .. |
| B 329§ | „ 20 | 2½ | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 4 | 1 | 1 | 1 | 4 | 1 | 2 | .. | 1 | 1 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 2 | 1 | 1 | 2 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. |
| B 331 | „ 20 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | 1 | 2 | 4 | 4 | .. | 4 | 1 | 3 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | 1 | 2 | 6 | 2 | 3 | .. | .. | .. | .. |
| B 332 | „ 21 | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 2 | 1 | 2 | 4 | 1 | 1 | 6 | 6 | 6 | 2 | 3 | 1 | .. | 1 | .. |
| | | | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | .. | .. | 1 | 1 | 3 | .. | 2 | 2 | 2 | 1 | 4 | 5 | 3 | 5 | 4 | 1 | 1 | .. | .. |
| B 333 | „ 21 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 3 | 3 | 1 | 6 | 11 | 8 | 9 | 9 | 5 | 8 | 3 | 7 | 2 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 3 | 2 | .. | 1 | .. | 2 | 4 | 5 | 5 | 2 | 8 | 5 | 2 | 3 | 1 | 1 | .. |
| B 334 | „ 21 | 4 11/12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | 3 | 4 | 2 | 4 | 11 | 11 | 8 | 6 | 7 | 3 | 2 | 2 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | 3 | 1 | 1 | 3 | 2 | 3 | 9 | 4 | .. | 2 | 2 | .. | 2 |
| B 335 | „ 21 | 5 1/12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 3 | 1 | 1 | 1 | 4 | 12 | 11 | 8 | 13 | 5 | 5 | 3 | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 2 | 2 | 2 | 3 | 4 | 8 | 8 | 2 | 2 | 2 | .. | .. | .. |
| B 336 | „ 21-22 | 5⅙ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 8 | 10 | 9 | 16 | 16 | 27 | 26 | 17 | 20 | 4 | 5 | 6 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. | 2 | 1 | 5 | 2 | 12 | 15 | 11 | 14 | 10 | 7 | 2 | 3 | 2 | .. |
| B 337 | „ 22 | 5⅙ | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 1 | 2 | 4 | 4 | 2 | 7 | 7 | 11 | 10 | 3 | 5 | 5 | 1 | 5 | 2 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 2 | .. | 2 | .. | 1 | 2 | 5 | 2 | 8 | 9 | 7 | 3 | 1 | .. | 2 | 1 | .. |

* Accident to net probably influenced catch. See Table III.
§ Accident to net probably did not influence catch.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 40 | 20·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 37 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 12 | 22·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 11 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 66 | 23·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 65 | |
| .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 2 | 41·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | — |
| 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 2 | 38·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | |
| 2 | .. | 1 | 2 | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 36·5 |
| 1 | 1 | .. | 1 | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14 | |
| .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5* | 36·6 |
| .. | 1 | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4* | |
| .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 41·6 |
| .. | .. | .. | 1 | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| 1 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 11 | 34·7 |
| 2 | 2 | 1 | 3 | 1 | 1 | 1 | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 31·6 |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | 39·0 |
| 5 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 34·5 |
| .. | .. | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 35·3 |
| .. | .. | .. | 1 | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 13 | |
| 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 32 | 31·0 |
| .. | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 25 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 26·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 28 | 30·1 |
| 1 | 1 | .. | .. | 1 | 1 | 1 | 1 | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 39 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 11 | 32·1 |
| 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F 8 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 1 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 5 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 20 | 27·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 16 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 21 | 26·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 12 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 24 | 28·5 |
| .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 38 | 26·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 39 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 80 | 26·2 |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 48 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 68 | 27·4 |
| .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 37 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 69 | 26·8 |
| .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 39 | |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 168 | 26·8 |
| .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 91 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 73 | 26·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . 48 | |

‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| B 338 | 1905. June 22 | 5 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 4 | 4 | 7 | 4 | 6 | 10 | 6 | 7 | 7 | 5 | 4 | 2 | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | 1 | 2 | 2 | 4 | 4 | 4 | 3 | 6 | 2 | 5 | 2 | 1 | 4 | .. | 1 |
| B 339 | „ 22 | 5 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | 2 | 4 | 5 | 5 | 6 | 8 | 11 | 6 | 5 | 4 | 2 | 2 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 2 | .. | 1 | 3 | 9 | 3 | 2 | 4 | 2 | 1 | 2 | .. |
| B 340 | „ 22–23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 4 | 8 | 8 | 4 | 6 | 6 | 10 | 4 | 11 | 4 | 7 | 4 | 1 | 2 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 2 | 3 | .. | 2 | 2 | 4 | 4 | 5 | 8 | 5 | 8 | 4 | 2 | 1 | 3 | 4 |
| B 341 | „ 23 | 6 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 1 | 1 | 1 | 3 | 4 | .. | 6 | 3 | 4 | 3 | 3 | .. | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | .. | 2 | 3 | 1 | 4 | 4 | 2 | 1 | 1 | 2 |
| B 342 | „ 23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 1 |
| B 343 | „ 23 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | 3 | 1 | 1 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 1 | 1 | .. | 3 | 2 | 3 |
| O 318 | „ 27 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| O 319 | „ 27 | 5 | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 2 | 1 | 2 |
| O 320 | „ 27–28 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | .. | 3 |
| O 321 | „ 28 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 323 | „ 29 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| B(c.) 344 | „ 29 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 324 | „ 29 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 325 | „ 30 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| | | | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 326 | „ 30 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 327 | July 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 328 | „ 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 345 | „ 7 | 2 | .. | .. | .. | .. | .. | 3 | 8 | 16 | 21 | 34 | 21 | 26 | 16 | 12 | 9 | 7 | 1 | 4 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 329 | „ 7 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 2 | |
| O 330* | „ 8 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 331 | „ 9 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 |
| O 332 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 |
| O 334 | „ 10 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 335 | „ 10 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| O 336 | „ 11 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 337* | „ 11 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B(c.) 346 | „ 12 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 338 | „ 12 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 340¶ | „ 23 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 9 | 11 | 7 | 8 | 4 | 2 | 5 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 8 | 19 | 20 | 19 | 7 | 3 | 6 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | 4 | 5 | 3 | 11 | 34 | 66 | 46 | 34 | 13 | 11 | 1 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 341 | „ 24 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

* Accident to net probably influenced catch. *See* Table III.
¶ Only part of catch measured.

| Centimetres | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 69 | 25·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 44 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 63 | 26·8 |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 35 | |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 82 | 26·8 |
| 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 63 | |
| .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 36 | 28·6 |
| 3 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 28 | |
| .. | 1 | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 34·7 |
| .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 33·4 |
| 3 | 1 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 22 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 37·4 |
| .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 36·4 |
| 1 | 2 | 2 | .. | .. | 1 | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 19 | |
| 1 | .. | 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 42·9 |
| 2 | 4 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | 2 | .. | 4 | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | F. 35 | |
| 4 | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 9 | 42·2 |
| .. | .. | .. | 1 | .. | 1 | 1 | 1 | 1 | 1 | .. | .. | 1 | .. | 2 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 12 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 37·0 |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | — |
| .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | F. 4 | 49·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 2 | 46·6 |
| .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| 1 | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 47·5 |
| 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | 3 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | F. 12 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 45·8 |
| .. | .. | .. | .. | .. | 2 | 2 | 1 | .. | 2 | 1 | 2 | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14 | |
| .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 43·7 |
| .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 180 | 17·2 |
| 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 40·1 |
| 1 | 1 | 6 | 4 | 1 | 4 | 1 | 1 | 2 | 2 | 1 | .. | 1 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 35 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M 1* | 38·7 |
| .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 3* | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 40·1 |
| .. | 2 | .. | 1 | 2 | 1 | .. | 1 | 1 | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | . | .. | .. | .. | .. | F. 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. | 38·8 |
| .. | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | 1 | .. | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 42·2 |
| .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| .. | .. | . | .. | 1 | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 41·9 |
| .. | .. | 1 | .. | .. | 3 | 1 | .. | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 41·2 |
| .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2* | 42·5 |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 41·0 |
| .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | . | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | F. 3 | 58·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 49 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 87 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 233 | |
| .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 2 | 41·5 |

‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.). | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | 1905. | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 5 | 5 | 3 | 1 | 3 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. |
| O 342 | July 24 | ½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 4 | 5 | 16 | 7 | 3 | 5 | 5 | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | 1 | 2 | 5 | 15 | 50 | 114 | 67 | 37 | 19 | 11 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 347 | Aug. 8 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | . | 3 | .. | 4 | 2 | 1 | 2 | .. | 4 | 2 | 1 | 3 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | 1 | 3 | 1 | 3 | 2 | 1 | 2 | .. | .. | 2 | 1 | .. | 2 | .. | 1 |
| B 348 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 3 | .. | .. | 3 | 3 | .. | 2 | 2 | 2 | 1 | 2 | .. | 1 | 2 | 1 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 1 | 3 | .. | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 |
| B 349 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 4 | 2 | .. | 3 | 3 | .. | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | .. | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 5 | 5 | 1 | 2 | 1 | 2 | .. | 1 | 1 | .. | .. | .. | 1 | 1 | .. | .. | 1 |
| B 350 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 6 | 3 | 1 | 2 | 6 | 3 | 3 | 1 | 1 | 4 | .. | .. | 1 | .. | .. | 2 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 2 | 1 | 1 | 4 | 1 | 1 | .. | .. | 3 | 2 | 1 | 3 | .. | 3 | 1 | .. | .. |
| B 351 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 2 | .. | 1 | .. | 3 | 1 | 1 | 2 | 1 | 3 | 2 | .. | 2 | 3 | 1 | 1 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | 1 | 3 | 1 | .. | .. | .. | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | .. |
| B 352 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 1 | .. | 1 | .. | 1 | 2 | 1 | 1 | 1 | 2 | .. | 3 | 1 | .. | .. | .. | .. | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | .. | .. | 1 | 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. |
| B 353 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | .. | 2 | 1 | 3 | 2 | 1 | .. | .. | 2 | 2 | 3 | 2 | 1 | 2 | 2 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | 2 | 1 | 2 | .. | .. | .. | 2 | 4 | .. | .. | 1 | 1 |
| B 354 | „ 9 | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 1 | 1 | .. | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | .. | .. | 2 | .. |
| B 355 | „ 10 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 3 | 2 | 3 | 3 | 4 | 4 | 3 | 3 | 2 | 2 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 1 | 2 | 1 | 2 | 5 | 5 | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 1 |
| B 356† | „ 10 | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 5 | 1 | 2 | 2 | 1 | .. | 1 | .. | .. | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 | 1 | 1 | 5 | 1 | 3 | 1 | 1 | 1 | .. | 2 | .. | .. |
| B 357 | „ 10 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 2 | 2 | 1 | .. | 2 | .. | .. | 1 | .. | .. | 1 | .. |
| B 358 | „ 10 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | 1 | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. |
| B 359 | „ 12 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 361 | „ 12 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 363 | „ 13 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 1 | 1 | 3 | 1 | 5 | 1 | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | 1 | 1 | 5 | 1 | .. | 3 | 3 | .. | .. | .. | .. | .. | 1 | .. | .. |
| B 364 | „ 13 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | 1 | .. | .. | 2 | 4 | .. | 1 | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 2 | .. | .. | .. | .. |
| B 365 | „ 13 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 3 | 4 | 2 | 6 | .. | 1 | 2 | 1 | 2 | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 3 | 5 | 1 | 2 | .. | 2 | 1 | .. | .. | .. | .. |
| B 366 | „ 13 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 367 | „ 14 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | .. | 1 | 4 | 1 | 4 | 7 | .. | 1 | 3 | 1 | 2 |
| B 368 | „ 14 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | .. | 2 | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | .. | 1 | .. | .. | .. | 1 | .. |
| B 369 | „ 14 | 1⅓ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| B 370 | „ 14 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| B 371§ | „ 24 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | 1 | 3 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | 1 | .. | 2 | 2 | 1 | .. | 3 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 372 | „ 24 | 2¼ | .. | .. | .. | .. | .. | 1 | 1 | 2 | 2 | .. | 3 | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | 2 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. |
| B 373 | „ 29 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 5 | 38 | 38 | 43 | 46 | 27 | 28 | 28 | 15 | 6 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 17 | 39 | 44 | 46 | 46 | 22 | 22 | 29 | 9 | 10 | 6 | .. | .. | .. | .. | .. | .. | .. | .. |
| O 343 | Sept. 5 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | 1 | 1 | .. | 4 | 5 | 3 | 3 | 2 | 4 | 6 | 1 | 2 | 1 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 | 2 | 5 | 6 | 1 | 1 | .. | 2 | 2 | 3 | .. | 2 | .. | .. | .. |
| O 344 | „ 5 | 4 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 4 | .. | .. | 1 | 4 | 1 | 2 | 1 | 5 | 1 | 3 | 1 | 1 | 1 | 1 | 3 | .. | 2 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 3 | .. | .. | .. | 1 | 2 | 3 | 4 | 1 | 1 | 6 | 1 | 2 | 1 | .. | 1 |

† Accident to net which may or may not have influenced catch. *See* Table III.
§ Accident to net probably did not influence catch.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average Size (cm.). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 23 | 16·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 52 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 324 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 26 | 27·4 |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 24 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 25 | 25·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 17 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 29 | 24·6 |
| 1 | .. | 1 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 29 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 35 | 23·7 |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 28 | 26·6 |
| .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 23 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 18 | 23·4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 27 | 26·9 |
| 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 29 | 25·5 |
| 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 12 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 33 | 26·9 |
| 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 38 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 24 | 25·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 26·7 |
| .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8 | 27·4 |
| 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 17·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 2 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 17·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 3 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 19 | 23·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 19 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 12 | 26·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 24 | 26·6 |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 16 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 24·1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 3 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 10 | 31·5 |
| .. | 2 | 4 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 36 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 28·5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | F. 7 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | F. 2 | 33·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | M. 8 | 17·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 13 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 13 | 16·6 |
| .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 8 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 280 | 20·4 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 293 | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 39 | 27·7 |
| 2 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 33 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 36 | 26·9 |
| .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 32 | |

Sex not determined.

| Net and No. | Date. | Duration (hrs.) | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | 1905. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O 345 | Sept. 5 | 4 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | 2 | 1 | 2 | .. | 5 | 3 | .. | 3 | 2 | 2 | 2 | 1 | 1 | .. |
| | | | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 2 | 3 | .. | 4 | 2 | 1 | .. | .. | 1 | .. |
| O 346 | „ 6 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | . | 1 | 2 | 4 | 2 | 4 | 3 | 1 | 3 | 2 | 1 | 3 | .. | 2 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | 3 | 1 | 4 | 3 | 2 | 2 | 1 | 2 | 1 | 1 | 3 | .. | .. |
| B (c.) 374‡‡ | „ 6 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | 1 | 1 | .. | .. | 3 | 2 | 7 | 6 | 5 | 6 | 4 | 1 | 1 | 1 | .. | .. | 1 | 1 |
| B (c.) 375‡‡ | „ 6 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 1 | .. | .. | .. | .. | .. | 3 | .. | 1 | 2 | 3 | 1 | 1 | 1 | 1 | .. | .. | .. | .. |
| O 347 | „ 6 | 4 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 3 | 4 | 6 | 5 | 10 | 5 | 8 | 6 | 10 | 4 | 1 | 2 | 3 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 7 | 6 | 6 | 7 | 7 | 5 | 6 | 12 | 7 | 3 | 4 | 5 | 2 | 2 | 2 |
| O 348 | „ 13 | 2 | .. | .. | .. | .. | .. | .. | 1 | 10 | 16 | 16 | 12 | 13 | 8 | 8 | 1 | 3 | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | 1 | .. | .. | 4 | 14 | 18 | 12 | 13 | 11 | 6 | 2 | 3 | 3 | 4 | 3 | 1 | 1 | 1 | 1 | 2 | .. | .. | .. | .. | .. |
| B (c.) 376‡‡ | „ 13 | 2 | 1 | .. | .. | 2 | 6 | 23 | 30 | 30 | 29 | 21 | 12 | 8 | 9 | 1 | 4 | 4 | 6 | 5 | 4 | 2 | 1 | .. | .. | 1 | 1 | 1 | .. | .. | .. |
| B (c.) 377‡‡ | „ 13 | 2 | .. | .. | .. | 1 | 2 | 34 | 47 | 44 | 38 | 26 | 18 | 18 | 10 | 5 | 6 | .. | 2 | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | 6 | 21 | 24 | 44 | 35 | 37 | 13 | 17 | 13 | 11 | 12 | 12 | 5 | 3 | 8 | 7 | 3 | .. | 1 | .. | .. | .. | 1 | .. | .. |
| O 349 | „ 13 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 13 | 25 | 32 | 35 | 12 | 7 | 4 | 1 | 5 | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 9 | 19 | 23 | 18 | 14 | 9 | 3 | 4 | 2 | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. |
| O 350 | „ 14 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 13 | 18 | 20 | 24 | 22 | 13 | 18 | 14 | 9 | 7 | 9 | 4 | 3 | 1 | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | 1 | 5 | 22 | 20 | 24 | 25 | 21 | 19 | 11 | 13 | 11 | 4 | 7 | 9 | 1 | 2 | 1 | 2 | .. |
| O 351 | „ 14 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 5 | 16 | 12 | 13 | 12 | 9 | 10 | 8 | 8 | 9 | 11 | 8 | 6 | 6 | 2 | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 4 | 11 | 16 | 7 | 10 | 6 | 13 | 8 | 4 | 6 | 7 | 5 | 7 | 1 | .. | 1 | 1 |
| O 352 | „ 14 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 6 | 6 | 6 | 3 | 5 | 7 | 10 | 4 | 3 | 5 | 2 | 5 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 3 | 7 | 8 | 7 | 12 | 13 | 8 | 12 | 6 | 4 | 2 | 3 | 3 | .. | 1 | 1 |
| B 378§ | „ 19 | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 380† | „ 20 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 381 | „ 21 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 382 | „ 21 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 384 | „ 22 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 4 | 2 | 3 | 1 | 2 | 2 | 4 | 1 | 1 | 1 | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | . | .. | 1 | .. | 1 | .. | .. | .. | 1 | 1 | .. | 1 | 1 | .. | .. | .. | 2 | .. | .. | 2 | 1 | .. |
| B 385† | „ 26 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 386* | „ 26 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 4 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | | .. | .. | .. | .. | .. | .. |
| B 387 | „ 27 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 9 | 5 | 5 | 7 | 6 | 10 | 8 | 6 | 1 | 3 | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 5 | 5 | 5 | 8 | 2 | 3 | 4 | 4 | 3 | 2 | 1 | 1 | .. | 1 |
| B 388 | „ 27 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 6 | 3 | 2 | 4 | 2 | 1 | 10 | .. | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 2 | 3 | 2 | 5 | 2 | 4 | 4 | 2 | 1 | 1 | .. |
| B 389 | „ 27 | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| B 390 | „ 27 | 5½ | .. | 1 | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | . | .. | 1 | .. | 1 | .. | .. | 2 | 3 | 2 | 1 | 5 | 5 | 5 | 3 | 4 | .. | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | 4 | 1 | 4 | 6 | .. | 2 | 5 |
| B 391 | „ 27 28 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | 1 | 3 | 3 | 3 | 3 | 1 | 7 | 5 | 3 | 3 | 4 | 3 | 3 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 2 | 3 | 2 | 4 | 6 | 4 | 1 | .. | 3 | 1 | 3 | 1 |
| B 392 | „ 28 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 2 | 2 | .. | 4 | 1 | 2 | 3 | 4 | 3 | 3 | 1 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | 4 | 4 | 5 | 5 | 4 | 2 | 5 | 3 | 1 | 3 |
| B 394 | „ 29 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 1 | 1 |
| B 395 | „ 29 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 |
| B 396 | „ 29 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 1 | .. | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 3 | .. | 1 | 1 | .. |
| O 354 | Oct. 9 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| O 356 | „ 10 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 357 | „ 10 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| O 358 | „ 11 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | 1 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 4 | 2 | .. | 1 | .. | 2 | .. |

‡‡ Contents of covering net combined with those of ordinary cod-ends.
§ *Accident to net probably did not influence catch.*
† Accident to net which may or may not have influenced catch.

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total Measured for each Sex. | Average size (c.m.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | | |
| .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 28 | 28·4 |
| .. | 1 | 1 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 27 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 31 | 26·4 |
| 1 | 1 | 1 | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 36 | |
| 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 47 | — |
| .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 21 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 70 | 26·2 |
| 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 89 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 93 | 17·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 100 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ‡ 201 | 15·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 255 | 16·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 273 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 141 | 19·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 106 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 179 | 22·9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 198 | |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 139 | 24·4 |
| .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 112 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 65 | 25·2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 92 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 2 | 23·0 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 24·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 23·3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 23 | 27·2 |
| 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 13 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | — |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 8* | 23·8 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 3* | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 63 | 26·0 |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 48 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 34 | 29·6 |
| 2 | 2 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 36 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 4 | 26·4 |
| .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 4 | |
| 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 41 | 30·4 |
| .. | 3 | 3 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 38 | |
| 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 52 | 29·4 |
| 2 | .. | 1 | 1 | 1 | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 42 | |
| 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 33 | 31·4 |
| 2 | 1 | 1 | 5 | 2 | 3 | .. | 2 | 1 | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 57 | |
| .. | 1 | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 37·4 |
| .. | 1 | .. | .. | 3 | .. | .. | 1 | .. | .. | .. | 1 | 2 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 16 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 1 | 39·2 |
| 1 | 1 | .. | .. | 1 | 1 | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 10 | |
| 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 6 | 34·8 |
| 1 | .. | 4 | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 14 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | F. 3 | 47·7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 3 | 36·8 |
| .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 3 | |
| .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 9 | 49·4 |
| .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 34·4 |
| .. | 1 | .. | .. | .. | 1 | 1 | 2 | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 20 | |

* Accident to net probably influenced catch. *See* Table III
‡ Sex not determined.

| Net and No. | Date. | Duration (hrs.) | Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| | 1905. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O 359 | Oct. 11 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 1 | .. | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| O 360 | „ 12 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | 5 | 3 | 3 | .. | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 4 | 4 | 6 | 3 | 3 | 2 |
| O 361 | „ 12 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 6 | .. | 4 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 3 | 8 | 4 | 3 | 6 | 3 | 1 | 2 |
| B 397 | „ 19 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 3 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | .. |
| O 362 | „ 19 | 4 | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | .. | 1 | 2 | .. | .. | 1 | 1 | 2 | 2 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | 1 |
| O 363 | „ 19 | 5½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. |
| O 364 | „ 19-20 | 4½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | 2 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | 1 | 2 |
| O 365 | „ 20 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 3 | 1 | 1 | 1 | 2 | 1 | .. |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | 3 | .. | 1 | 3 | 2 | 4 |
| O 366 | „ 20 | 4¾ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 1 | 1 | .. | .. | .. | 1 | 1 | 2 | 1 | 1 | .. | 1 | 2 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 2 | 2 | 1 | 1 |
| O 368 | „ 24 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 2 | 3 | 4 | 8 | 9 | 8 | 1 | 5 | 8 | 6 | 5 | 10 | 3 | 3 | 4 | 6 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 4 | 4 | 1 | 3 | 3 | 8 | 5 | 5 | 6 | 7 | 5 | 9 | 8 | 10 | 14 | 7 | 3 |
| O 369 | „ 25 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 9 | 9 | 7 | 9 | 12 | 13 | 9 | 19 | 12 | 11 | 13 | 7 | 6 | 6 | 8 | 3 | 1 | 1 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 4 | 1 | 12 | 8 | 12 | 5 | 12 | 13 | 19 | 10 | 8 | 12 | 4 | 8 | 3 | 5 | 4 | 4 |
| O 370 | „ 2 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | 6 | 4 | 7 | 5 | 10 | 8 | 7 | 6 | 6 | 6 | 2 | 8 | 1 | 3 |
| | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 2 | 1 | 4 | 10 | 7 | 17 | 9 | 11 | 4 | 4 | 3 | 8 | 3 | 2 | 5 |
| B (c.) 398 | „ 3 | 1½ | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

| Centimetres. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | Total Measured for each Sex. | Average size (c.m.). |
| 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 7 | 35·5 |
| .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 6 | |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 19 | 33·4 |
| 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 33 | |
| 1 | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 28 | 32·8 |
| 2 | 2 | 3 | 2 | .. | 1 | .. | .. | 1 | 1 | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 48 | |
| .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 11 | 35·8 |
| .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | 1 | 2 | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 15 | |
| 1 | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 19 | 34·4 |
| 1 | 3 | 1 | 3 | 3 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 18 | |
| .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 5 | 38·3 |
| .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F 7 | |
| 3 | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 12 | 36·6 |
| 3 | 2 | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 18 | |
| 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 16 | 34·3 |
| 6 | 1 | 1 | .. | 2 | 2 | .. | .. | 1 | 1 | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 34 | |
| 3 | .. | 3 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 22 | 35·1 |
| 3 | 1 | 1 | 1 | 5 | 3 | 1 | 1 | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 28 | |
| 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 93 | 29·4 |
| 5 | 3 | 2 | 5 | 3 | 2 | .. | .. | .. | 3 | .. | 2 | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 133 | |
| 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 163 | 26·0 |
| 1 | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | 2 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 155 | |
| 1 | 1 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | M. 90 | 29·4 |
| 2 | 1 | 2 | .. | 4 | 1 | 2 | 3 | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | F. 116 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | F. 1 | — |

# III.—SUMMARIES OF HAULS MADE BY S.S. *HUXLEY*, DISTINGUISHING THE SIZES OF FISH IN 10 CM. GROUPS (ARRANGED CHRONOLOGICALLY).

## (*a.*) List of Latin Synonyms for English Names of Fishes.

(Systematic names adopted from *Publications de circonstances du conséil permanent internationale pour l'exploration de la mer*, *No.* 12.)

I. FLAT FISH (PLEURONECTIDÆ).

| English names. | Latin names. |
|---|---|
| Brill. | Rhombus lævis. |
| Dab. | Pleuronectes limanda. |
| Flounder. | Pleuronectes flesus. |
| Halibut. | Hippoglossus vulgaris. |
| Lemon Dab. | Pleuronectes microcephalus. |
| *Long Rough Dab.* | *Hippoglossoides platessoides.* |
| Megrim. | Zeugopterus megastoma. |
| Plaice. | Pleuronectes platessa. |
| Sand Sole. | Solea lascaris. |
| Scaldback. | Arnoglossus laterna. |
| Sole. | Solea vulgaris. |
| Solenette. | Solea lutea. |
| Thickback. | Solea variegata. |
| Turbot. | Rhombus maximus. |
| Witch. | Pleuronectes cynoglossus. |

II. ROUND FISH (OTHER TELEOSTEI).

| | |
|---|---|
| Angler. | Lophius piscatorius. |
| Cat fish. | Anarrhichas lupus. |
| Coal fish. | Gadus morrhua. |
| Cod. | Gadus virens. |
| Conger. | Conger vulgaris. |
| Four-bearded Rockling. | Motella cimbria. |
| Grey Gurnard. | Trigla gurnardus. |
| Haddock. | Gadus æglifinus. |
| Hake. | Merluccius vulgaris. |
| Herring. | Clupea harengus. |
| Horse Mackerel. | Caranx trachurus. |
| John Dory. | Zeus faber. |

II. ROUND FISH (OTHER TELEOSTEI)—*continued.*

| English names. | Latin names. |
|---|---|
| Latchet. | Trigla hirundo. |
| Ling. | Molva vulgaris. |
| Mackerel. | Scomber scomber. |
| Norway Pout. | Gadus esmarki. |
| Parrot Gurnard. | Trigla. |
| Pout or Pouting. | *Gadus luscus.* |
| Red Gurnard. | Trigla cuculus. |
| Red Mullet. | Mullus surmuletus. |
| Shad. | Clupea alosa. |
| Sprat. | Clupea sprattus. |
| Twaite Shad. | Clupea finta. |
| Weever (Greater). | Trachinus draco. |
| Whiting. | Gadus merlangus. |

III. DOG FISH, SHARKS, SKATES, AND RAYS (ELASMOBRANCHII).

| | |
|---|---|
| Angel. | Rhina squatina. |
| Blonde. | Raia blanda. |
| Homelyn Ray. | Raia maculata. |
| Lesser Spotted Dog. | Scyllium canicula. |
| Nursehound. | Scyllium catulus. |
| Porbeagle. | Lamna cornubica. |
| Skate (or Black Skate). | Raia batis. |
| Smooth Hound. | Mustelus vulgaris. |
| Spur Dog. | Acanthias vulgaris. |
| Starry Ray. | Raia radiata. |
| Sting Ray | Trygon pastinaca. |
| Thornback. | Raia clavata. |
| Tope. | Galeus vulgaris. |
| White Skate. | Raia alba. |

NOTE.—Weights included within square brackets have been estimated by interpolation.

## (*b.*) Tables.

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXV 1 | Lower Scruff .. | 21½ f.l.s. | 1904. Jan. 2nd | Plaice .. | .. | .. | 42 | 19 | 3 | .. | 1 | .. | .. | .. | .. | 65 | 25 | 65 | 25 |
| O 146 | 54° 59½′ N., 4° 51′ E. | 22 | 8 a.m. | Dab .. .. | .. | 1 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | Net slightly torn. | 21½ f.l.s. | 9 hours | Sole .. .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | 4 | 1 | 1 | 1 | .. | .. | .. | .. | 7 | 15 | 7 | 15 |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 6 | 9 | 5 | 2 | 1 | .. | .. | .. | .. | 23 | 15 | 23 | 15 |
| | | | | Haddock .. | .. | .. | 12 | 186 | 11 | 1 | .. | .. | .. | .. | .. | 210 | 97 | 210 | 97 |
| | | | | Whiting .. | .. | .. | 65 | 17 | 2 | .. | .. | .. | .. | .. | .. | 84 | 15 | 84 | 15 |
| | | | | Grey Gurnard | .. | .. | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Spur dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXV 2 | Lower Scruff .. | 21½ f.l.s. | Jan. 2nd | Plaice .. | .. | .. | 31 | 24 | 5 | .. | .. | .. | .. | .. | .. | 60 | 23 | 60 | 23 |
| O 147 | 55° 10½′ N., 4° 59¾′ E. | 22½ | 2 p.m. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 24½ f.g.s. | 5 hours | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | 1 | 1 | 2 | .. | 1 | .. | .. | .. | .. | 5 | 13 | 5 | 13 |
| | | | | Brill .. .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | 23 |
| | | | | Haddock .. | .. | .. | 5 | 43 | 9 | .. | .. | .. | .. | .. | .. | 57 | 26 | [297] | 133 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Hake .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXV 3 | S.E. of Tail end of Dogger Bank. | 17 spk. s. | Jan. 5th | Plaice .. | .. | .. | 1 | 4 | .. | .. | 2 | .. | .. | .. | .. | 7 | .. | 7 | .. |
| O 148 | 55° 25½′ N., 4° 52′ E. | 19–21 | 12.15 a.m. | Lemon Dab.. | .. | .. | 2 | 4 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | Net very badly torn. | 23 f.s. sharp | 6 hrs., 45 mins. | Sole .. .. | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Cod .. .. | .. | .. | 17 | 39 | 29 | 16 | 8 | 1 | 1 | .. | 1 | 112 | 122 | 112 | 122 |
| | | | | Haddock .. | .. | .. | .. | 63 | 35 | 15 | .. | .. | .. | .. | .. | 113 | 96 | 113 | 96 |
| XXV 4 | East of Tail end of Dogger Bank. | 23 f.s. | Jan. 5th | Plaice .. | .. | .. | 1 | 5 | 7 | 7 | .. | .. | .. | .. | .. | 20 | 26 | 20 | 26 |
| O 149 | 55° 18⅝′ N., 5° 17½′ E. | 24 s. & oz. | noon | Lemon Dab.. | .. | .. | 2 | 6 | 1 | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | 6 hrs. | Sole .. .. | .. | .. | 8 | 6 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Turbot .. | .. | .. | .. | 7 | 3 | 1 | 1 | .. | .. | .. | .. | 12 | 22 | 12 | 22 |
| | | | | Brill.. .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | 4 | 2 | 4 | 2 | 2 | .. | 14 | 60 | 104 Kg. (44 small) | |
| | | | | Haddock .. | .. | .. | .. | 53 | 2 | 1 | .. | .. | .. | .. | .. | 56 | 31 | [780 | 396] |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 1 | 5 | 34 | 5 | 34 |
| | | | | Thornback.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 31 | .. |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| XXV 5 | West of Horn Reef Outer. | 24 s. & oz. | Jan. 5th | Plaice .. .. | .. | .. | 4 | 7 | 11 | 3 | .. | .. | .. | .. | .. | 25 | 28 | 25 | 28 |
| O 150 | 55° 20½′ N., 5° 46⅝′ E. | 26 s. & oz. | 6.30 p.m. | Lemon Dab . | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Net slightly torn. | | 5½ hrs. | Sole .. .. | .. | .. | 8 | 13 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 4 | 3 | .. | 10 | 73 | .. | 104 |
| | | | | Haddock .. | .. | .. | 2 | 48 | 4 | 1 | .. | .. | .. | .. | .. | 55 | 31 | [1100 | 620] |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 45 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 65 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| XXV 6 | West part of Horn Reef Outer. | 26 s. & oz. | Jan. 6th | Plaice .. | .. | .. | 3 | 8 | 11 | 2 | 1 | .. | .. | .. | .. | 25 | 27 | 25 | 27 |
| O 151 | 55° 27¾′ N., 6° 18¼′ E. | 23 s. & oz. | 1 a.m. | Sole .. .. | .. | .. | 11 | 10 | 1 | .. | .. | .. | .. | .. | .. | 22 | .. | 22 | .. |
| | | 21 s. & oz. | 6 hrs. | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 7 | 3 | .. | 15 | 104 | .. | 132 |
| | | | | Haddock .. | .. | .. | .. | 101 | 18 | 1 | .. | .. | .. | .. | .. | 120 | 58 | [600 | 290] |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 130 | 26 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 108 | .. |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| XXV 7 | Horn Reef Outer .. | 21 s. & oz. | Jan. 6th | Plaice .. | .. | .. | 2 | 4 | 11 | 5 | .. | .. | .. | .. | .. | 22 | 26 | 22 | 26 |
| O 152 | 55° 32′ N., 6° 30¾′ E. | 22 | 7.30 a.m. | Lemon Dab . | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 22 s. & oz. | 5½ hrs. | Sole .. .. | .. | .. | 10 | 11 | 1 | .. | .. | .. | . | .. | .. | 22 | .. | 22 | .. |
| | | | | Turbot .. | .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Brill .. .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 7 | 3 | .. | 14 | 90 | 65 | 128 |
| | | | | Haddock .. | .. | .. | 4 | 56 | 3 | 1 | .. | .. | .. | .. | .. | 64 | 28 | [389 | 178] |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 63 | 20 |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 8 | 1 | 8 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 80 | .. |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 20 | 1 | 20 |
| XXV 8 | Horn Reef Outer .. | 22 s. & oz. | Jan. 6th | Plaice .. | .. | .. | .. | 2 | 8 | .. | .. | .. | .. | .. | .. | 10 | 12 | 10 | 12 |
| O 153 | 55° 34½′ N., 6° 34¾′ E. | 22 | 1.30 p.m. | Sole .. .. | .. | .. | 7 | 7 | 1 | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | 22 s. & oz. | 6 hrs. | Turbot .. | .. | .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Brill .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | 6 | 9 | 6 | 9 | 8 | 7 | 1 | 46 | 210 | .. | 249 |
| | | | | Haddock .. | .. | .. | 1 | 47 | 6 | 2 | .. | .. | .. | .. | .. | 56 | 30 | [826] | 444 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 80 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXV 9 | Horn Reef Outer .. | 22 s. & oz. | Jan. 6th & 7th | Plaice .. | .. | .. | 3 | 5 | 6 | 2 | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| O 154 | 55° 36⅜′ N., 6° 34¼′ E... | 22 | 8 p.m. (6th) | Sole .. .. | .. | .. | 11 | 8 | 1 | 1 | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | 22 s. & oz. | 5½ hrs. | Turbot .. | .. | .. | .. | 1 | 2 | .. | 1 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 190 |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | [1380 | 690] |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 Baskets | |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 70 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| XXV 10 | Horn Reef Outer .. | 22 s. & oz. | Jan. 7th | Plaice .. | .. | .. | 3 | 10 | 5 | 2 | 2 | .. | .. | .. | .. | 22 | .. | 22 | .. |
| O 155 | 55° 38′ N., 6° 37½′ E... | 22 | 2 a.m. | Sole .. .. | .. | .. | 13 | 14 | 1 | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| | | 20 f.s. & oz. | 5½ hrs. | Turbot .. | .. | .. | .. | 7 | 2 | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets (small) + 4 large fish. | |
| | | | | Haddock .. | .. | .. | 3 | 56 | 2 | .. | 1 | .. | .. | .. | .. | 62 | 30 | [612 | 300] |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 130 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | many small 3 | .. |
| XXV 11 | Borkum Outer .. | 22 f.d.s. | Jan. 8th | Plaice .. | .. | .. | 3 | 21 | 13 | 1 | .. | .. | .. | .. | .. | 38 | 26 | 38 | 26 |
| O 156 | 54° 17½′ N., 6° 4¼′ E... | 22 | 11.45 a.m | Sole .. .. | .. | .. | 4 | 1 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | 20½ f.s. & oz. | 4 hrs. | Turbot .. | .. | .. | 1 | 3 | 1 | .. | 1 | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Brill .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | 3 | 10 | 3 | 10 |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| XXV 12 | Borkum Outer .. | 20½ f.s & oz. | Jan. 8th | Plaice .. | .. | .. | .. | 29 | 25 | 2 | .. | .. | .. | .. | .. | 56 | 42 | 56 | 42 |
| O 157 | 54° 15¾′ N., 6° 5½′ E... | 21 | 4 p.m. | Sole .. .. | .. | .. | 8 | 7 | 1 | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | 22 f.s. & m. | 5 hrs. | Turbot .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 38 |
| | | | | Haddock .. | .. | .. | .. | 2 | 7 | 8 | 4 | .. | .. | .. | .. | 21 | 38 | 21 | 38 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| XXV 14 | Borkum Outer .. | 21 f.s. & oz. | Jan. 9th | Plaice .. | .. | .. | 5 | 18 | 16 | 1 | .. | .. | .. | .. | .. | 40 | 30 | 40 | 30 |
| B 100 | 54° 16½′ N., 6° 1⅓′ E. | 21 | 7 a.m. | Dab .. .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | 21 f.s. & oz. | 4⅓ hrs. | Lemon Dab .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Turbot .. | .. | .. | 1 | 3 | 1 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | 3 | 7 | 3 | 7 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 (Small) | |
| XXVI 2 | North-East of Blakeney Overfall. | 10 c.s. & s.h. | Jan. 19th | Plaice .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B 101 | 53° 6½′ N., 1° 0⅞′ E. | 10 c.s. | 3 p.m. | Dab .. .. | .. | 48 | 28 | 1 | .. | .. | .. | .. | .. | .. | .. | 77 | 7 | 77 | 7 |
| | | | 2 hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 4 | 5 | 8 | 4 | 4 | 3 | .. | .. | .. | .. | 28 | 51 | 28 | 51 |
| XXVII 1 | Teignmouth Bay .. | 6 s. & m. | Feb 26th | Plaice .. | .. | 1 | 10 | 2 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| B 103 | 50° 29⅗′ N., 3° 28⅝′ E. | 8 | 9.15 a.m. | Flounder .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Small hole in square and in small meshed net over cod end. | 10 s. | 3 hrs. | Sprat .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | 1 | 24 | 18 | 2 | 1 | 1 | .. | .. | .. | .. | .. | 47 | .. | 47 | .. |
| | | | | Buffoon .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Lesser Spotted Dog. | .. | .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | 4 | .. | 4 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) | and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15⅜+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXVII 2 | Off The Ledge .. | 14 | s. & sh. | Feb. 26th | John Dory .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 104 | 50° 29⅜′ N., 3° 19¾′ W. | 14 | | 1.45 p.m. | Thornback .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Had a "pull out," net very badly torn. | 14 | s. & sh. | 1 hr. | Lesser Spotted Dog. | .. | .. | .. | .. | .. | .. | 5 | .. | .. | .. | .. | 5 | .. | 5 | .. |
| XXVII 4 | Inside Eastern Scruff | 17 | f.s. | Feb. 27th | Plaice .. | .. | 13 | 52 | 27 | 2 | 2 | .. | .. | .. | .. | .. | 96 | 23 | 96 | 23 |
| O 159 | 50° 33¼′ N., 2° 50¼′ W. | 20 | | 5 p.m. | Dab .. .. | .. | 63 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 66 | 3 | 66 | 3 |
| | | 23 | spk.s. | 2½ hrs. | Sole .. .. | .. | .. | 3 | 8 | 1 | .. | .. | .. | .. | .. | .. | 12 | 5 | 12 | 5 |
| | | | | | Turbot .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 5 | 1 | 5 |
| | | | | | Flounder .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | | Whiting .. | .. | 26 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| | | | | | Pout .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Herring .. | .. | 1 | 1 | .. | .. | .. | .. | . | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | .. | 2 | .. |
| | | | | | Homelyn .. | 13 | 16 | 1 | .. | 3 | .. | .. | .. | .. | .. | .. | 33 | } 73 | 33 | } 73 |
| | | | | | Thornback .. | 3 | 10 | 4 | 3 | 2 | 8 | 4 | .. | .. | .. | .. | 34 | | 34 | |
| | | | | | Skate .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Blonde .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Lesser Spotted Dog. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 128 | .. |
| | | | | | Angel .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Smoothhound | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXVIII 2 | Lynn Deep .. .. | 16 | m.ross | Mar. 10th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 107 | 52° 59′ N., 0° 20′ E. | 12 | m.ross | 7.15 a.m. | Flounder .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | 1 hr. | Cod .. .. | .. | 11 | 6 | .. | .. | .. | 1 | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | | Whiting .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | | Pout .. .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | | Thornback .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | | Homelyn .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Skate .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXVIII 4 | Lynn Deep .. .. | 12 | s. | Mar. 10th | Plaice .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B 108 | 52° 57½′ N., 0° 17⅜′ E. | 10 | m. | 8.45 a.m. | Dab .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | 1 hr. | Sole .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Flounder .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Cod .. .. | .. | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | | Whiting .. | .. | 5 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | | Thornback .. | .. | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | | Homelyn .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Skate .. .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| XXVIII 5 | Eastern part of S.W. Patch of Dogger Bank. | 9 | f.s. | Mar. 11th | Plaice .. | .. | .. | 26 | 18 | 6 | 2 | .. | .. | .. | .. | .. | 52 | .. | 52 | .. |
| O 160 | 54° 32¼′ N., 2° 28′ E. | 10 | f.s. | 7.30 a.m. | Dab .. .. | .. | 15 | 14 | 2 | .. | .. | .. | .. | .. | .. | .. | 31 | .. | 31 | .. |
| | | 13 | f.s. | 6 hrs. | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | Belly slightly torn. | | | | Whiting .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Ling .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Herring .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| XXVIII 7 | Dogger Bank, East of S.W. Patch. | 14 | f.s. & sh. | Mar. 11th | Plaice .. | .. | .. | 18 | 35 | 21 | 5 | 1 | .. | .. | .. | .. | 80 | 51 | 80 | 51 |
| O 161 | 54° 33⅜′ N., 2° 49½′ E. | 16 | f.s. | 2.45 p.m. | Dab .. .. | 4 | 66 | 30 | 5 | .. | .. | .. | .. | .. | .. | .. | 105 | 9 | 105 | 9 |
| | | 17 | f.s. | 7 hrs. | Lemon Dab... | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Turbot .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | | Cod .. .. | .. | .. | .. | .. | .. | 2 | 3 | 1 | 1 | .. | .. | 7 | 24 | 7 | 24 |
| | | | | | Haddock .. | .. | .. | .. | 58 | 4 | .. | .. | .. | .. | .. | .. | 62 | 27 | [310 | 136] |
| | | | | | Whiting .. | .. | 8 | 23 | 4 | .. | .. | .. | .. | .. | .. | .. | 35 | 5 | 35 | 5 |
| XXVIII 9 | Dogger Bank, East of S.W. Patch. | 17 | f.s. | Mar. 11th & 12th | Plaice .. | .. | .. | 24 | 48 | 23 | 5 | .. | .. | .. | .. | .. | 100 | 59 | 100 | 59 |
| O 162 | 54° 29¾′ N., 2° 53¼′ E. | 16 | f.s. | 11 p.m. (11th) | Dab .. .. | .. | 178 | 37 | 5 | .. | .. | .. | .. | .. | .. | .. | 220 | .. | 220 | .. |
| | | 16½ | f.s. | 6¼ hrs. | Lemon Dab... | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Cod .. .. | .. | .. | .. | .. | 1 | 5 | 5 | 3 | .. | .. | .. | 14 | 38 | 14 | 38 |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXVIII 9 | Dogger Bank, East of S.W. Patch—*cont.* | 17 f.s. | Mar. 11th & 12th. | Haddock .. | .. | .. | .. | 95 | 20 | .. | 1 | .. | .. | .. | .. | 116 | 55 | [391] | [185] |
| O 162 | | 16 f.s. | 11 p.m. (11th). | Whiting .. | .. | 1 | 32 | 4 | .. | .. | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| | | 16½ f.s. | 6¼ hrs. | Grey Gurnard | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Mackerel .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXVIII 10 | Dogger Bank. East of S.W Patch. | 16½ f.s. | Mar. 12th | Plaice .. | .. | .. | 4 | 13 | 3 | 4 | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| O 163 | | 16½ f.s. | 6 a.m. | Dab .. .. | 3 | 27 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| | 54° 32½′ N., 2° 49¾′ E. | | 2½ hrs. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Net slightly torn. | | | Cod .. .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | .. | 1 | 19 | 1 | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Whiting .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Mackerel .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXVIII 11 | Eastern shoal of Dogger Bank. | 13 f.s. | Mar. 12th | Plaice .. | .. | .. | 21 | 17 | 11 | 5 | .. | .. | .. | .. | .. | 54 | 31 | 54 | 31 |
| O 164 | 54° 36′ N., 2° 32½′ E. | 11 f.s. | 9.20 a.m. | Dab .. .. | .. | 39 | 8 | 3 | .. | .. | .. | .. | .. | .. | .. | 50 | .. | 50 | .. |
| | Trawl slightly torn. | 10½ f.s. | 5 hrs. 40 mins. | Cod .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Whiting .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Sprat .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXVIII 12 | West of Eastern shoal of Dogger Bank. | 10½ f.l.s. | Mar. 12th | Plaice .. | .. | .. | 2 | 7 | 1 | 3 | 1 | .. | .. | .. | .. | 14 | .. | 14 | .. |
| O 165 | 54° 40¾′ N., 2° 17¼′ E. | 10½ f.l.s. | 3.35 p.m. | Dab .. .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | 2 hrs. | Cod .. .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXVIII 14 | N.W. of Eastern shoal of Dogger Bank. | 10½ f.l.s. | Mar. 12th | Plaice .. | .. | .. | 9 | 18 | 8 | 5 | 2 | .. | .. | .. | .. | 42 | .. | 42 | .. |
| O 166 | 54° 48¾′ N., 2° 24½′ E. | 12 f.s. | 6 p.m. | Dab .. .. | 1 | 19 | 35 | 13 | .. | . | .. | .. | .. | .. | .. | 68 | .. | 68 | .. |
| | Net badly torn. | 13½ f.s. | 6 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod . .. | .. | .. | .. | .. | .. | 5 | 6 | 2 | .. | .. | 1 | 14 | 48 | 14 | 48 |
| | | | | Haddock .. | .. | .. | .. | 50 | 7 | .. | .. | .. | . | .. | .. | 57 | .. | [285] | .. |
| | | | | Whiting .. | .. | .. | 14 | 2 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| XXVIII 15 | Leman Ground .. | 16 f.d.s. | Mar. 14th | Plaice .. | .. | .. | 8 | 7 | 3 | 1 | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| B 109 | 53° 18¼′ N., 2° 34¾′ E. | 16 f.d.s. | 7 a.m. | Dab .. .. | .. | 92 | 35 | 2 | .. | .. | .. | .. | .. | .. | .. | 129 | .. | 129 | .. |
| | | 14½ f.s. | 5 hrs. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 5 | 4 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Sprat .. .. | 2 | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | 3 | 1 | 5 | 4 | .. | 2 | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXVIII 17 | Leman Ground .. | 14½ f.s. | Mar. 14th | Plaice .. | .. | 1 | 10 | 5 | 5 | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| B 110 | 53° 23¼′ N., 2° 28′ E. | 15 f.d.s. | 1 p.m. | Dab .. .. | .. | 89 | 21 | 1 | .. | .. | .. | .. | .. | .. | .. | 111 | .. | 111 | .. |
| | | 16 f.d.s. | 5 hrs. | Flounder .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Grey Gurnard. | .. | 1 | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Sprat .. .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXVIII 18 | Leman Ground .. | 16 f.d.s. | Mar. 14th | Plaice .. | .. | 1 | 5 | 4 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| B 111 | 53° 24½′ N., 2° 46¾′ E. | 16 f.d.s. | 6.30 p.m. | Dab .. .. | .. | 193 | 15 | 1 | .. | .. | .. | .. | .. | .. | .. | 209 | .. | 209 | .. |
| | | | 4 hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 3 | .. | 3 | .. |
| | | | | Whiting .. | .. | .. | 22 | 6 | .. | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| | | | | Grey Gurnard | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Thornback .. | 1 | 1 | 2 | 7 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Skate .. | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXVIII 19 | East of Leman Ground. | 16 f.d.s. | Mar. 15th | Plaice .. | .. | .. | 3 | 6 | 1 | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| B 112 | 53° 17¼′ N., 3° 6′ E. | 16 f.d.s. | 6.45 a.m. | Dab .. .. | .. | 147 | 26 | 1 | .. | .. | .. | .. | .. | .. | .. | 174 | .. | 174 | .. |
| | | | 2¼ hrs. | Flounder .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | 2 | 3 | .. | .. | .. | .. | 5 | .. | 5 | .. |
| XXVIII 21 | Broad Fourteens .. | 16 f.g.s. | Mar. 15th | Plaice .. | .. | 5 | 67 | 11 | .. | .. | .. | .. | .. | .. | .. | 83 | .. | 83 | .. |
| B 113 | 52° 40⅝′ N., 3° 58⅝′ E. | 12½ f.g.s. | 3 p.m. | Dab .. .. | .. | 48 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 56 | .. | 56 | .. |
| | | | 6 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Flounder .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXVIII 23 | West of Ymuiden .. | 12½ f.g.s. | Mar. 15th & 16th | Plaice .. | .. | 91 | 72 | .. | .. | .. | .. | .. | .. | .. | .. | 163 | .. | 163 | .. |
| B 114 | 52° 30⅜′ N., 4° 12′ E. | 11 f.g.s. | 9.30 p.m. (15th) | Dab .. .. | .. | 279 | 159 | 3 | .. | .. | .. | .. | .. | .. | .. | 441 | .. | [882] | .. |
| | | 10 f.g.s. | 7 hrs. | Flounder .. | .. | 1 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| XXVIII 24 | Off Ymuiden.. .. | 10 f.s. | Mar. 16th | Plaice .. | .. | 346 | 70 | 1 | .. | .. | .. | .. | .. | .. | .. | 417 | .. | 417 | .. |
| B 115 | 52° 23¼′ N., 4° 29¾′ E. | 9½ f.s. | 5 a.m. | Dab .. .. | .. | 303 | 163 | 1 | .. | .. | .. | .. | .. | .. | .. | 467 | .. | [934] | .. |
| | | 8½ f.s. | 5¾ hrs. | Flounder .. | .. | 11 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | | | | Sprat .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| XXVIII 26 | Off Ymuiden.. .. | 8½ f.s. | Mar. 16th | Plaice .. | .. | 291 | 51 | .. | .. | .. | .. | .. | .. | . | .. | 342 | .. | 342 | .. |
| B 116 | 52° 32½′ N., 4° 24⅝′ E. | 9 f.s. | 11 a.m. | Dab .. .. | .. | 89 | 60 | .. | .. | .. | .. | .. | .. | .. | .. | 149 | .. | 149 | .. |
| | | | 3 hrs. | Flounder .. | .. | 6 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| XXVIII 27 | Broad Fourteens .. | 14 f.s. | Mar. 16th | Plaice .. | .. | 6 | 53 | 11 | 1 | .. | .. | .. | .. | .. | .. | 71 | .. | 71 | .. |
| B 117 | 52° 38½′ N., 4° 2½′ E. | 14 f.s. | 4 p.m. | Dab .. .. | .. | 35 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 49 | .. | 49 | .. |
| | | | 2¼ hrs. | Flounder .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXIX 1 | Off Ymuiden .. | 10½ f.g.s. | Mar. 22nd | Plaice * .. | .. | 48 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 63 | .. | 63 | .. |
| O 167 | 52° 29½′ N., 4° 19¾′ E. | 9½ f.g.s. | 6 a.m. | (No other fish recorded.) | | | | | | | | | | | | | | | |
| | | | 1½ hrs. | | | | | | | | | | | | | | | | |
| XXIX 2 | Off Egmond .. .. | 9½ f.g.s. | Mar. 22nd | Plaice * .. | .. | 35 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| O 168 | 52° 37½′ N., 4° 23¾′ E. | 9 f.s. | 8 a.m. | (No other fish recorded.) | | | | | | | | | | | | | | | |
| | | | 2 hrs. | | | | | | | | | | | | | | | | |
| XXIX 3 | Off Egmond .. .. | 9 f.s. | Mar. 22nd | Plaice * .. | .. | 100 | 21 | .. | .. | .. | .. | .. | .. | .. | .. | 121 | .. | 121 | .. |
| O 169 | 52° 33¼′ N., 4° 22¼′ E. | 9 f.s. | 10.15 a.m. | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | . | .. | .. | 1 | .. | 1 | .. |
| | | | 2 hrs. | (No other fish recorded.) | | | | | | | | | | | | | | | |
| XXIX 4 | West of Ymuiden .. | 9 f.s. | Mar. 22nd | Plaice * .. | .. | 73 | 34 | 1 | .. | .. | .. | .. | .. | .. | .. | 108 | .. | 108 | .. |
| O 170 | 52° 29′ N., 4° 15½′ E. | 11 f.s. | 12.30 p.m. | Dab .. .. | .. | 56 | 46 | .. | .. | .. | .. | .. | .. | .. | .. | 102 | .. | 102 | .. |
| | | | 2 hrs. | (No other fish recorded.) | | | | | | | | | | | | | | | |
| XXIX 5 | West of Ymuiden . | 11 f.s. | Mar. 22nd | Plaice * .. | .. | 25 | 35 | .. | .. | .. | .. | .. | .. | .. | .. | 60 | .. | 60 | .. |
| O 171 | 52° 27⅓′ N., 4° 8½′ E. | 11½ f.s. | 2.45 p.m. | (No other fish recorded.) | | | | | | | | | | | | | | | |
| | | | 1¾ hrs. | | | | | | | | | | | | | | | | |
| XXIX 7 | N.E. of S.W. Patch of Dogger Bank. | 11 f.s. & sh. | Mar. 24th | Plaice .. | .. | .. | 9 | 12 | 1 | .. | 1 | .. | .. | .. | .. | 23 | .. | 23 | .. |
| O 172 | 54° 34½′ N., 2° 33½′ E. | 9 f.s. | 4 a.m. | Dab .. .. | .. | 24 | 16 | 3 | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| | Turn in fore quarter. | 11 f.s. & sh. | 5 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod . .. | .. | .. | .. | .. | .. | 1 | 5 | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Haddock .. | .. | .. | .. | 19 | 10 | 1 | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | | | | Whiting .. | .. | 1 | 10 | 2 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

* Samples of plaice collected for transplantation, probably not representative ; total catch not recorded.

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXIX 8 | Eastern Shoal of Dogger Bank. | 11 f.s. & sh. | Mar. 24th | Plaice .. | .. | .. | 2 | 12 | 5 | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| O 173 | 54° 37¾′ N., 2° 45½′ E. | 14½ f.s. | 9.30 a.m. | Cod .. .. | .. | .. | .. | .. | 1 | 9 | 7 | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | 5 hrs. | Haddock .. | .. | .. | 1 | 6 | 2 | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Whiting .. | .. | .. | 9 | 1 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sprat .. .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXIX 9 | S.W. of Eastern Shoal of Dogger Bank. | 14½ f.s. | Mar. 24th | Plaice .. | .. | .. | 5 | 22 | 6 | 2 | .. | .. | .. | .. | .. | 35 | .. | 35 | .. |
| O 174 | 54° 32¾′ N., 2° 55¼′ E. | 15 f.s. | 3 p.m. | Dab .. .. | .. | 6 | 9 | 3 | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | 3 hrs. | Cod .. .. | .. | .. | 1 | .. | 3 | 5 | 1 | 1 | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Haddock .. | .. | .. | 1 | 54 | 5 | .. | .. | .. | .. | .. | .. | 60 | .. | 60 | .. |
| | | | | Whiting .. | .. | .. | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Starry Ray .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXIX 10 | Lower Scruff .. .. | 24 f.s. | Mar. 26th | Plaice .. | .. | .. | 18 | 10 | 1 | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| O 175 | 55° 11¼′ N., 4° 27⅓′ E. | 24 f.s. | 4 a.m. | Dab .. .. | .. | 74 | 21 | .. | .. | .. | .. | .. | .. | .. | .. | 95 | .. | 95 | .. |
| | | | 5 hrs. | Long Rough Dab. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Cod .. .. | .. | .. | 3 | 3 | 7 | .. | 2 | 2 | 2 | 5 | .. | 24 | .. | 24 | .. |
| | | | | Haddock .. | .. | .. | 7 | 54 | .. | 1 | .. | .. | .. | .. | .. | 62 | .. | [186] | .. |
| | | | | Whiting .. | .. | 1 | 169 | 21 | 1 | .. | .. | .. | .. | .. | .. | 192 | .. | 192 | .. |
| | | | | Grey Gurnard | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Starry Ray .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| XXIX 12 | West part of Horn Reef Outer. | 24 f.s. | Mar. 26th & 27th | Plaice .. | .. | .. | 3 | 8 | 7 | 1 | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| O 176 | 55° 26¼′ N., 6° 17′ E. | 23 f.s. | 7 p.m. (26th) | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 small Basket | | | .. |
| | | 22 f.s. | | Sole .. .. | .. | .. | 3 | 5 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | 6 hrs. | Turbot .. | .. | .. | .. | 4 | 3 | 1 | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | 6 | 2 | .. | 12 | .. | 12 | .. |
| | | | | Haddock .. | .. | .. | 2 | 78 | 3 | .. | .. | .. | .. | .. | .. | 83 | .. | 83 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Grey Gurnard | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | 1 | 4 | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| XXIX 13 | Horn Reef Outer .. | 22 f.s. | Mar. 27th | Plaice .. | .. | .. | 4 | 8 | 5 | 1 | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| O 177 | 55° 31⅜′ N., 6° 27½′ E. | 23 f.s. | 1.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | 23 f.s. | 6 hrs. | Sole .. .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | . | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Flounder .. | | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | 1 | 2 | 5 | 3 | 5 | 1 | 17 | .. | 17 | .. |
| | | | | Haddock .. | .. | .. | .. | 21 | .. | 1 | .. | .. | .. | .. | .. | 22 | .. | 22 | .. |
| | | | | Whiting .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | 3 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Starry Ray .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Skate .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXIX 14 | Horn Reef Outer .. | 23 f.s. | Mar. 27th | Plaice .. | .. | .. | 6 | 3 | 5 | 1 | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| O 178 | 55° 32½′ N., 6° 34¾′ E. | 22 f.s. | 8 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket (small) | |
| | | 22 f.s. & oz. | 7½ hrs. | Sole .. .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Turbot .. | .. | .. | .. | 6 | 4 | 1 | 2 | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | 1 | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | .. | 10 | 69 | 1 | .. | .. | .. | .. | .. | .. | 80 | .. | [320] | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Starry Ray .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | . | .. | 1 | .. | 1 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40+ | 19¾+ / 50+ | 23⅝+ / 60+ | 27½+ / 70+ | 31½+ / 80+ | 35½+ / 90+ | 39½+ / 100+ | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXIX 15 | Horn Reef Outer .. | 22 f.s. & oz. | Mar. 27th | Plaice .. | .. | .. | 8 | 5 | 2 | 1 | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| O 179 | 55° 34′ N., 6° 34⅛′ E. | 23 f.s. | 4 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket (small). | |
| | | 23 f.s. | 7½ hrs. | Lemon Dab.. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sole .. .. | .. | 1 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Turbot .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 1 | .. | 1 | 4 | 3 | 4 | 4 | .. | 18 | .. | 18 | .. |
| | | | | Haddock .. | .. | .. | 9 | 60 | 1 | .. | .. | .. | .. | .. | .. | 70 | .. | [1050] | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. | |
| | | | | Coalfish .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Herring .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback.. | .. | .. | .. | .. | 2 | 1 | 1 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Skate.. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXIX 16 | Horn Reef Outer .. | 23 f.s. | Mar. 28th | Plaice .. | .. | .. | 7 | 12 | 2 | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| O 180 | 55° 35¼′ N., 6° 33′ E. | 23 f.s. | 12.5 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket (small). | |
| | | 22 f.s. | 6 hrs. 55 mins. | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | 1 | .. | 4 | 5 | 4 | 1 | .. | 16 | .. | 16 | .. |
| | | | | Haddock .. | .. | .. | 1 | 53 | 7 | 1 | .. | .. | .. | .. | .. | 62 | .. | [900] | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¾ Basket (small). | |
| | | | | Catfish .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Skate.. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXIX 17 | Horn Reef Outer .. | 22 f.s. | Mar. 28th | Plaice .. | .. | .. | 3 | 5 | 2 | 3 | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| O 181 | 55° 40¾′ N., 6° 33½′ E. | 22 f.s. & oz. | 7.30 a.m. | Dab.. .. | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. | |
| | | 22½ f.s. & oz. | 7½ hrs. | Sole .. .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | 4 | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 4 | .. | .. | 7 | .. | 7 | .. |
| | | | | Haddock .. | .. | .. | 7 | 62 | 2 | .. | .. | .. | .. | .. | .. | 71 | .. | [375] | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Coalfish .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback.. | .. | .. | .. | 2 | 2 | 2 | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Starry Ray.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXIX 18 | North West of Horn Reef. | 22½ f.s. & oz. | Mar. 28th | Plaice .. | .. | .. | 1 | 6 | 6 | 4 | 1 | .. | .. | .. | .. | 18 | .. | 18 | .. |
| O 182 | 55° 45¾′ N., 6° 37′ E. | 22 f.s. & oz. | 3.15 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | 21 f.s. & oz. | 6½ hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | . |
| | | | | Turbot .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | .. | 2 | 1 | 1 | 4 | 2 | 2 | 2 | 1 | 15 | .. | 15 | .. |
| | | | | Haddock .. | .. | .. | 8 | 45 | 3 | .. | .. | .. | .. | .. | .. | 56 | .. | [350] | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. |
| | | | | Thornback.. | .. | .. | .. | 3 | 5 | 1 | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Starry Ray.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXIX 19 | Dogger Bank, East of S.W. Patch. | 10½ f.s. | Mar. 29th to 30th. | Plaice .. | .. | .. | 18 | 32 | 11 | 1 | .. | .. | .. | .. | .. | 62 | .. | 62 | .. |
| O 183 | 54° 33⅛′ N., 2° 37½′ E. | 10 f.s. | 9 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | 11 f.s. | (29th) 6 hrs. | Lemon Dab.. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | 9 | 10 | 2 | .. | .. | .. | 22 | .. | 22 | .. |
| | | | | Haddock .. | .. | .. | 1 | 75 | 29 | 2 | 1 | .. | .. | .. | .. | 108 | .. | [710] | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm, .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXIX 20 | Dogger Bank, East of S.W. Patch. | 11 f.s. | Mar. 30th | Plaice .. | .. | .. | 12 | 27 | 10 | 1 | .. | .. | .. | .. | .. | 50 | .. | 50 | .. |
| O 184 | 54° 26½′ N., 2° 36⅛′ E. | 12 f.s. | 3.45 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | 14 f.s. | 5¾ hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | 3 | 6 | 1 | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Haddock .. | .. | .. | .. | 42 | 6 | .. | .. | .. | .. | .. | .. | 48 | .. | [150] | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Grey Gurnard | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXIX 21 | Dogger Bank, S.E. of S.W. Patch. | 14 f.s. | Mar. 30th | Plaice .. | .. | .. | 12 | 22 | 7 | 1 | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| O 185 | 54° 26⅜′ N., 2° 36′ E. | 10 f.s. | 9.45 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | 10 f.s. | 4¾ hrs. | Cod .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | 1 | .. | .. | 3 | .. | 3 | .. |
| | | | | Haddock .. | .. | .. | .. | 11 | 3 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | | | Coalfish .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXX 1 | Inside Protector Overfalls. | 8½ s.spk. | Apr. 8th | Dab .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 118 | 53° 21⅛′ N., 0° 23½′ E. | 7½ c.s. | 4.30 p.m. | Sole .. .. | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | Square torn. | | 1 hr. | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Homelyn .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXX 3 | Off Trusthorpe .. | 7½ f.s. | Apr. 8th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 119 | 53° 20¾′ N., 0° 23⅜′ E. | 7½ c.s. | 6.45 a.m. | Sole .. .. | .. | .. | 11 | 4 | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | 2 hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 5 | 3 | 4 | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Homelyn .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | . | .. | 5 | .. | 5 | .. |
| | | | | Skate .. .. | .. | 3 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| XXX 4 | Off Mablethorpe .. | 7½ gvl. | Apr. 9th | Plaice .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B 120 | 53° 21½′ N., 0° 22¾′ E. | 8 d.s. | 9.10 a.m. | Dab .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 2 hrs. | Sole .. .. | .. | .. | 36 | 2 | .. | .. | .. | .. | .. | .. | .. | 38 | 4½ | 38 | 4½ |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Pout .. .. | .. | 1 | .. | .. | . | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Skate .. .. | .. | 1 | 5 | .. | 1 | .. | .., | .. | .. | .. | .. | 7 | .. | 7 | .. |
| XXX 6 | Off Mablethorpe .. | 8 d.s. & sh. | Apr. 9th | Dab .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 121 | 53° 21½′ N., 0° 23⅛′ E. | 8 | 11.45 a.m. | Lemon Dab | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 8½ d.s. & sh. | 4 hrs. | Sole .. .. | .. | 1 | 47 | 6 | 2 | .. | .. | .. | .. | .. | .. | 56 | 11 | 56 | 11 |
| | | | | Brill .. . | .. | .. | .. | 2 | 8 | .. | 1 | .. | .. | .. | . | 11 | 18 | 11 | 18 |
| | | | | Cod .. .. | .. | 2 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Pout .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | 1 | 5 | 3 | 7 | 1 | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | | Hemelyn .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Skate .. .. | .. | 4 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| XXX 10 | Bridlington Bay .. | 5½ f.g.s. | Apr. 11th | Plaice .. | .. | 72 | 48 | .. | .. | .. | .. | .. | .. | .. | .. | 120 | .. | 120 | .. |
| B 122 | 53° 58⅜′ N., 0° 8′ W. | 7½ gvl. | 9.30 a.m. | Dab .. .. | .. | 16 | 11 | 2 | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| | Fore wing badly torn. | | 1¼ hrs. | Sole .. .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXX 11 | Bridlington Bay .. | 5½ d.s. | Apr. 11th | Plaice .. | .. | 86 | 136 | 1 | .. | .. | .. | .. | .. | .. | .. | 223 | .. | 223 | .. |
| B 123 | 53° 59¾′ N., 0° 9⅛′ W. | 7½ d.s.gvl. | 12.30 p.m. | Dab .. .. | .. | 32 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| | Ground rope parted, net badly torn. | | 1¼ hrs. | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXX 16 | Bridlington Bay .. | 5 f.g.s. | Apr. 12th | Plaice .. | .. | 158 | 117 | .. | .. | .. | .. | .. | .. | .. | .. | 275 | .. | 275 | .. |
| B 124 | 54° 11¼′ N., 0° 10½′ W. | 5½ | 6.45 a.m. | Dab .. .. | .. | 67 | 26 | 3 | .. | .. | .. | .. | .. | .. | .. | 96 | .. | 96 | .. |
| | | 5 f.g.s. | 1 hr. | Sole .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Flounder .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| XXX 19 | North of Terschelling Light Vessel. | 21 m. | Apr. 14th | Plaice .. | .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| O 186 | 53° 44′ N., 4° 49′ E. | 20 m. | 4.15 a.m. | Dab .. .. | .. | 347 | 44 | 1 | .. | .. | .. | .. | .. | .. | .. | 392 | 18 | 392 | 18 |
| | | 20 m. | 5 hrs. | Sole .. .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | 2 | 1 | .. | .. | .. | .. | .. | 6 | 13 | 6 | 13 |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 2 | .. | .. | 1 | .. | 2 | .. | .. | 6 | 16 | 6 | 16 |
| | | | | Haddock .. | .. | .. | 3 | 50 | 7 | .. | .. | .. | .. | .. | .. | 60 | 28 | [210] | [98] |
| | | | | Whiting .. | .. | 16 | 409 | 82 | 1 | 2 | .. | .. | .. | .. | .. | 510 | [147¼] | 510 | [147¼] |
| | | | | Herring .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Grey Gurnard | .. | 22 | 41 | 6 | .. | .. | .. | .. | .. | .. | .. | 69 | .. | 69 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXX 24 | North of Terschelling Light Vessel. | 20 m. | Apr. 14th | Plaice .. | .. | 1 | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| O 187 | 53° 42½′ N., 4° 45½′ E. | 19 s.m. | 11.20 a.m. | Dab .. .. | .. | 239 | 32 | .. | .. | .. | .. | .. | .. | .. | .. | 271 | 15 | 271 | 15 |
| | | | 5 hrs. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Long Rough Dab. | .. | 2 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | 3 | .. | 1 | .. | .. | .. | 5 | 15 | 5 | 15 |
| | | | | Haddock .. | .. | .. | 3 | 203 | 18 | 2 | 6 | .. | .. | .. | .. | 232 | 131 | 232 | 131 |
| | | | | Whiting .. | .. | 17 | 609 | 100 | 2 | .. | .. | .. | .. | .. | .. | 728 | 114 | 728 | 114 |
| | | | | Grey Gurnard | .. | 19 | 40 | 2 | .. | .. | .. | .. | .. | .. | .. | 61 | 8 | 61 | 8 |
| | | | | Shad .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXX 31 | Texel Ground .. | 15 f.s. | Apr. 15th | Plaice .. | .. | 131 | 351 | 14 | .. | .. | .. | .. | .. | .. | .. | 496 | 62 | 496 | 62 |
| B 125 | 52° 57¾′ N., 4° 13′ E. | 14 f.s. | 7 a.m. | Dab .. .. | .. | 70 | 19 | .. | .. | .. | .. | .. | .. | .. | .. | 89 | 5½ | 89 | 5½ |
| | | | 3 hrs. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 19 | .. | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Grey Gurnard | .. | 45 | 67 | .. | .. | .. | .. | .. | .. | .. | .. | 112 | .. | 112 | .. |
| XXX. 39 | N.E. part of Brown Ridges. | 15 f.s. | Apr. 15th | Plaice .. | .. | 1 | 40 | 29 | 1 | .. | .. | .. | .. | .. | .. | 71 | 22 | 71 | 22 |
| B 126 | 52° 56⅝′ N., 3° 45½′ E. | 15 f.s. | 5.15 p.m. | Dab .. .. | .. | 140 | 19 | 1 | .. | .. | .. | .. | .. | .. | .. | 160 | .. | 160 | .. |
| | | | 3 hrs. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXI 1 | Off Norderney .. | 11 f.s. | May 11th | Plaice .. | .. | 4 | 11 | 6 | .. | .. | .. | .. | .. | .. | .. | 21 | 5 | 21 | 5 |
| B 127 | 53° 51′ N., 7° 8¾′ E. | 12 f.s. | 8.15 p.m. | Dab .. .. | .. | 78 | 24 | .. | .. | .. | .. | .. | .. | .. | .. | 102 | 6 | 102 | 6 |
| | | | 3 hrs. | Sole .. .. | .. | .. | 29 | 11 | 3 | .. | .. | .. | .. | .. | .. | 43 | 12 | 43 | 12 |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 10 | 1 | 10 |
| | | | | Grey Gurnard | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXI 2 | North of Norderney | 15½ f.d.s. | May 12th | Plaice .. | .. | .. | 2 | .. | .. | .. | 1 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| B 128 | 54° 0⅝′ N., 7° 15⅝′ E. | 17 f.d.s. | 4.15 a.m. | Dab .. .. | 1 | 93 | 26 | .. | .. | .. | .. | .. | .. | .. | .. | 120 | 6 | [240] | 12 |
| | | | 3 hrs. | Lemon Dab.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | 7 | 1 | 1 | .. | .. | .. | .. | .. | 9 | 12 | 9 | 12 |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | .. | .. | 29 | .. | .. | .. | .. | .. | .. | .. | 29 | 13½ | 29 | 13½ |
| | | | | Whiting .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | 55 | 56 | .. | .. | .. | .. | .. | .. | .. | .. | 111 | .. | 111 | .. |
| | | | | Latchet .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date. Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXI 3 | S.W. of Heligoland .. | 19 s. & oz. | May 12th | Plaice .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B 129 | 53° 59¾′ N., 7° 42¾′ E. | 18½ s. & oz. | 9 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Same size as last haul. | | ½ Basket. | 14 |
| | | | 3 hrs. | Turbot .. .. | .. | .. | 1 | 4 | .. | 1 | .. | .. | .. | .. | .. | 6 | 9 | 6 | 9 |
| | | | | Brill .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | 2 | 1 | .. | .. | 4 | 15 | 4 | 15 |
| | | | | Haddock .. | .. | .. | .. | 16 | 4 | .. | .. | .. | .. | .. | .. | 20 | 12 | 20 | 12 |
| | | | | Whiting .. | .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Grey Gurnard .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | ¼ Basket. | 6 |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXI 4 | Off Weser Light Vessel. | 18½ s. & oz. | May 12th | Plaice .. .. | .. | 138 | 47 | 7 | .. | .. | .. | .. | .. | .. | .. | 192 | 13 | 192 | 13 |
| B 130 | 53° 55⅛′ N., 7° 46¾′ E. | 11 f.d.s. | 12.15 p.m. | Dab .. .. | .. | 31 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 40 | 3 | [400] | 30 |
| | | | 3 hrs. | Sole .. .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Turbot .. .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 6 | 1 | 6 |
| | | | | Grey Gurnard .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket. | 6 |
| XXXI 6 | Between Heligoland and Amrum | 11 f.s. & oz. | May 12th | Plaice .. .. | .. | 3 | 27 | 9 | .. | .. | .. | .. | .. | .. | .. | 39 | 8 | 39 | 8 |
| B 131 | 54° 30⅜′ N., 7° 51¼′ E. | 10 f.s. | 8.20 p.m. | Dab .. .. | .. | 34 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| | | | 2 hrs. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Halibut .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| XXXI 7 | Sylt Inner .. .. | 7 f.s. | May 13th | Plaice .. .. | .. | 154 | 118 | .. | .. | .. | .. | .. | .. | .. | .. | 272 | 22 | 272 | 22 |
| O 188 | 54° 55′ N., 8° 9′ E. | 7 f.s. | 7 a.m. | Dab .. .. | .. | 30 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| | | | 2 hrs. | Flounder .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Grey Gurnard .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sprat .. .. | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| XXXI 9 | S.W. of Fanö .. .. | 7½ f.s. & oz. | May 13th | Plaice .. .. | .. | 449 | 319 | .. | .. | .. | .. | .. | .. | .. | .. | 768 | 59 | 768 | 59 |
| B 132 | 55° 18′ N., 8° 15′ E. | 7½ f.s. & oz. | noon | Dab .. .. | 1 | 52 | 58 | 2 | .. | .. | .. | .. | .. | .. | .. | 113 | 10 | 113 | 10 |
| | | | 2 hrs. | Lemon Dab .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Flounder .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Sprat .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 4 | .. | 7 | 21 | 7 | 21 |
| XXXI 10 | S.E. of Vyl Light Vessel. | 11 f.s. | May 13th | Plaice .. .. | .. | 14 | 64 | 67 | .. | .. | .. | .. | .. | .. | .. | 145 | 37 | 145 | 37 |
| B 133 | 55° 20⅝′ N., 7° 50½′ E. | 11 f.s. | 4.30 p.m. | Dab .. .. | .. | 214 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 230 | 10 | 230 | 10 |
| | | | 2 hrs. | Lemon Dab .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Grey Gurnard .. | .. | 8 | 40 | .. | .. | .. | .. | .. | .. | .. | .. | 48 | .. | 48 | .. |
| XXXI 12 | Norman's Deep .. | 11½ f.d.s. | May 17th | Plaice .. .. | .. | 74 | 132 | 17 | .. | .. | .. | .. | .. | .. | .. | 223 | 25 | [2297] | 257½ |
| B 134 | 55° 35¼′ N., 7° 45¾′ E. | 7 f.d.s. | 7.20 a.m. | Dab .. .. | .. | 254 | 106 | 4 | .. | .. | .. | .. | .. | .. | .. | 364 | 27 | 364 | 27 |
| | | | 2 hrs. | Lemon Dab .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXI 14 | Horn Reef Outer .. | 19 f.l.s. | May 17th | Dab .. .. | .. | 52 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 63 | .. | 63 | .. |
| B 135 | 55° 35¼′ N., 6° 39¾′ E. | 21 f.l.s. | 5 p.m. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 2 hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Grey Gurnard | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 6 or 7 | .. |
| XXXI 16 | Western part of Horn Reef Outer. | 26½ f.s.oz. | May 18th | Plaice .. | .. | .. | 4 | 4 | 2 | 1 | .. | .. | .. | .. | .. | 11 | 6 | 11 | 6 |
| B 136 | 55° 32¾′ N., 6° 3½′ E. | 27 f.s.m. | 6 a.m. | Dab .. .. | .. | 148 | 16 | 2 | .. | .. | .. | .. | .. | .. | .. | 166 | .. | 166 | .. |
| | | | 2 hrs. | Turbot .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab | .. | 11 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 1 | 1 | 2 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Haddock .. | .. | 1 | 7 | 13 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 2 | 21 | .. | .. | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| | | | | Starry Ray.. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXI 18 | Western part of Horn Reef Outer. | 27 f.s.m. | May 18th | Plaice .. | .. | .. | 2 | 5 | 1 | .. | 1 | .. | .. | .. | .. | 9 | .. | 9 | .. |
| B 137 | 55° 33½′ N., 6° 9¼′ E. | 26 f.s.m. | 8.45 a.m. | Dab .. .. | .. | 191 | 24 | .. | .. | .. | .. | .. | .. | .. | .. | 215 | .. | 215 | .. |
| (With chain on ground rope.) | | | 2 hrs. | Long Rough Dab | .. | 19 | 21 | .. | .. | .. | .. | .. | .. | .. | .. | 40 | .. | 40 | .. |
| | | | | Cod .. .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Haddock .. | .. | .. | 5 | 13 | .. | 1 | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Grey Gurnard | .. | 7 | 50 | .. | .. | .. | .. | .. | .. | .. | .. | 57 | .. | 57 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. |
| | | | | Catfish .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXI 19 | Sylt Inner .. .. | 7½ f.s. | May 21st & 22nd | Plaice .. | .. | 263 | 381 | 64 | .. | .. | .. | .. | .. | .. | .. | 708 | 126] | 708 | [126] |
| B 138 | 55° 1′ N., 8° 5½′ E. | 7½ f.s. | 10.30 p.m. (21st) | Dab .. .. | 2 | 156 | 40 | .. | .. | .. | .. | .. | .. | .. | .. | 198 | 10½ | 198 | 10½ |
| (With chain on ground rope.) | | | 3 hrs. | Sole .. .. | .. | .. | 1 | 7 | 4 | .. | .. | .. | .. | .. | .. | 12 | [6¼] | 12 | [6¼] |
| | | | | Turbot .. | .. | .. | .. | 1 | . | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXI 20 | Sylt Outer .. .. | 10 f.s. | May 23rd | Plaice .. | .. | 3 | 21 | 98 | .. | .. | .. | .. | .. | .. | .. | 122 | 43 | 122 | 43 |
| B 139 | 54° 52½′ N., 7° 43¼′ E. | 10½ f.s. | midnight | Dab.. .. | 1 | 165 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 180 | 9 | 180 | 9 |
| (With chain on ground rope.) | | 11½ f.s. | 2 hrs. | Sole .. .. | .. | .. | 2 | 5 | 4 | .. | .. | .. | .. | .. | .. | 11 | 6½ | 11 | 6½ |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 | 9 | 2 | 9 |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 3 | 21 | 3 | 21 |
| | | | | Haddock .. | .. | .. | 1 | 20 | 12 | .. | .. | .. | .. | .. | .. | 33 | 24 | 33 | 24 |
| | | | | Whiting .. | .. | 1 | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Grey Gurnard | .. | 4 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Latchet .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXI 22 | Norman's Deep .. | 12 f.s.m. | May 24th | Plaice .. | .. | 778 | 625 | 5 | .. | .. | .. | .. | .. | .. | .. | 1408 | [115] | 1408 | [115] |
| B 140 | 55° 33¼′ N., 7° 50½′ E. | 15 f.s.m. | 12.15 p.m. | Dab .. .. | .. | 38 | 50 | 1 | .. | .. | .. | .. | .. | .. | .. | 89 | 9 | 89 | 9 |
| (With chain on ground rope.) | | 13 f.s.m. | 1 hr. | Lemon Dab.. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 2 | 8 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Cod .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXI 23 | N. W. of Norman's Deep. | 9 f.s.m. | May 24th | Plaice .. | .. | 70 | 110 | 8 | .. | .. | .. | .. | .. | .. | .. | 188 | .. | 188 | . |
| B 141 | 55° 36⅝′ N., 7° 45⅝′ E. | 6½ f.d.s. | 1.50 p.m. | Dab .. .. | .. | 10 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| (With chain on ground rope.) | | | 1 hr. | Sole .. .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXI 25 | Dogger Bank, Northern Slope of Swashway. | 16½ f.l.g.s. | May 25th | Plaice .. | .. | .. | 2 | 10 | 4 | .. | .. | .. | .. | .. | .. | 16 | 10 | 16 | 10 |
| B 142 | 55° 26½′ N., 4° 16½′ E. | 18 f.s. | 6.50 a.m. | Dab .. .. | 1 | 28 | 10 | 3 | .. | .. | .. | .. | .. | .. | .. | 42 | 4 | 42 | 4 |
| (With chain on ground rope.) | | 21 f.g.s. | 6 hrs. | Turbot .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | 3 | 11 | 3 | 11 |
| | | | | Brill.. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 5½ | 1 | 5½ |
| | | | | Cod .. .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Coalfish .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXI 30 | Dogger Bank, East of S. W. Patch. | 12 f.g.s. | May 26th | Plaice .. | .. | .. | 2 | 17 | 1 | .. | .. | .. | .. | .. | .. | 20 | 10 | 20 | 10 |
| B 143 | 54° 32′ N., 2° 40½′ E. | 11 | 1.15 a.m. | Dab .. .. | .. | 30 | 82 | 28 | .. | .. | .. | .. | .. | .. | .. | 140 | 25 | 140 | 25 |
| (With chain on ground rope.) | | 12 f.d.s. | 6 hrs. | Lemon Dab.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | 2 | 9 | 2 | 9 |
| | | | | Haddock .. | .. | .. | .. | 12 | 2 | .. | .. | .. | .. | .. | .. | 14 | 7 | 14 | 7 |
| | | | | Whiting .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard .. | 6 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| XXXI 42 | Dogger Bank, S. of S.W. Patch. | 19½ f.s. | May 26th | Plaice .. .. | .. | .. | .. | 11 | 1 | .. | 1 | .. | .. | .. | .. | 13 | 8 | 13 | 8 |
| B 144 | 54° 15⅝′ N., 2° 19⅜′ E. | 21½ f.s. | 5.5 p.m. | Dab .. .. | 1 | 11 | 24 | 5 | 1 | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| (With chain on ground rope.) | Piece of wreck in trawl, net torn badly. | | 3 hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 1 | 6 | 2 | .. | .. | .. | .. | .. | 10 | 9 | 10 | 9 |
| | | | | Haddock .. | .. | .. | 4 | 25 | 11 | .. | .. | .. | .. | .. | .. | 40 | 22½ | 40 | 22½ |
| | | | | Grey Gurnard .. | 9 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| XXXI 43 | Flamborough Off .. | 31½ f.d.s. | May 27th | Plaice .. .. | .. | .. | .. | 17 | 9 | 1 | .. | .. | .. | .. | .. | 27 | 20 | 27 | 20 |
| B 145 | 54° 3¾′ N., 1° 1′ E. | 26 f.d.s. | 3.15 a.m. | Dab .. .. | .. | 45 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 47 | .. | 47 | .. |
| (With chain on ground rope.) | | | 3 hrs. | Lemon Dab... | .. | .. | 2 | 8 | 2 | .. | .. | .. | .. | .. | .. | 12 | 6 | 12 | 6 |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 2¼ | 1 | 2¼ |
| | | | | Cod .. .. | .. | .. | 3 | 2 | 6 | .. | .. | 1 | .. | .. | .. | 12 | 10½ | 12 | 10½ |
| | | | | Haddock .. | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard .. | 2 | 13 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Starry Ray.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXI 43 | Bridlington Bay .. | 4⅜ f.s. | May 27th | Plaice .. .. | 29 | 42 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 73 | 7½ | 73 | 7½ |
| B 116 | 54° 2′ N., 0° 9¼′ W. | 5½ f.s. | 11.50 a.m. | Dab .. .. | 12 | 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| (With chain on ground rope.) | | | 1 hr. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard .. | 9 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Thornback .. | .. | .. | 1 | 5 | 12 | 2 | .. | .. | .. | .. | .. | 20 | 29 | 20 | 29 |
| XXXI 47 | Bridlington Bay .. | 6 f.s. | May 27th | Plaice .. .. | 31 | 39 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 70 | .. | 70 | .. |
| B (c.) 147 | 54° 2′ N., 0° 9⅛′ W. | 7 f.s. | 1.50 p.m. | Dab .. .. | 24 | 25 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 49 | .. | 49 | .. |
| | Covered net experiment (No. 1) Contents of ordinary cod-end alone recorded here. | | 1 hr. | Sole .. .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | 1 | 18 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Thornback.. | .. | 1 | 1 | 8 | 8 | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| XXXII 14 | Sunk .. .. .. | 9 c.s. gvl. | June 2nd | Sole .. .. | .. | .. | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| B 149 | 51° 49′ N., 1° 31¾′ E. | 10 c.s. | 6.15 a.m. | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| (With chain on ground rope.) | | | 1¼ hrs. | Thornback .. | .. | 1 | .. | 1 | 7 | 4 | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Homelyn .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXII 20 | Off Southwold .. | 10½ gvl. | June 3rd | Plaice .. .. | 6 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| B 150 | 52° 17⅜′ N., 1° 49½′ E. | 15 gvl. | 4 a.m. | Dab .. .. | 16 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22 | .. | 22 | .. |
| | Net torn. | | 2 hrs. | Lemon Dab.. | .. | .. | 1 | .. | .. | .. | . | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Cod .. .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Whiting .. | .. | .. | 10 | 5 | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Thornback .. | . | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Homelyn .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | . |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15½+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXIII 25 | Lynn Deep .. .. | 17 d.s. gvl. | June 10th | Sole .. .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| B 151 | 52° 59′ N., 0° 20′ E. | 12 c.s.m. | 1.15 p.m. | Thornback .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | Small hole in batings. | | 1½ hrs. | | | | | | | | | | | | | | | | |
| XXXIII 44 | Off Mablethorpe .. | 10 c.s. | June 17th | Plaice .. | .. | 8 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| B 152 | 53° 22′ N., 0° 24⅞′ E. | 9 c.s. | 7 a.m. | Dab .. .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | 8 c.s. | 3 hrs. | Sole .. .. | .. | 1 | 32 | 2 | .. | .. | .. | .. | .. | .. | .. | 35 | .. | 35 | .. |
| | | | | Brill .. .. | .. | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | 9 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Homelyn .. | .. | 1 | 1 | 3 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| XXXIII 51 | Lynn Deep .. .. | 7 m. | June 18th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 153 | 52° 56½′ N., 0° 16′ E. | 8 m. | 4.45 a.m. | Sole .. .. | .. | 1 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | Lost nearly all fish, codline insecurely fastened. | | 1½ hrs. | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur dog .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | 2 | .. |
| XXXIII 53 | North of Blakeney Overfalls. | 9½ c.s.sh. | June 18th | Plaice .. | .. | 27 | 16 | 1 | .. | .. | .. | .. | .. | .. | .. | 44 | .. | 44 | .. |
| B 154 | 53° 6½′ N., 0° 55¾′ E. | 9½ c.s.sh. | 11.40 a.m. | Dab .. .. | .. | 69 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 73 | .. | 73 | .. |
| | Belly and cod end chafed "to pieces." | | 2 hrs. | Lemon Dab .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Sole .. .. | .. | .. | 10 | 2 | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Cod .. .. | .. | 14 | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | | | | Whiting .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Pout .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | 1 | .. | 2 | 4 | 1 | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | .. | 2 | .. |
| XXXIV 1 | Leman Ground .. | 16 f.d.s. | June 28th | Plaice .. | .. | 1 | 26 | 36 | 5 | 1 | 1 | .. | .. | .. | .. | 70 | 28 | 70 (small) | 28 |
| O 189 | 53° 23¼′ N., 2° 50⅝′ E. | 16 f.d.s. | 4 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 30 |
| | | 16 f.d.s. | 5 hrs. | Sole .. .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | 2 | 4 | 1 | .. | .. | .. | .. | .. | 7 | 10 | 7 | 10 |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2½ Baskets. | 71 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 30 | .. |
| | | | | Horse Mackerel | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Dogfish .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| XXXIV 2 | Easternedge of Leman Ground. | 16 f.d.s. | June 28th | Plaice .. | .. | .. | 34 | 30 | 5 | 3 | .. | .. | .. | .. | .. | 72 | 28 | 72 | 28 |
| O 190 | 53° 27⅞′ N., 2° 54¾′ E. | 16 f.d.s. | 9.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket. | 8 |
| | Parted aft wire, some fish lost. | 16 f.d.s. | 5½ hrs. | Sole .. .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | 4 | 6 | 4 | 6 |
| | | | | Whiting .. | .. | 6 | 259 | 12 | .. | .. | .. | .. | .. | .. | .. | 277 | 40 | 277 | 40 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| XXXIV 3 | Flamborough Off . | 26 s.m. | July 2nd | Plaice .. | .. | .. | 5 | 15 | 4 | 1 | .. | .. | .. | .. | .. | 25 | 12 | 25 | 12 |
| O 191 | 54° 4½′ N., 0° 50½′ E. | 25 s.m. | 4 p.m. | Dab .. .. | .. | 664 | 26 | 2 | .. | .. | .. | .. | .. | .. | .. | 692 | 33 | 692 | 33 |
| | | | 4 hrs. | Lemon Dab .. | .. | .. | 3 | 9 | 2 | .. | .. | .. | .. | .. | .. | 14 | 6 | 14 | 6 |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 3 | 52 | 2 | .. | .. | .. | .. | .. | 1 | .. | 58 | .. | 58 | .. |
| | | | | Haddock .. | .. | .. | 10 | 4 | 2 | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Whiting .. | .. | 19 | 197 | 22 | 1 | .. | .. | .. | .. | .. | .. | 239 | 33 | 239 | 33 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. |
| | | | | Greater Weever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXIV 4 | Flamborough Off .. | 25 s.m. | July 2nd & 3rd. | Plaice .. | .. | .. | 7 | 85 | 19 | .. | .. | .. | .. | .. | .. | 111 | 68 | 111 | 68 |
| O 192 | 54° 7′ N., 0° 56′ E. | 25 | 8.30 p.m. (2nd.) | Dab .. .. | .. | 283 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 285 | 9 | [1140] | [36] |
| | | 27 f.s.m. | 6 hrs. | Lemon Dab.. | .. | .. | 3 | 5 | .. | .. | .. | .. | .. | .. | .. | 8 | 5 | 8 | 5 |
| | | | | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | 15 | 172 | 8 | 2 | 2 | 3 | 5 | 7 | 4 | 2 | 220 | 179 | 220 | 179 |
| | | | | Haddock .. | .. | 1 | 47 | 26 | 1 | .. | .. | .. | .. | .. | .. | 75 | 20 | 75 | 20 |
| | | | | Whiting .. | .. | 17 | 197 | 10 | .. | .. | .. | .. | .. | .. | .. | 224 | 30 | [1232] | [165] |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| XXXIV 5 | Flamborough Off .. | 27 f.s. & m. | July 3rd | Plaice .. | .. | .. | 1 | 60 | 8 | .. | .. | .. | .. | .. | .. | 69 | 40 | 69 | 40 |
| O 193 | 54° 7⅞′ N., 1° 10⅜′ E. | 27 | 2.45 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket (small) | |
| | | 27 f.s. & m. | 5¾ hrs. | Lemon Dab.. | .. | 2 | 8 | 16 | 4 | .. | .. | .. | .. | .. | .. | 30 | 16 | 30 | 16 |
| | | | | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | 8 | 55 | 14 | 23 | 6 | 21 | 26 | 27 | 18 | 2 | 200 | 569 | 200 | 569 |
| | | | | Haddock .. | .. | 2 | 96 | 58 | 5 | .. | .. | .. | .. | .. | .. | 161 | 45 | 161 | 45 |
| | | | | Whiting .. | .. | 5 | 59 | 2 | .. | .. | .. | .. | .. | .. | .. | 66 | 10 | 66 | 10 |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | 2 | .. |
| XXXIV 6 | Flamborough Off .. | 27 f.s.m. | July 3rd | Plaice .. | .. | .. | .. | 49 | 9 | 2 | .. | .. | .. | .. | .. | 60 | 38 | 60 | 38 |
| O 194 | 54° 6¼′ N., 1° 13¾′ E. | 27 | 8.45 a.m. | Dab .. .. | .. | 96 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 98 | 4 | 98 | 4 |
| | | 28 s.m. | 5½ hrs. | Lemon Dab.. | .. | .. | 3 | 19 | 1 | .. | .. | .. | .. | .. | .. | 23 | 11 | 23 | 11 |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | 6 | 2 | 6 |
| | | | | Cod .. .. | .. | 2 | 55 | 4 | 13 | 2 | 5 | 12 | 6 | 2 | 1 | 102 | 158 | 102 | 158 |
| | | | | Haddock .. | .. | .. | 83 | 39 | 1 | .. | .. | .. | .. | .. | .. | 123 | 30 | 123 | 30 |
| | | | | Whiting .. | .. | .. | 19 | 2 | .. | .. | .. | .. | .. | .. | .. | 21 | 5 | 21 | 5 |
| | | | | Grey Gurnard | .. | 13 | 35 | 1 | .. | .. | .. | .. | .. | .. | .. | 49 | 6 | 49 | 6 |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| XXXIV 7 | Flamborough Off .. | 28 s.m. | July 3rd | Plaice .. | .. | .. | 1 | 43 | 10 | .. | .. | .. | .. | .. | .. | 54 | 30 | 54 | 30 |
| O 195 | 54° 5¼′ N., 1° 10½′ E. | 25 f.d.s. | 2.30 p.m. | Dab .. .. | .. | 126 | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 133 | 5 | 133 | 5 |
| | | | 5½ hrs. | Lemon Dab.. | .. | .. | 2 | 18 | .. | .. | .. | .. | .. | .. | .. | 20 | 12 | 20 | 12 |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 4 | 98 | 13 | 9 | 3 | 4 | 8 | 4 | 3 | 2 | 148 | 159 | 148 | 159 |
| | | | | Haddock .. | .. | .. | 113 | 62 | 2 | .. | 1 | .. | .. | .. | .. | 178 | 47 | 178 | 47 |
| | | | | Whiting .. | .. | 3 | 179 | 18 | .. | .. | .. | .. | .. | .. | .. | 200 | 31 | 200 | 31 |
| | | | | Coalfish .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 4 | 1 | 11 | 74 | 11 | 74 |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 22 | 59 | .. | .. | .. | .. | .. | .. | .. | .. | 81 | 9 | 81 | 9 |
| | | | | Horse Mackerel | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XXXV 8 | Flamborough Off .. | 25 f.d.s. | July 3rd & 4th | Plaice .. | .. | .. | 1 | 56 | 12 | 1 | 1 | .. | .. | .. | .. | 71 | 45 | 71 | 45 |
| O 196 | 54° 4½′ N., 1° 10′ E. | 25 | 8.20 p.m. (3rd) | Dab .. .. | .. | 238 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 245 | 9 | 245 | 9 |
| | | 25 f.d.s. | 6 hrs. 10 mins. | Lemon Dab.. | .. | .. | .. | 8 | 2 | .. | .. | .. | .. | .. | .. | 10 | 7 | 10 | 7 |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 3 | 66 | 14 | 11 | 1 | 2 | 6 | 12 | 3 | .. | 118 | 160 | 118 | 160 |
| | | | | Haddock .. | .. | .. | 50 | 61 | 1 | .. | .. | .. | .. | .. | .. | 112 | 35 | [224 | 70] |
| | | | | Whiting .. | .. | 7 | 162 | 8 | 1 | .. | .. | .. | .. | .. | .. | 178 | 30 | [623 | 105] |
| | | | | Grey Gurnard | .. | 4 | 24 | 7 | .. | .. | .. | .. | .. | .. | .. | 35 | 6 | 35 | 6 |
| | | | | Herring .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | (small) |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXIV 9 | Flamborough Off .. | 25 f.d.s. | July 4th | Plaice .. | .. | .. | .. | 63 | 9 | 4 | .. | .. | .. | .. | .. | 76 | 50 | 76 | 50 |
| O 197 | 54° 1⅛′ N., 1° 6⅜′ E. | 22½ f.d.s. | 2.50 a.m. | Dab .. .. | .. | 106 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 109 | 6 | 109 | 6 |
| | | | 5 hrs. 40 mins. | Lemon Dab.. | .. | .. | 1 | 30 | .. | .. | .. | .. | .. | .. | .. | 31 | 18 | 31 | 18 |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 30 | 15 | 22 | 5 | 6 | 4 | 5 | 1 | 1 | 89 | 127 | 89 | 127 |
| | | | | Haddock .. | .. | .. | 33 | 34 | 2 | .. | .. | .. | .. | .. | .. | 69 | 20 | 69 | 20 |
| | | | | Whiting .. | .. | .. | 157 | 22 | .. | .. | .. | .. | .. | .. | .. | 179 | 30 | 179 | 30 |
| | | | | Grey Gurnard | .. | 15 | 50 | 6 | .. | .. | .. | .. | .. | .. | .. | 71 | 10 | 71 | 10 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | (large) |
| XXXIV 10 | Flamborough Off .. | 22½ f.d.s. | July 4th | Plaice .. | .. | .. | 4 | 26 | 3 | 1 | .. | .. | .. | .. | .. | 34 | 15 | 34 | 15 |
| O 198 | 54° 0′ N., 1° 8⅝′ E. | 23 f.d.s. | 9 a.m. | Dab .. .. | .. | 339 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 347 | 15 | [1041 | 45] |
| | | 23 f.d.s. | 5½ hrs. | Lemon Dab.. | .. | .. | 2 | 11 | 1 | .. | .. | .. | .. | .. | .. | 14 | 8 | 14 | 8 |
| | | | | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 28 | .. | .. | .. | 1 | .. | 1 | 3 | .. | 33 | 41 | 33 | 41 |
| | | | | Haddock .. | .. | .. | 20 | 30 | .. | .. | .. | .. | .. | .. | .. | 50 | 15 | 50 | 15 |
| | | | | Whiting .. | .. | 8 | 252 | 23 | .. | .. | .. | .. | .. | .. | .. | 283 | 41 | 283 | 41 |
| | | | | Grey Gurnard | .. | 111 | 111 | 4 | .. | .. | .. | .. | .. | .. | .. | 226 | 25 | [452 | 50] |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| XXXIV 11 | Flamborough Off .. | 23 f.d.s. | July 4th | Plaice .. | .. | .. | 8 | 17 | 6 | .. | .. | .. | .. | .. | .. | 31 | 16 | 31 | 16 |
| O 199 | 54° 5⅜′ N., 1° 1⅜′ E. | 25 f.d.s. | 3 p.m. | Dab .. .. | .. | 134 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 140 | 6 | 140 | 6 |
| | Small hole in bosom. | 27 f.d.s. | 5½ hrs. | Lemon Dab.. | .. | .. | 2 | 6 | .. | .. | .. | .. | .. | .. | .. | 8 | 4 | 8 | 4 |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 | 11 | 2 | 11 |
| | | | | Cod .. .. | .. | 4 | 93 | 7 | .. | 1 | 3 | 4 | 5 | 3 | .. | 120 | 105 | 120 | 105 |
| | | | | Haddock .. | .. | .. | 87 | 38 | 1 | .. | .. | .. | .. | .. | .. | 126 | 31 | [189 | 46½] |
| | | | | Whiting .. | .. | 2 | 131 | 13 | .. | .. | .. | .. | .. | .. | .. | 146 | 23 | 146 | 23 |
| | | | | Coalfish .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 95 | 136 | 2 | .. | .. | .. | .. | .. | .. | .. | 233 | 23 | 233 | 23 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XXXIV 12 | Flamborough Off .. | 27 f.d.s. | July 4th & 5th | Plaice .. | .. | .. | .. | 40 | 14 | .. | .. | .. | .. | .. | .. | 54 | 35 | 54 | 35 |
| O 200 | 54° 9′ N., 1° 8½′ E. | 28 | 9 p.m. (4th) | Dab .. .. | .. | 143 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 146 | 6 | 146 | 6 |
| | | 28 f.s. & m. | 5¾ hrs. | Lemon Dab.. | .. | .. | 1 | 13 | 1 | .. | .. | .. | .. | .. | .. | 15 | 7 | 15 | 7 |
| | | | | Cod .. .. | .. | 1 | 49 | 7 | 11 | 2 | 4 | 3 | 4 | 12 | 1 | 94 | 186 | 94 | 186 |
| | | | | Haddock .. | .. | 1 | 69 | 70 | 5 | .. | .. | .. | .. | .. | .. | 145 | 45 | 145 | 45 |
| | | | | Whiting .. | .. | 4 | 251 | 38 | 2 | .. | .. | .. | .. | .. | .. | 295 | 53 | 295 | 53 |
| | | | | Grey Gurnard | .. | 6 | 47 | 12 | .. | .. | .. | .. | .. | .. | .. | 65 | 12 | 65 | 12 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | .. |
| XXXIV 13 | Flamborough Off .. | 28 f.s.m. | July 5th | Plaice .. | .. | .. | .. | 15 | 7 | .. | .. | .. | .. | .. | .. | 22 | 13 | 22 | 13 |
| O 201 | 54° 11½′ N., 1° 7¼′ E. | 29 f.d.s. | 3.15 a.m. | Dab .. .. | .. | 54 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 61 | 3 | 61 | 3 |
| | | | 5¼ hrs. | Lemon Dab.. | .. | .. | 1 | 8 | .. | .. | .. | .. | .. | .. | .. | 9 | 5 | 9 | 5 |
| | | | | Cod .. .. | .. | .. | 43 | 6 | 11 | 8 | 3 | 6 | 4 | .. | .. | 81 | 98 | 81 | 98 |
| | | | | Haddock .. | .. | 1 | 98 | 35 | 2 | .. | .. | .. | .. | .. | .. | 136 | 30 | 136 | 30 |
| | | | | Whiting .. | .. | .. | 154 | 21 | 1 | .. | .. | .. | .. | .. | .. | 176 | 32 | 176 | 32 |
| | | | | Coalfish .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 19 | 70 | 2 | .. | .. | .. | .. | .. | .. | .. | 91 | 10 | 91 | 10 |
| XXXIV 14 | Flamborough Off .. | 29 f.d.s. | July 5th | Plaice .. | .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| O 202 | 54° 13⅓′ N., 1° 7½′ E. | 33 f.d.s. & sh. | 9 a.m. | Lemon Dab.. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | Came fast to wreck, parted ground rope and headline, net very badly torn. | | 1 hr. | Cod .. .. | .. | .. | 9 | 1 | 1 | .. | 6 | 2 | .. | .. | .. | 19 | 32 | 19 | 32 |
| | | | | Haddock .. | .. | .. | 13 | 3 | 2 | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | Whiting .. | .. | 4 | 21 | 3 | .. | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| XXXIV 15 | Flamborough Off .. | 30 d.s. & sh. | July 5th | Plaice .. | .. | .. | .. | 20 | 12 | 1 | .. | .. | .. | .. | .. | 33 | 23 | 33 | 23 |
| O 203 | 54° 17⅝′ N 1° 15⅜′ E. | 30 d.s. & sh. | 6.30 p.m. | Dab .. .. | .. | 46 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 52 | 3 | 52 | 3 |
| | | | 3½ hrs. | Lemon Dab ... | .. | .. | 2 | 19 | .. | .. | .. | .. | .. | .. | .. | 21 | 10 | 21 | 10 |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | 5 | 2 | 5 |
| | | | | Cod .. .. | .. | .. | 18 | 6 | 9 | 3 | 3 | 1 | 1 | .. | .. | 41 | 35 | 41 | 35 |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40+ | 19¾+ / 50+ | 23⅝+ / 60+ | 27½+ / 70+ | 31½+ / 80+ | 35½+ / 90+ | 39½+ / 100+ | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXIV 15 | Flamborough Off—*cont.* | 30 d.s. & sh. | July 5th | Haddock .. | .. | 1 | 68 | 29 | 2 | .. | .. | .. | .. | .. | .. | 100 | 23 | 100 | 23 |
| O 203 | 54° 17⅝′ N., 1° 15⅝′ E. | 30 d.s. & sh. | 6.30 p.m. | Whiting .. | .. | 4 | 68 | 20 | .. | .. | .. | .. | .. | .. | .. | 92 | 15 | 92 | 15 |
| | | | 3½ hrs. | Grey Gurnard | .. | 12 | 40 | 1 | .. | .. | .. | .. | .. | .. | .. | 53 | 5 | 53 | 5 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XXXIV 16 | Flamborough Off .. | 30 d.s. & sh. | July 5th & 6th. | Plaice .. | .. | .. | .. | 29 | 4 | 1 | .. | .. | .. | .. | .. | 34 | 24 | 34 | 24 |
| O 204 | 54° 13¾′ N., 1° 14′ E. | 25 f.d.s. | 10.30 p.m. (5th) | Dab .. .. | .. | 131 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 140 | 6 | 140 | 6 |
| | | | 4½ hrs. | Lemon Dab.. | .. | 1 | 2 | 11 | .. | .. | .. | .. | .. | .. | .. | 14 | 6 | 14 | 6 |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 4 | 1 | 4 |
| | | | | Cod .. .. | .. | .. | 41 | 2 | 8 | 2 | 5 | 3 | 5 | 2 | .. | 68 | 89 | 68 | 89 |
| | | | | Haddock .. | .. | 5 | 90 | 48 | 3 | .. | .. | .. | .. | .. | .. | 146 | 41 | 146 | 41 |
| | | | | Whiting .. | .. | 11 | 155 | 18 | 1 | .. | .. | .. | .. | .. | .. | 185 | 32 | 185 | 32 |
| | | | | Pout .. .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 35 | 76 | 15 | .. | .. | .. | .. | .. | .. | .. | 126 | 19 | 126 | 19 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| XXXIV 17 | Flamborough Off .. | 25 f.d.s. | July 6th | Plaice .. | .. | .. | 1 | 32 | 5 | .. | .. | .. | .. | .. | .. | 38 | 22 | 38 | 22 |
| O 205 | 54° 9½′ N., 1° 12⅝′ E. | 28 f.d.s. | 3.30 a.m. | Dab .. .. | .. | 138 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 142 | 6 | 142 | 6 |
| | | | 5½ hrs. | Lemon Dab.. | .. | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | .. | 6 | 4 | 6 | 4 |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 10 | 1 | 10 |
| | | | | Cod .. .. | .. | 2 | 11 | 1 | .. | .. | 1 | 2 | .. | 2 | .. | 19 | 33 | 19 | 33 |
| | | | | Haddock .. | .. | .. | 49 | 6 | 1 | .. | .. | .. | .. | .. | .. | 56 | 9 | 56 | 9 |
| | | | | Whiting .. | .. | 5 | 55 | 1 | .. | .. | .. | .. | .. | .. | .. | 61 | 8 | 61 | 8 |
| | | | | Grey Gurnard | .. | 63 | 102 | 2 | .. | .. | .. | .. | .. | .. | .. | 167 | 15 | 167 | 15 |
| XXXIV 18 | Flamborough Off .. | 28 f.d.s. | July 6th | Plaice .. | .. | .. | .. | 22 | 3 | .. | .. | .. | .. | .. | .. | 25 | 13 | 25 | 13 |
| O 206 | 54° 8⅝′ N., 1° 11½′ E. | 25 f.d.s. | 9.30 a.m. | Lemon Dab.. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | 4 | 3 | 4 |
| | | 27 ds. s.h. | 5 hrs. 20 mins. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 1 | 13 | .. | .. | .. | 1 | 2 | .. | .. | .. | 17 | 10 | 17 | 10 |
| | | | | Haddock .. | .. | .. | 16 | 2 | .. | .. | .. | .. | .. | .. | .. | 18 | 3 | 18 | 3 |
| | | | | Whiting .. | .. | 2 | 91 | 4 | .. | .. | .. | .. | .. | .. | .. | 97 | 14 | 97 | 14 |
| | | | | Grey Gurnard | .. | 93 | 217 | 4 | .. | .. | .. | .. | .. | .. | .. | 314 | 30 | 314 | 30 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| XXXIV 19 | Flamborough Off .. | 27 d.s.s.h. | July 6th | Plaice .. | .. | .. | 1 | 32 | 17 | 3 | .. | .. | .. | .. | .. | 53 | 38 | 53 | 38 |
| O 207 | 54° 8′ N., 1° 9¾′ E. | 27 f.d.s. | 3.20 p.m. | Dab .. .. | .. | 56 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 63 | 3 | 63 | 3 |
| | | | 4 hrs. 55 mins. | Lemon Dab.. | .. | .. | 2 | 10 | .. | .. | .. | .. | .. | .. | .. | 12 | 6 | 12 | 6 |
| | | | | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | 6 | 2 | 6 |
| | | | | Cod .. .. | .. | .. | 27 | 2 | 3 | .. | .. | .. | .. | .. | .. | 32 | 7 | 32 | 7 |
| | | | | Haddock .. | .. | .. | 25 | 6 | .. | .. | .. | .. | .. | .. | .. | 31 | 5 | 31 | 5 |
| | | | | Whiting .. | .. | .. | 20 | 2 | .. | .. | .. | .. | .. | .. | .. | 22 | 4 | 22 | 4 |
| | | | | Grey Gurnard | .. | 67 | 157 | 2 | .. | .. | .. | .. | .. | .. | .. | 226 | 20 | 226 | 20 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XXXIV 20 | Flamborough Off .. | 27 f.d.s. | July 6th & 7th. | Plaice .. | .. | .. | 10 | 40 | 10 | 2 | .. | .. | .. | .. | .. | 62 | 33 | 62 | 33 |
| O 208 | 54° 6½′ N., 1° 0½′ E. | 27 | 8.45 p.m. (6th) | Dab .. .. | .. | 104 | 14 | 4 | .. | .. | .. | .. | .. | .. | .. | 122 | 8 | 122 | 8 |
| | | 27 f.s.m. | 5¾ hrs. | Lemon Dab.. | .. | .. | .. | 10 | .. | .. | .. | .. | .. | .. | .. | 10 | 6 | 10 | 6 |
| | | | | Sole .. .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 1 | 11 | 2 | 3 | .. | .. | .. | .. | 1 | .. | 18 | 10 | 18 | 10 |
| | | | | Haddock .. | .. | .. | 54 | 9 | .. | .. | .. | .. | .. | .. | .. | 63 | 13 | 63 | 13 |
| | | | | Whiting .. | .. | 6 | 135 | 5 | 1 | .. | .. | .. | .. | .. | .. | 147 | 23 | 147 | 23 |
| | | | | Grey Gurnard | .. | 11 | 37 | 8 | .. | .. | .. | .. | .. | .. | .. | 56 | 8 | 56 | 8 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXIV 21 | Flamborough Off .. | 27 f.s.m. | July 7th | Plaice .. | .. | .. | 14 | 17 | 6 | 1 | .. | .. | .. | .. | .. | 38 | 16 | 38 | 16 |
| O 209 | 54° 6⅜′ N., 0° 49′ E. | 25 f.d.g.s. | 3 a.m. | Dab .. .. | .. | 141 | 17 | 1 | .. | .. | .. | .. | .. | .. | .. | 159 | 8 | 159 | 8 |
| | | | 5½ hrs. | Lemon Dab.. | .. | .. | 1 | 14 | .. | .. | .. | .. | .. | .. | .. | 15 | 6 | 15 | 6 |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 32 | 6 | 1 | .. | 1 | 1 | 1 | 2 | .. | 44 | 36 | 44 | 36 |
| | | | | Haddock .. | .. | .. | 47 | 16 | 1 | .. | .. | .. | .. | .. | .. | 64 | 16 | 64 | 16 |
| | | | | Whiting .. | .. | 7 | 147 | 8 | 1 | .. | .. | .. | .. | .. | .. | 163 | 23 | 163 | 23 |
| | | | | Grey Gurnard | .. | 56 | 154 | 1 | .. | .. | .. | .. | .. | .. | .. | 211 | 22 | [422 | 44] |
| | | | | Horse Mackerel | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Herring .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXXIV 22 | Flamborough Off .. | 25 f.g.s. d.spks. | July 7th | Plaice .. | .. | .. | 10 | 18 | 3 | .. | .. | .. | .. | .. | .. | 31 | 14 | 31 | 14 |
| O 210 | 54° 2½′ N., 0° 50⅝′ E. | 25 | 9 a.m. | Dab .. .. | .. | 44 | 14 | 1 | 1 | .. | .. | .. | .. | .. | .. | 60 | 4 | 60 | 4 |
| | Belly badly torn. | 25 f.g.s. sh. | 5½ hrs. | Lemon Dab.. | .. | .. | 7 | 13 | .. | .. | .. | .. | .. | .. | .. | 20 | 8 | 20 | 8 |
| | | | | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 7 | 1 | 7 |
| | | | | Cod .. .. | .. | 3 | 39 | 4 | 1 | .. | 2 | .. | 1 | .. | .. | 50 | 18 | 50 | 18 |
| | | | | Haddock .. | .. | .. | 4 | 5 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 43 | 85 | 3 | .. | .. | .. | .. | .. | .. | .. | 131 | 13 | [393 | 39] |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | | .. | 2 | .. |
| XXXIV 23 | Flamborough Off .. | 25 f.d.s. | July 7th | Plaice .. | .. | .. | 4 | 12 | 10 | .. | .. | .. | .. | .. | .. | 26 | 17 | 26 | 17 |
| O 211 | 54° 5½′ N., 0° 55½′ E. | 28 f.d.s. | 5 p.m. | Dab .. .. | .. | 91 | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 98 | 5 | 98 | 5 |
| | | | 4½ hrs. | Lemon Dab.. | .. | .. | 4 | 17 | 2 | .. | .. | .. | .. | .. | .. | 23 | 15 | 23 | 15 |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 49 | 4 | 7 | 3 | 4 | 4 | 5 | 1 | 1 | 78 | 90 | 78 | 90 |
| | | | | Haddock .. | .. | .. | 95 | 187 | 9 | .. | .. | .. | .. | .. | .. | 291 | 111 | 291 | 111 |
| | | | | Whiting .. | .. | 10 | 138 | 10 | .. | .. | .. | .. | .. | .. | .. | 158 | 30 | [316 | 60] |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 17 | 89 | .. | .. | .. | .. | .. | .. | .. | .. | 106 | 12 | [212 | 24] |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXXIV 24 | Flamborough Off .. | 28 f.d.s. | July 7th & 8th | Plaice .. | .. | .. | 5 | 11 | 11 | .. | .. | .. | .. | .. | .. | 27 | 16 | 27 | 16 |
| O 212 | 54° 5¼′ N., 0° 48¼′ E. | 28½ f.s.m. | 9.50 p.m. (7th) | Dab .. .. | .. | 171 | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | 180 | .. | 180 | .. |
| | | | 5 hrs. 40 min. | Lemon Dab .. | .. | .. | 2 | 8 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | 3 | 76 | 6 | 8 | 3 | 6 | 8 | 6 | 2 | .. | 118 | 131 | 118 | 131 |
| | | | | Haddock .. | .. | .. | 121 | 129 | 15 | .. | .. | .. | .. | .. | .. | 265 | 96 | [353 | 128] |
| | | | | Whiting .. | .. | 2 | 83 | 5 | .. | .. | .. | .. | .. | .. | .. | 90 | 15 | [270 | 45] |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XXXV 1 | Flamborough Off .. | 25 f.d s. | July 20th | Plaice .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B (c.) 155 | 54° 3⅝′ N., 0° 58⅜′ E. | 25 f.d.s. | 3.50 a.m. | Dab .. .. | 5 | 70 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 77 | .. | 77 | .. |
| | Covered net experiment (No. 2). | | 1 hr. | Lemon Dab ... | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Whiting .. | .. | 4 | 16 | 1 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Grey Gurnard | .. | 23 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| XXXV 3 | Flamborough Off .. | 25 f.g.s. | July 20th | Plaice .. | .. | .. | 1 | 13 | 7 | .. | .. | .. | .. | .. | .. | 21 | 12 | 21 | 12 |
| O 213 | 54° 6⅛′ N., 1° 0⅜′ E. | 27 f.g.s. m. | 6.15 a.m. | Dab .. .. | 3 | 112 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 128 | .. | 128 | .. |
| | | 25 f.s. & m. | 5 hrs. | Lemon Dab | .. | 1 | 2 | 4 | 1 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 2 | 34 | 3 | .. | .. | .. | .. | 1 | .. | .. | 40 | 12 | 40 | 12 |
| | | | | Haddock .. | .. | .. | 58 | 4 | 1 | .. | .. | .. | .. | .. | .. | 63 | 10½ | 63 | 10½ |
| | | | | Whiting .. | .. | .. | 184 | 16 | .. | .. | .. | .. | .. | .. | .. | 200 | 28 | 200 | 28 |
| | | | | Grey Gurnard | .. | 136 | 137 | .. | .. | .. | .. | .. | .. | .. | .. | 273 | 23 | [682] | 58 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15⅝+ / 40 + | 19⅝+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXV 4 | Flamborough Off .. | 25 f.s.m. | July 20th | Plaice .. | .. | 1 | 3 | 18 | 9 | .. | .. | .. | .. | .. | .. | 31 | 17½ | 31 | 17½ |
| O 214 | 54° 8¾′ N., 1° 2⅝′ E. | 29 f.d.s. | 11.50 a.m. | Dab .. .. | .. | 62 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 78 | .. | 78 | .. |
| | | 30 f.d.s. | 6½ hrs. | Lemon Dab | .. | .. | 3 | 23 | 2 | .. | .. | .. | .. | .. | .. | 28 | 15 | 28 | 15 |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 51 | 3 | 3 | 1 | .. | .. | 1 | .. | .. | 59 | 20½ | 59 | 20½ |
| | | | | Haddock .. | . | .. | 143 | 31 | 2 | 1 | .. | .. | .. | .. | .. | 177 | [37¼] | 177 | [37¼] |
| | | | | Whiting .. | .. | 1 | 135 | 17 | 1 | .. | .. | .. | .. | .. | .. | 154 | 25 | 154 | 25 |
| | | | | Grey Gurnard | .. | 72 | 176 | 2 | .. | .. | .. | .. | .. | .. | .. | 250 | 24 | [604] | 58 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| XXXV 5 | Flamborough Off .. | 30 f.d.s.m. | July 20th & 21st | Plaice .. | .. | .. | 1 | 25 | 10 | 1 | .. | .. | .. | .. | .. | 37 | 26 | 37 | 26 |
| O 215 | 54° 11¾′ N., 1° 0⅜′ E. | 35 f.d.s.m. | 6.50 p.m. (20th) 7 hrs. 10 min. | Dab .. .. | .. | 12 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Lemon Dab | .. | .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | 11 | 6 | 11 | 6 |
| | | | | Sole .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 4½ | 1 | 4½ |
| | | | | Cod .. .. | .. | .. | 56 | 23 | 8 | 2 | 3 | 4 | 2 | .. | .. | 98 | 77 | 98 | 77 |
| | | | | Haddock .. | .. | 1 | 87 | 159 | 15 | .. | .. | .. | .. | .. | .. | 262 | [98¼] | 262 | [98¼] |
| | | | | Whiting .. | .. | 1 | 152 | 23 | .. | .. | .. | .. | .. | .. | .. | 176 | 33 | [325] | 61 |
| | | | | Hake .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | About 1 Basket. | |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| XXXV 6 | Flamborough Off .. | 35 f.d.s. | July 21st | Plaice .. | .. | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| B (c.) 156 | 54° 12½′ N., 1° 2¾′ E. | 33 f.d.s. | 3 a.m. | Dab .. .. | 9 | 24 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 34 | .. | 34 | .. |
| | Covered net experiment (No. 3). | | 1 hr. | Lemon Dab | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | 8 | 4 | 10 | 1 | .. | .. | .. | 1 | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Haddock .. | .. | .. | 14 | 4 | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | Whiting .. | .. | 41 | 53 | 4 | .. | .. | .. | .. | .. | .. | .. | 98 | .. | 98 | .. |
| | | | | Pout .. .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | 4 | 25 | 2 | .. | .. | .. | .. | .. | .. | .. | 31 | .. | 31 | .. |
| | | | | Starry Ray.. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 7 | Botney Gut .. .. | 31 m. | July 21st | Plaice .. | .. | .. | 3 | 48 | 1 | .. | .. | .. | .. | .. | .. | 52 | 23 | 52 | 23 |
| O 216 | 53° 53⅜′ N., 3° 1⅜′ E. | 31 m. | 2.30 p.m. | Dab .. .. | 2 | 84 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 99 | .. | 99 | .. |
| | | 32 m. | 5½ hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | 37 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 51 | .. | 51 | .. |
| | | | | Cod .. .. | .. | .. | 8 | 4 | 4 | 9 | 8 | 12 | 6 | 2 | .. | 53 | 146 | 53 | 146 |
| | | | | Haddock .. | .. | .. | 3 | 20 | 12 | .. | .. | .. | .. | .. | .. | 35 | 22 | 35 | 22 |
| | | | | Whiting .. | .. | 1 | 481 | 84 | 2 | .. | .. | .. | .. | .. | .. | 568 | 103¾] | 568 | 103¾] |
| | | | | Grey Gurnard | .. | 89 | 152 | .. | .. | .. | .. | .. | .. | .. | .. | 241 | 20½ | 241 | 20½ |
| | | | | Mackerel .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Skate .. .. | .. | .. | 2 | 1 | 1 | 1 | 2 | .. | .. | .. | .. | 7 | 15 | 7 | 15 |
| XXXV 9 | Between Coal Pit and Broken Bank. | 13 s.gvl. | July 22nd | Plaice .. | .. | .. | 9 | 31 | 7 | 1 | .. | .. | .. | .. | .. | 48 | 22½ | 48 | 22½ |
| 157 | 53° 23⅜′ N., 2° 3′ E. | 14 c.s. | 4.30 a.m. | Dab .. .. | .. | 103 | 55 | 2 | .. | .. | .. | .. | .. | .. | .. | 160 | 13 | 169 | 13 |
| | Belly torn. | 14 f.g.s. | 5½ hrs. | Lemon Dab . | .. | 2 | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | 9 | 2½ | 9 | 2½ |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | 3½ | 2 | 3½ |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Ling .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 25 | 16 | 1 | .. | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| XXXV 11 | Between Swarte Bank and Broken Bank. | 14 f.g.s. | July 22nd | Plaice .. | .. | 3 | 26 | 53 | 5 | 2 | .. | .. | .. | .. | .. | 89 | 34 | 89 | 34 |
| B 158 | 53° 20½′ N., 2° 11¾′ E. | 15 f.g.s. | 12.15 p.m. | Dab .. .. | .. | 426 | 61 | 2 | .. | .. | .. | .. | .. | .. | .. | 489 | 28 | 489 | 28 |
| | | | 4¼ hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | .. | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Pout .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 14 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0/0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15⅜+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXV 12 | East of South part of Swarte Bank. | 15 f.g.s. | July 22nd | Plaice .. | .. | 3 | 42 | 78 | 10 | .. | .. | .. | .. | .. | .. | 133 | 49 | 133 | 49 |
| O 217 | 53° 20′ N., 2° 23′ E. | 12 f.g.s. | 5.30 p.m. | Dab .. .. | 2 | 887 | 223 | 6 | .. | .. | .. | .. | .. | .. | .. | 1118 | 76 | 1118 | 76 |
| | | 14 f.g.s. | 5½ hrs. | Lemon Dab | .. | 1 | 3 | 4 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Sole .. .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Whiting .. | .. | .. | 39 | 9 | .. | .. | .. | .. | .. | .. | .. | 48 | .. | 48 | .. |
| | | | | Grey Gurnard | .. | 28 | 71 | 2 | .. | .. | .. | .. | .. | .. | .. | 101 | .. | 101 | .. |
| | | | | Latchet .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Red Mullet .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | 15 | 9 | .. | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Horse Mackerel. | . | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 13 | Leman Ground .. | 14 f.g.s. | July 22nd & 23rd. | Plaice .. | .. | .. | 5 | 34 | 10 | 1 | .. | .. | .. | .. | .. | 50 | 28½ | 50 | 28½ |
| O 218 | 53° 25′ N., 2° 19¾′ E. | 14 f.g.s. | 11.30 p.m. (22nd.) | Dab .. .. | .. | 189 | 98 | 18 | .. | .. | .. | .. | .. | .. | .. | 305 | 31 | 305 | 31 |
| | Belly and fore wing torn. | 14 f.g.s. | 5½ hrs. | Lemon Dab | .. | 1 | 15 | 8 | .. | .. | .. | .. | .. | .. | .. | 24 | 8 | 24 | 8 |
| | .. | | | Sole .. .. | .. | .. | 3 | 6 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 7½ | 1 | 7½ |
| | | | | Cod .. .. | .. | 1 | 16 | 2 | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Whiting .. | .. | .. | 25 | 13 | .. | .. | .. | .. | .. | .. | .. | 38 | .. | 38 | .. |
| | | | | Grey Gurnard | .. | 5 | 20 | .. | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | | | | Red Mullet .. | .. | 5 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| XXXV 14 | Leman Ground .. | 13 f.g.s. | July 23rd | Plaice .. | .. | 4 | 18 | 55 | 7 | 1 | .. | .. | .. | .. | .. | 85 | 35 | 85 | 35 |
| O 219 | 53° 25′ N., 2° 23⅝′ E. | 11 f.g.s. | 8 a.m. | Dab .. .. | .. | 288 | 104 | 22 | .. | .. | .. | .. | .. | .. | .. | 414 | 39 | 414 | 39 |
| | Belly split. | 19 f.g.s. | 5½ hrs. | Lemon Dab | .. | 1 | 3 | 9 | .. | .. | .. | .. | .. | .. | .. | 13 | 5 | 13 | 5 |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | 3 | 2 | 3 |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | .. | 3 | 8 | 3 | 8 |
| | | | | Cod .. .. | .. | .. | 12 | 5 | .. | .. | .. | .. | .. | .. | .. | 17 | [4¼] | 17 | [4¼] |
| | | | | Whiting .. | .. | 1 | 25 | 24 | .. | .. | .. | .. | .. | . | .. | 50 | [11] | 50 | [11] |
| | | | | Grey Gurnard | .. | 34 | 48 | 4 | .. | .. | .. | .. | .. | .. | .. | 86 | .. | 86 | .. |
| | | | | Latchet .. | .. | 1 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Greater Weever. | .. | .. | 3 | 4 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Thornback .. | .. | .. | 1 | 2 | 1 | 2 | .. | .. | .. | .. | .. | 6 | 13½ | 6 | 13½ |
| | | | | Homelyn . | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 15 | Leman Ground .. | 16 f.g.s. | Ju y 23rd | Plaice .. | .. | .. | 17 | 57 | 6 | .. | .. | .. | .. | .. | .. | 80 | 32 | 80 | 32 |
| O 220 | 53° 25⅞′ N., 2° 39¾′ . | 16 f.g.s. | 3.40 p.m. | Dab .. .. | 1 | 713 | 19 | .. | .. | .. | .. | .. | .. | .. | .. | 733 | 34 | [1229] | 57 |
| | | | 4 hrs. 20 mins. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | 3 | 6 | 3 | 6 |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 17 | 62 | 2 | .. | .. | .. | .. | .. | .. | .. | 81 | 8 | 81 | 8 |
| | | | | Grey Gurnard | .. | 60 | 59 | .. | .. | .. | .. | .. | .. | .. | .. | 119 | 10 | 119 | 10 |
| | | | | Latchet .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Horse Mackerel. | .. | . | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sprat .. | 11 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Thornback .. | .. | .. | 1 | 3 | 2 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| XXXV 16 | Leman Ground .. | 16 f.g.s. | July 23rd & 24th. | Plaice .. | .. | .. | 61 | 113 | 11 | .. | .. | .. | .. | .. | .. | 185 | 70 | 185 | 70 |
| O 221 | 55° 23′ N., 2° 53¾′ E. | 16 f.g.s. | 8.30 p.m. (23rd | Dab .. .. | .. | 710 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 717 | 31 | [3284] | 142 |
| | | 16½ f.g.s. | 6 hrs. | Sole .. .. | .. | .. | 15 | 3 | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | .. | .. | 1 | .. | .. | .. | .. | 4 | 11 | 4 | 11 |
| | | | | Whiting .. | .. | 12 | 23 | .. | .. | .. | .. | .. | .. | .. | .. | 35 | .. | 35 | .. |
| | | | | Grey Gurnard | .. | 128 | 77 | 2 | .. | .. | .. | .. | .. | .. | .. | 207 | 16 | 207 | 16 |
| | | | | Latchet .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Salmon .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 3¼ | 1 | 3¼ |
| | | | | Red Mullet .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Greater Weaver. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Horse Mackerel. | .. | .. | 6 | 5 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Thornback .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |

| Voyage, Station and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXV 17 | Leman Ground .. | 16½ f.g.s. | July 24th | Plaice .. | .. | .. | 150 | 246 | 15 | 1 | .. | .. | .. | .. | .. | 412 | 150½ | 412 | 150½ |
| O 222 | 53° 22′ N., 2° 53′ E. | 16 f.g.s. | 3.45 a.m. | Dab .. .. | 1 | 324 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 330 | 17 | [1650] | 85 |
| | | 16 f.g.s. | 6¾ hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | 3 | 8 | 3 | 8 |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard | .. | 102 | 72 | .. | .. | .. | .. | .. | .. | .. | .. | 174 | 15 | 174 | 15 |
| | | | | Latchet .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Red Mullet.. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Mackerel .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sprat .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Thornback .. | .. | 2 | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Nursehound | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 18 | Leman Ground .. | 16 f.d.s. | July 24th | Plaice .. | .. | .. | 166 | 199 | 14 | 5 | .. | .. | .. | .. | .. | 384 | 137½ | 384 | 137½ |
| O 223 | 53° 26½′ N., 2° 53′ E. | 16 | 11 a.m. | Dab .. .. | .. | 271 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 280 | 14 | [860] | 43 |
| | | 16½ f.d.s. | 8 hrs. | Sole .. .. | .. | .. | 8 | 3 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Turbot .. | .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | 6 | 6½ | 6 | 6½ |
| | | | | Cod .. .. | .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | .. | 125 | 10 | .. | .. | .. | .. | .. | .. | .. | 135 | 21 | 135 | 21 |
| | | | | Grey Gurnard | .. | 64 | 46 | .. | .. | .. | .. | .. | .. | .. | .. | 110 | 10 | 110 | 10 |
| | | | | Red Mullet .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | 3 | 4 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Herring .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sprat.. .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 19 | Leman Ground .. | 16½ f.d.s. | July 24th & 25th. | Plaice .. | .. | 1 | 149 | 112 | 9 | .. | .. | .. | .. | .. | .. | 271 | 84½ | 271 | 84½ |
| O 224 | 53° 24′ N., 2° 55⅓′ E. | 16 f.d.s. | 7.40 p.m. (24th.) | Dab .. .. | .. | 35 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 38 | 2 | [722] | 38 |
| | Turn in aft wing. | 16½ f.d.s. | 6 hrs. 50 min. | Sole .. .. | .. | .. | 6 | 5 | 1 | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Turbot .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | 3 | 171 | 3 | .. | .. | .. | .. | .. | .. | .. | 177 | 22 | 177 | 22 |
| | | | | Grey Gurnard | .. | 30 | 33 | .. | .. | .. | .. | .. | .. | .. | .. | 63 | .. | 63 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Red Mullet.. | .. | 1 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Thornback .. | .. | 1 | 3 | 1 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 20 | Leman Ground .. | 16½ f.d.s. | July 25th | Plaice .. | .. | .. | 77 | 76 | 4 | .. | .. | .. | .. | .. | .. | 157 | 49 | 157 | 49 |
| O 225 | 53° 22¾′ N., 2° 59½′ E. | 16 f.d.s. | 3.30 a.m. | Dab .. .. | .. | 242 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 251 | 12 | [669] | 32 |
| | Aft wing torn. | 16 f.d.s. | 5½ hrs. | Sole .. .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 1 | 112 | 4 | .. | .. | .. | .. | .. | .. | .. | 117 | 15 | 117 | 15 |
| | | | | Grey Gurnard | .. | 50 | 45 | .. | .. | .. | .. | .. | .. | .. | .. | 95 | .. | 95 | .. |
| | | | | Red Mullet.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 21 | S.E. part of Leman Ground. | 16 f.d.s. | July 25th | Plaice .. | .. | .. | 57 | 53 | 2 | .. | .. | .. | .. | .. | .. | 112 | 32 | 112 | 32 |
| O 226 | 53° 18½′ N., 3° 2⅝′ E. | 16 f.d.s. | 10.15 a.m. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Belly and fore wing torn. | 16 f.d.s. | 5½ hrs. | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15⅝+ / 40+ | 19⅝+ / 50+ | 23⅝+ / 60+ | 27½+ / 70+ | 31½+ / 80+ | 35½+ / 90+ | 39½+ / 100+ | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXV 22 | S.E. part of Leman Ground. | 16 f.d.s. | July 25th | Plaice .. | .. | .. | 28 | 14 | 2 | .. | .. | .. | .. | .. | .. | 44 | 16 | 44 | 16 |
| O 227 | 53° 17′ N., 3° 6¼′ E. | 15 f.d.s. | 5 p.m. | Dab .. .. | .. | 36 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 44 | .. | 44 | .. |
| | Parted headline, net torn badly. | | 1 hr. 40 mins. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 10 | 97 | 2 | .. | .. | .. | .. | .. | .. | .. | 109 | .. | 109 | .. |
| | | | | Grey Gurnard | .. | 4 | 31 | 1 | .. | .. | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| | | | | Red Mullet.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 23 | North part of Brown Bank. | 14 f.d.s. | July 26th | Plaice .. | .. | 2 | 408 | 9 | 1 | .. | .. | .. | .. | .. | .. | 420 | 73 | 420 | 73 |
| O 228 | 53° 12¼′ N., 3° 1⅛′ E. | 15 f.d.s. | 8.30 a.m. | Dab .. .. | .. | 232 | 34 | .. | .. | .. | .. | .. | .. | .. | .. | 266 | 16 | [665 | 40] |
| | | | 3½ hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | John Dory .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 39 | 140 | .. | .. | .. | .. | .. | .. | .. | .. | 179 | .. | 179 | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever | .. | .. | 8 | 4 | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 25 | North part of Brown Bank. | 15 f.d.s. | July 26th | Plaice .. | .. | .. | 327 | 12 | 1 | .. | .. | .. | .. | .. | .. | 340 | 64 | 340 | 64 |
| O 229 | 53° 10′ N., 3° 21′ E. | 14 f.d.s. | 12.30 p.m. | Dab .. .. | .. | 228 | 23 | 1 | .. | .. | .. | .. | .. | .. | .. | 252 | 16 | [850] | 54 |
| | | | 5 hrs. | Sole .. .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 75 | 132 | 1 | .. | .. | .. | .. | .. | .. | .. | 208 | .. | 208 | .. |
| | | | | Latchet .. | .. | 1 | 1 | 4 | 2 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Greater Weever | .. | .. | 5 | 6 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 26 | North part of Brown Bank. | 14 f.d.s. | July 26th & 27th | Plaice .. | .. | 6 | 421 | 12 | .. | .. | .. | .. | .. | .. | .. | 439 | 78 | 439 | 78 |
| O 230 | 53° 12½′ N., 3° 26⅝′ E. | 14 f.d.s. | 8 p.m. (26th.) | Dab .. .. | .. | 174 | 38 | .. | .. | .. | .. | .. | .. | .. | .. | 212 | 16 | [835] | 63 |
| | | | 6 hrs. | Sole .. .. | .. | .. | 23 | 4 | .. | .. | .. | .. | .. | .. | .. | 27 | 6 | 27 | 6 |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 32 | 47 | 1 | .. | .. | .. | .. | .. | .. | .. | 80 | .. | 130 | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Greater Weever | .. | .. | 34 | 4 | .. | .. | .. | .. | .. | .. | .. | 38 | .. | 38 | .. |
| | | | | Red Mullet.. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback.. | .. | .. | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Spur dog .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXV 27 | North part of Brown Bank. | 14 f.d.s. | July 27th | Plaice .. | .. | 9 | 357 | 13 | 3 | .. | .. | .. | .. | .. | .. | 382 | 71 | 382 | 71 |
| B 159 | 53° 18⅜′ N., 3° 29⅔′ E. | 14 f.d.s. | 3 a.m. | Dab .. .. | .. | 159 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 173 | 10 | [2491] | 144 |
| | | | 6 hrs. | Sole .. .. | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Turbot .. | .. | .. | .. | 6 | 2 | .. | .. | .. | .. | .. | .. | 8 | 11 | 8 | 11 |
| | | | | John Dory .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Greater Weever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Thornback .. | .. | 1 | 3 | .. | 2 | 1 | .. | .. | .. | .. | .. | 7 | 9½ | 7 | 9½ |
| | | | | Tope .. .. | .. | .. | 1 | .. | 3 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| XXXV 28 | North part of Brown Bank. | 14 f.d.s. | July 27th | Plaice .. | .. | 2 | 265 | 4 | 2 | .. | .. | .. | .. | .. | .. | 273 | 50 | 273 | 50 |
| B 160 | 53° 16½′ N., 3° 38½′ E. | 14 f.d.s. | 9.45 a.m. | Dab .. .. | 1 | 379 | 74 | .. | .. | .. | .. | .. | .. | .. | .. | 454 | .. | [908] | .. |
| | | | 5¾ hrs. | Sole .. .. | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Brill .. .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard | .. | 34 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 35 | .. | 35 | .. |
| | | | | Latchet .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever | .. | 1 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Thornback .. | .. | .. | 8 | 1 | 1 | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Tope .. .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15⅝+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXV 29 | Brown Bank .. .. | 14 f.d.s. | July 27th | Plaice .. | .. | .. | 325 | 19 | 2 | .. | .. | .. | .. | .. | .. | 346 | 66 | 346 | 66 |
| B 161 | 53° 11¼′ N., 3° 28′ E. | 14½ f.g.s. | 4 p.m. | Dab .. .. | .. | 379 | 60 | .. | .. | .. | .. | .. | .. | .. | .. | 439 | 30 | 1054] | 72 |
| | | | 6 hrs. | Sole .. .. | .. | .. | 14 | 4 | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVI 1 | Off Ymuiden .. .. | 8½ f.g.s. | Aug. 3rd | Plaice .. | .. | 32 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| B (c) 162 | 52° 29⅕′ N., 4° 27⅝′ E. | 9 f.g.s. | 4 a.m. | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Covered net experiment (No. 4). | | 1 hr. | Greater Weever. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Tope .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXVI 2 | Off Egmond .. .. | 9 f.g.s. | Aug. 3rd | Plaice .. | .. | 286 | 21 | .. | .. | .. | .. | .. | .. | .. | .. | 307 | 18 | 307 | 18 |
| O 231 | 52° 33⅜′ N., 4° 25¼′ E. | 9 f.g.s. | 6 a.m. | Dab .. .. | .. | 30 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| | | | 4 hrs. | Grey Gurnard | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Latchet .. | .. | .. | 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Greater Weever. | .. | 1 | 46 | 6 | .. | .. | .. | .. | .. | .. | .. | 53 | .. | 53 | .. |
| XXXVI 3 | East part of Brown Bank. | 15 f.g.s. | Aug. 3rd | Plaice .. | .. | .. | 11 | 4 | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| B (c) 163 | 53° 3⅛′ N., 3° 47⅜′ E. | 15 f.d.g.s. | 4.15 p.m. | Dab .. .. | .. | 74 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 78 | .. | 78 | .. |
| | Covered net experiment (No. 5). | | 1 hr. | Greater Weever. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXVI 4 | East part of Brown Bank. | 15 f.d.g.s. | Aug. 3rd | Plaice .. | .. | 3 | 938 | 38 | .. | .. | .. | .. | .. | .. | .. | 979 | 178 | 979 | 178 |
| O 232 | 53° 5¾′ N., 3° 48¾′ E. | 15 | 6 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 142 |
| | | 14½ f.d.g.s. | 6 hrs. | Sole .. .. | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 3 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 1 Basket. | .. |
| | | | | Latchet .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 31 |
| | | | | Horse Mackerel. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| XXXVI 50 | East of S. end of Well Bank. | 18 f.d.g.s. | Aug. 9th | Plaice .. | .. | .. | .. | .. | Fish not measured. | | | | | .. | .. | .. | .. | 5 | .. |
| B 164 | 53° 6′ N., 2° 23¼′ E. | 20 | 7.40 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | Ground rope parted, net torn. | 15 f.d.g.s. | 2 hrs. | Lemon Dab .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXXVI 51 | East of S. part of Well Bank. | 15 f.d.g.s. | Aug. 9th | .. | .. | .. | .. | .. | No fish caught. | | | | | .. | .. | .. | .. | .. | .. |
| B 165 | 53° 9¼′ N., 2° 27¾′ E. | 18 d.s.m.gvl. | 10.50 a.m. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | 2 hrs. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| XXXVI 52 | Off Smith's Knoll Light Vessel. | 24 m.s. | Aug. 9th | Plaice .. | .. | 2 | 19 | 39 | .. | .. | .. | .. | .. | .. | .. | 60 | .. | 60 | .. |
| B 166 | 52° 52⅜′ N., 2° 34′ E. | 21 d.s. | 3.40 p.m. | Dab .. .. | .. | 40 | 14 | 1 | .. | .. | .. | .. | .. | .. | .. | 55 | .. | 55 | .. |
| | | | 3 hrs. 50 mins. | Lemon Dab .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | 1 | 26 | 2 | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| | | | | Poor Cod (?) . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 17 | 1 | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | Thornback .. | .. | 5 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Spur Dog .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXVI 53 | Knoll Deep .. | 21 d.s. | Aug 9th & 10th | Plaice .. | .. | 1 | 46 | 112 | 4 | .. | .. | .. | .. | .. | .. | 163 | .. | 163 | .. |
| B 167 | 52° 52¼′ N., 2° 27½′ E. | 23 s.m. | 8 p.m. (9th) | Dab .. .. | .. | 24 | 54 | 3 | .. | .. | .. | .. | .. | .. | .. | 81 | .. | 81 | .. |
| | | | 5½ hrs. | Lemon Dab .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 5 | 6 | 1 | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Cod .. .. | .. | .. | 6 | 9 | 2 | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15⅜+ / 40 + | 19⅝+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXVI 53 | Knoll Deep—*cont.* .. | 21 \| d.s. | Aug. 9th & 10th | Whiting .. | .. | 1 | 77 | 47 | 2 | .. | .. | .. | .. | .. | .. | 127 | .. | [381] | .. |
| B 167 | 52° 52¼′ N., 2° 27⅛′ E. | 23 \| s.m. | 8 p.m. (9th) | Pout .. .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | 5½ hrs. | Grey Gurnard | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Red Gurnard | .. | .. | 15 | 5 | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Red Mullet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | 1 | .. | 1 | 1 | 1 | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| XXXVII 1 | Edge of Lowestoft Deeps. | 21 \| c.s. & sh. | Aug. 16th | Plaice .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| B 168 | 52° 18½′ N., 2° 11⅝ E. | 19 \| c.s. & sh. | 2.45 p.m. | Dab .. .. | .. | 14 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | Heavy pull out, net slightly damaged. | | ¾ hr. | Lemon Dab.. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sole .. .. | .. | .. | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Pout .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVII 2 | Lowestoft Deeps .. | 23 \| c. s & sh. | Aug. 16th | Plaice .. | .. | 2 | 16 | 4 | .. | .. | .. | .. | .. | .. | .. | 22 | 4 | 22 | 4 |
| B 169 | 52° 24⅛′ N., 2° 16¾′ E. | 25 \| c.s. & sh. | 4.15 p.m. | Dab.. .. | .. | 14 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| | | | 3 hrs. | Lemon Dab.. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sole .. .. | .. | .. | 6 | 6 | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 2 | 3 | 1 | 3 | 2 | 1 | .. | .. | .. | 12 | 16 | 12 | 16 |
| | | | | Whiting .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Pout .. .. | .. | 31 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 3 | 1 | 7 | 30 | 7 | 30 |
| | | | | Thornback .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Skate.. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Ray sp. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| XXXVII 5 | Off Smith's Knoll .. | 25 \| c.s. | Aug. 17th | Plaice .. | .. | .. | 5 | 20 | 2 | .. | .. | .. | .. | .. | .. | 27 | 12 | 27 | 12 |
| B 171 | 52° 56¾′ N., 2° 19½′ E. | 19 \| g.s. | 12.45 p.m. | Dab.. .. | .. | 3 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | 3 hrs. | Lemon Dab.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 5½ | 1 | 5½ |
| | | | | Cod .. .. | .. | .. | 1 | 1 | 1 | .. | 1 | 6 | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Whiting .. | .. | .. | 82 | 31 | 2 | .. | .. | .. | .. | .. | .. | 115 | .. | 115 | .. |
| | | | | Pout .. .. | .. | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Red Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Skate.. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVII 7 | S.E. of Well Bank .. | 19 \| g.s. | Aug. 17th | Plaice .. | .. | .. | 6 | 9 | 1 | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| B 172 | 52° 59¼′ N., 2° 27½′ E. | 20 \| g.s. | 5 p.m. | Dab .. .. | .. | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | 2 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 21 | 5 | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | | | | Horse Mackeral.. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| XXXVII 11 | Middle Ground .. | 20 \| g.s. | Aug. 20th | Plaice .. | .. | .. | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| B 174 | 52° 20¾′ N., 3° 8½′ E. | 13 \| d.g.s. | 11.30 a.m. | Dab .. .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | 2 hrs. | Grey Gurnard | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXVII 13 | Winterton Shoal .. | 19 g.br.s. | Aug. 20th | Plaice .. | .. | .. | 143 | 24 | .. | .. | .. | .. | .. | .. | .. | 167 | 35½ | 167 | 35½ |
| B 175 | 52° 38⅛′ N., 3° 1¾′ E. | 20 g.br.s. | 4.30 p.m. | Dab .. .. | .. | 30 | 33 | .. | .. | .. | .. | .. | .. | .. | .. | 63 | .. | 63 | .. |
| | | | 4 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 11 | 18 | 1 | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Red Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXVII 15 | Brown Bank, West | 17 f.g.s. | Aug. 21st | Plaice .. | .. | .. | 16 | 17 | .. | .. | .. | .. | .. | .. | .. | 33 | 10 | 33 | 10 |
| B 176 | 53° 1½′ N., 2° 59½′ E. | 13 f.g.s. | 4 a.m. | Dab .. .. | .. | 36 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 44 | .. | 44 | .. |
| | | | 3 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Skate .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| XXXVII 17 | Brown Bank, East .. | 15 f.g.br.s. | Aug. 21st | Plaice .. | .. | 16 | 685 | 20 | .. | .. | .. | .. | .. | .. | .. | 721 | [104¾] | 721 | [104¾] |
| B 177 | 53° 2⅝′ N., 3° 41¼′ E. | 16 | 9.30 a.m. | Dab .. .. | .. | 281 | 78 | .. | .. | .. | .. | .. | .. | .. | .. | 359 | 24 | 359 | 24 |
| | | 13 f.g.s. | 7 hrs. | Turbot .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 26 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 33 | .. | 47 | .. |
| | | | | Latchet .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | 29 | .. | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 41 | .. |
| XXXVII 19 | N.W. of Haaks Light-vessel. | 13 f.g.s. | Aug. 21st | Plaice .. | .. | 47 | 321 | 3 | .. | .. | .. | .. | .. | .. | .. | 371 | [54] | 371 | [54] |
| B 178 | 53° 0′ N., 3° 54¾′ E. | 16 f.g.s. | 4.45 p.m. | Dab .. .. | .. | 39 | 35 | .. | .. | .. | .. | .. | .. | .. | .. | 74 | .. | 74 | .. |
| | | 13 f.g.s. | 2 hrs. | Turbot .. | .. | .. | .. | 2 | 2 | .. | 1 | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Tope .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXXVII 22 | Broad Fourteens (North part). | 13 f.g.s. | Aug. 21st & 22nd | Plaice .. | .. | 94 | 854 | 30 | 1 | .. | .. | .. | .. | .. | .. | 979 | 138 | [2043] | 288 |
| B 179 | 52° 52½′ N., 3° 58⅜′ E. | 14 f.g.s. | 7 p.m. (21st) | Dab.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 Bas. | 97 |
| | | | 8 hrs. | Sole.. .. | .. | .. | 7 | 2 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Turbot .. | .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Grey Gurnard and Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Latchet .. | .. | .. | .. | 6 | 1 | 1 | .. | .. | .. | .. | .. | 8 | 8 | 8 | 8 |
| | | | | Thornback .. | .. | .. | .. | 3 | 2 | 3 | .. | .. | .. | .. | .. | 8 | 18 | 8 | 18 |
| | | | | Spur dog .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| XXXVII 23 | Broad Fourteens (Middle). | 14 f.g.s. | Aug. 22nd | Plaice .. | .. | 23 | 336 | 5 | .. | .. | .. | .. | .. | .. | .. | 364 | 76 | 364 | 76 |
| B 180 | 52° 37¼ N., 3° 57⅛′ E. | 13½ f.g.s. | 3.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | 7 hrs. | Sole.. .. | .. | .. | 5 | 2 | 1 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Turbot .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | John Dory .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Greater Weever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Thornback.. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| XXXVII 25 | Broad Fourteens (South part). | 14 f.g.s. | Aug. 22nd | Plaice .. | .. | 1 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| B 181 | 52° 30½′ N., 3° 57⅔′ E. Large piece of moor log in trawl. | 13 f.g.s. | 12.15 p.m. | Dab .. .. | .. | 3 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | 2 hrs. | Grey Gurnard | .. | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Greater Weever | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback.. | .. | .. | 1 | 1 | 3 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXVII 26 | Broad Fourteens, (South part.) | 13 f.g.s. | Aug. 22nd | Plaice .. | .. | .. | 31 | 1 | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| B 182 | 52° 30¼′ N., 3° 56½′ E. | 14 f.g.s. | 2.30 p m. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | 2 hrs. | Turbot .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Greater Weever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 or 12 | |
| | | | | Thornback .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVIII 1 | Dogger Bank, S.E. of S.W. Patch. | 21 f.d.g.s. | Aug. 28th | Plaice .. | .. | .. | .. | 17 | 4 | 3 | 1 | .. | .. | .. | .. | 25 | 22 | 25 | 22 |
| B 183 | 54° 18¼′ N., 2° 37′ E. | 16 f.d.g.s. | 4.30 a.m. | Dab .. .. | .. | 162 | 27 | 2 | .. | .. | .. | .. | .. | .. | .. | 191 | 12 | [652] | 41 |
| | | 16½ f.d.g.s. | 5 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 53 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | 63 | 5 | 63 | 5 |
| XXXVIII 2 | Dogger Bank, East of S.W. Patch. | 12½ f.d.g.s. & sh. | Aug. 28th | Dab .. .. | .. | 342 | 60 | 3 | .. | .. | .. | .. | .. | .. | .. | 405 | 28 | 405 | 28 |
| B 184 | 54° 31⅜′ N., 2° 49¾′ E. | 12½ | noon | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 13½ f.d.g.s. & sh. | 4 hrs. | Turbot .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | 6 | 2 | 6 |
| | | | | Grey Gurnard | .. | 50 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 56 | 3½ | 56 | 3½ |
| XXXVIII 3 | Dogger Bank, N.E of Eastern Shoal. | 10½ f.g.s. & sh. | Aug. 28th | Plaice .. | .. | .. | 1 | 25 | 2 | 1 | .. | .. | .. | .. | .. | 29 | 17 | 29 | 17 |
| B 185 | 54° 50⅜′ N., 3°8′ E. | 17 | 6 p.m. | Dab .. .. | .. | 74 | 43 | 10 | .. | .. | .. | .. | .. | .. | .. | 127 | 15 | [262] | 31 |
| | | 17 f.g.s. & sh. | 5 hrs. | Sole .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | 7 | 29 | 8 | .. | .. | .. | .. | .. | .. | 44 | 25 | 44 | 25 |
| | | | | Whiting .. | .. | .. | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Grey Gurnard | .. | 39 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 50 | 3½ | 50 | 3½ |
| XXXVIII 4 | Dogger Bank, middle of S.E. Slope. | 17 f.g.s.sh. | Aug. 28th & 29th | Plaice .. | .. | .. | 1 | 28 | 12 | 1 | .. | .. | .. | .. | .. | 42 | 30 | 42 | 30 |
| B 186 | 54° 58⅛′ N., 3° 23⅜′ E. | 18 | 11.30 p.m. (28th) | Dab .. .. | .. | 123 | 48 | 8 | 1 | .. | .. | .. | .. | .. | .. | 180 | 16 | [371] | 33 |
| | | 19½ f.g.s. | 5 hrs. | Lemon Dab.. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | 8 | 41 | 5 | .. | .. | .. | .. | .. | .. | 54 | 28 | 54 | 28 |
| | | | | Whiting .. | .. | 8 | 16 | 2 | .. | .. | .. | .. | .. | .. | .. | 26 | 3 | 26 | 3 |
| | | | | Grey Gurnard | .. | 14 | 20 | .. | .. | .. | .. | .. | .. | .. | .. | 34 | 4 | 34 | 4 |
| XXXVIII 5 | Dogger Bank, middle of S.E. Slope. | 19½ f.g.s. | Aug. 29th | Plaice .. | .. | .. | 1 | 6 | 8 | .. | .. | .. | .. | .. | .. | 15 | 12 | 15 | 12 |
| B 187 | 55° 5⅛′ N., 3° 34¾′ E. | 20 | 5 a.m. | Dab .. .. | 5 | 144 | 29 | 19 | .. | .. | .. | .. | .. | .. | .. | 197 | 19 | 197 | 19 |
| | | 19 f.g.s. | 5 hrs. | Lemon Dab.. | .. | .. | 3 | 4 | .. | .. | .. | .. | .. | .. | .. | 7 | 4 | 7 | 4 |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | 2 | 2 | 1 | 1 | .. | .. | . | .. | .. | 6 | 4 | 6 | 4 |
| | | | | Grey Gurnard | .. | 4 | 17 | 1 | .. | .. | .. | .. | .. | .. | .. | 22 | 3 | 22 | 3 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 3 | 1 | 3 |
| XXXVIII 6 | Swashway of Dogger | 21 f.g.s. | Aug. 29th | Plaice .. | .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| B (c.) 188 | 55° 22½′ N., 4° 11⅓′ E. | 19 f.g.s. | 2.30 p.m. | Dab .. .. | 33 | 90 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 130 | .. | 130 | .. |
| | Covered net experiment (No. 6). | | 2 hrs. | Lemon Dab.. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | 3 | 4 | 16 | 3 | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | | | | Grey Gurnard | .. | 2 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | | Herring .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVIII 7 | South part of Tail end of Dogger Bank | 19 f.g.s. & sh. | Aug. 29th | Plaice .. | .. | .. | .. | 16 | 11 | 1 | .. | .. | .. | .. | .. | 28 | 22 | 28 | 22 |
| B 189 | 55° 27½′ N., 4° 19′ E. | 17 | 6 p.m. | Dab .. .. | .. | 15 | 29 | 37 | .. | .. | .. | .. | .. | .. | .. | 81 | 25 | 81 | 25 |
| | | 16½ f.g.s. & sh. | 5 hrs. | Lemon Dab .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | 7 | 3 | 1 | 1 | .. | .. | .. | .. | 12 | 20 | 12 | 20 |
| | | | | Haddock .. | .. | .. | 54 | 122 | 18 | 1 | .. | .. | .. | .. | .. | 195 | 88 | 195 | 88 |
| | | | | Whiting .. | .. | .. | 8 | 4 | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Grey Gurnard | .. | .. | 21 | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| XXXVIII 8 | Tail end of Dogger Bank. | 16½ f.g.s. sh. | Aug. 29th and 30th. | Plaice .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| B 190 | 55° 35¾′ N., 4° 23½′ E. | 17 | 11.15 p.m. | Dab .. .. | .. | 25 | 60 | 5 | .. | .. | .. | .. | .. | .. | .. | 90 | 13 | 90 | 13 |
| | | 18 f.g.s. sh. | 5 hrs. | Turbot .. | .. | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | 5 | 11½ | 5 | 11½ |
| | | | | Cod .. .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 3 | 4 | 3 | 4 |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15½+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXVIII 8 | Tail end of Dogger Bank—*cont.* | 16½ f.g.s., sh. | Aug. 29th & 30th. | Haddock .. | .. | .. | 13 | 56 | 5 | .. | .. | .. | .. | .. | .. | 74 | 34 | 74 | 34 |
| B 190 | 55° 35⅝′ N., 4° 2½′ E. | 17 | 11.15 p.m. | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 18 f. g.s., sh. | 5 hrs. | Hake.. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 1 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVIII 10 | Dogger Bank, West of Swashway. | 16 f.g.s. sh. | Aug. 30th | Dab .. .. | .. | 63 | 41 | .. | .. | .. | .. | .. | .. | .. | .. | 104 | 9 | 104 | 9 |
| B 191 | 55° 25⅞′ N., 3° 48½′ E. | 16 f.g s. sh. | 7.30 a.m. | Turbot .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | 7 | 2 | 7 |
| | | | 3 hrs. | Haddock .. | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | 5 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVIII 12 | Dogger Bank. N.W. of Swashway. | 16 f.g.s. sh. | Aug. 30th | Plaice .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 2 | 8 | 2 | 8 |
| B 192 | 55° 31¼′ N., 3° 41½′ E. | 17 | noon | Dab .. .. | .. | 51 | 58 | 10 | .. | .. | .. | .. | .. | .. | .. | 119 | 17 | 119 | 17 |
| | | 19 f.g.s. sh. | 4 hrs. | Turbot .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | 6 | 2 | 6 |
| | | | | Haddock .. | .. | .. | 4 | 6 | 2 | .. | .. | .. | .. | .. | .. | 12 | 5 | 12 | 5 |
| | | | | Grey Gurnard | .. | 2 | 25 | .. | .. | .. | .. | .. | .. | .. | .. | 27 | 2 | 27 | 2 |
| | | | | Angler .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVIII 14 | North part of Dogger Bank. | 17 f.g.s. sh. | Aug. 30th | Dab .. .. | .. | 27 | 32 | .. | .. | .. | .. | .. | .. | .. | .. | 59 | 6 | 59 | 6 |
| B 193 | 55° 24½′ N., 3° 27′ E. | 17 f.g.s. sh. | 7.15 p.m. | Turbot .. | .. | .. | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | 5 | 16 | 5 | 16 |
| | | | 2 hrs. | Haddock .. | .. | .. | 1 | 17 | 9 | .. | .. | .. | .. | .. | .. | 27 | 17 | 27 | 17 |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXVIII 15 | Below North edge of Dogger Bank. | 25 f.g.s. sh, | Aug. 31st | Dab .. .. | 9 | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| B 194 | 55° 30½′ N., 2° 37½′ E. | 24 | 4.15 a.m. | Lemon Dab.. | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | Net cut to let out curly weed; some fish escaped, including Lemon Dabs, Starry Ray, Codling, Haddocks, and 2 Plaice. | 23 f.g.s. sh. | 5 hrs. | Cod .. .. | 15 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Haddock .. | .. | 1 | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Starry Ray.. | .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| XXXVIII 18 | Middle part (E.) of Dogger Bank. | 15 f.g.s. sh. | Aug. 31st | Dab .. .. | .. | 286 | 73 | 5 | .. | .. | .. | .. | .. | .. | .. | 364 | 32 | [432] | 38 |
| B 195 | 55° 0⅛′ N., 2° 40′ E. | 13 f.g.s. sh. | 3.30 p.m. | Turbot .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 5 | 1 | 5 |
| | | | 2 hrs. | Brill .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | 3 | 2 | 3 |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | .. | 3 | 5 | .. | .. | .. | .. | .. | .. | 8 | 6 | 8 | 6 |
| | | | | Grey Gurnard | .. | 8 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | 3 | 15 | 3 |
| XXXVIII 20 | Middle part (N.W.) of Dogger Bank. | 13 f.g.s. sh. | Aug. 31st | Plaice .. | .. | .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | 7 | 7 | 7 | 7 |
| B 196 | 55° 2⅞′ N., 2° 15½′ E. | 16 | 7.30 p.m. | Dab .. .. | .. | 75 | 112 | 19 | .. | .. | .. | .. | .. | .. | .. | 206 | 33 | 206 | 33 |
| | | 16½ f.g.s. sh. | 4 hrs. | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | 4 | 2 | 4 |
| | | | | Cod .. .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | .. | 24 | 82 | 38 | .. | .. | .. | .. | .. | .. | 144 | 79 | 144 | 79 |
| | | | | Whiting .. | .. | .. | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | 3 | 14 | 3 |
| | | | | Grey Gurnard | .. | 2 | 32 | .. | .. | .. | .. | .. | .. | .. | .. | 34 | 4 | 34 | 4 |
| XXXVIII 22 | Middle part (W.) of Dogger Bank. | 12 f.g.s. sh. | Sept. 1st | Plaice .. | .. | .. | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | 4 | 6 | 4 | 6 |
| B 197 | 54° 49′ N., 2° 12′ E. | 14½ f.g.s. sh. | 4.30 a.m. | Dab.. .. | .. | 125 | 89 | 8 | .. | .. | .. | .. | .. | .. | .. | 222 | 24 | 222 | 24 |
| | | | 3 hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 5 | 1 | 5 |
| | | | | Haddock .. | .. | .. | .. | 3 | 8 | .. | .. | .. | .. | .. | .. | 11 | 9 | 11 | 9 |
| | | | | Grey Gurnard | .. | 26 | 17 | .. | .. | .. | .. | .. | .. | .. | .. | 43 | 4 | 43 | 4 |
| XXXVIII 24 | Middle part (W.) of Dogger Bank. | 13½ f.g.s. & sh. | Sept. 1st | Plaice .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B 198 | 54° 44⅓′ N., 1° 53¼ E. | 14 | 9.30 a.m. | Dab .. .. | 1 | 20 | 6 | 3 | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | Net cut to let out weed. | 13 f.g.s. & sh. | 4 hrs. | Haddock .. | .. | .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |

| Voyage, Station, and No of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXVIII 26 | North part of Leman Ground. | 19 f.d.g.s. | Sept. 2nd | Plaice .. | .. | .. | 15 | 22 | 2 | .. | . | .. | .. | .. | .. | 39 | 16 | 39 | 16 |
| B 200 | 53° 42½′ N., 2° 36¾′ E. | 19 f.d.g.s. | 11.30 a.m. | Dab .. .. | 4 | 494 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 500 | 17 | [912] | 31 |
| | | | 4 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. .. | .. | .. | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Grey Gurnard .. | 69 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 69 | 3 | 69 | 3 |
| | | | | Thornback .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XXXVIII 28 | Leman Ground .. | 18 f.d.g.s. | Sept. 2nd | Plaice .. .. | .. | .. | 48 | 41 | 6 | .. | .. | .. | .. | .. | .. | 95 | 33 | 95 | 33 |
| B 201 | 53° 33½′ N., 2° 45′ E. | 17 | 5 p.m. | Dab .. .. | 3 | 195 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 200 | 8 | [1075] | 43 |
| | | 17 f.d.g.s | 5 hrs. | Sole .. .. | .. | .. | 4 | 7 | .. | .. | .. | .. | .. | .. | .. | 11 | 3 | 11 | 3 |
| | | | | Turbot .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1½ | 1 | 1½ |
| | | | | Whiting .. .. | 48 | 92 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 140 | 13 | 140 | 13 |
| | | | | Grey Gurnard .. | 106 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 114 | 6½ | 114 | 6½ |
| | | | | Greater Weever. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 5 | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | 18 | 5 | 18 | 5 |
| XXXVIII 29 | East part of Leman Ground. | 17 f.d.s. & oz. | Sept. 2nd & 3rd | Plaice .. .. | .. | .. | 95 | 43 | 1 | .. | .. | .. | .. | .. | .. | 139 | 36 | 139 | 36 |
| B 202 | 53° 25½′ N., 3° 0⅝′ E. | 16 | 11.30 p.m. (2nd) | Dab .. .. | .. | 193 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 199 | 10 | [1194 | 60] |
| | | 15 f.d.g.s. | 5 hrs. | Sole .. .. | .. | .. | 12 | 12 | .. | .. | .. | .. | .. | .. | .. | 24 | 7 | 24 | 7 |
| | | | | Turbot .. .. | .. | .. | 1 | 3 | 1 | .. | .. | .. | .. | .. | .. | 5 | 5 | 5 | 5 |
| | | | | Whiting .. .. | 7 | 36 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| | | | | Latchet .. .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | 5 | 37 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 53 | .. | 53 | .. |
| XXXVIII 30 | N.W. part of Brown Bank. | 14 f.d.g.s. | Sept. 3rd | Plaice .. .. | .. | 2 | 11 | 9 | 2 | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| B (c.) 203 | 53° 18⅝′ N., 3° 16½′ E. | 14 f d.g.s. | 6 a.m. | Dab .. .. | .. | 187 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 200 | .. | [600] | .. |
| | Covered net experiment (No. 7). | | 1½ hrs. | Turbot .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard .. | 43 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 49 | .. | 49 | .. |
| | | | | Greater Weever. .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. .. | .. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| XXXIX 1 | Sylt Outer .. .. | 12½ l.s. | Sept. 15th | Plaice .. .. | .. | 408 | 370 | 2 | .. | .. | .. | . | .. | .. | .. | 780 | 71 | 780 | 71 |
| B 204 | 54° 53′ N., 7° 19½′ E. | 14 ls. | 1.45 p.m. | Dab .. .. | .. | 163 | 48 | .. | .. | .. | .. | .. | .. | .. | .. | 211 | 15 | 211 | 15 |
| | | | 1 hr. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard .. | 24 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 33 | .. | 33 | .. |
| | | | | Greater Weever. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| XXXIX 3 | S.W. of Horn Reef .. | 12 f.g.s. | Sept. 15th | Plaice .. .. | .. | 201 | 359 | 9 | .. | .. | .. | .. | .. | .. | .. | 569 | 65 | [1505] | 172 |
| B 205 | 55° 13½′ N., 7° 16¼′ E. | 14 f.d.g.s. | 6.15 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 30 |
| | | | 1½ hrs. | Sole .. .. | .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 28 |
| | | | | Thornback .. | .. | .. | .. | 2 | 4 | 1 | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| XXXIX 5 | White Bank .. .. | 22 s. & m. | Sept. 16th | Plaice .. .. | .. | .. | 13 | .. | 1 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | . |
| B 206 | 54° 55½′ N., 6° 11¼′ E. | 22 s. & m. | 4.45 a.m. | Dab .. .. | .. | 183 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 199 | .. | 199 | .. |
| | | | 1½ hrs. | Turbot .. .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Whiting .. .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard .. | 13 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXIX 7 | Horn Reef Outer .. | 21 s. & oz. | Sept. 16th | Plaice .. .. | .. | .. | 145 | 14 | 3 | .. | .. | .. | .. | .. | .. | 162 | 35 | 162 | 35 |
| O 233 | 55° 26⅝′ N., 6° 27¼′ E. | 24½ s. & oz. | 11 a.m. | Dab .. .. | .. | 271 | 24 | .. | .. | .. | .. | .. | .. | .. | .. | 295 | 15 | 295 | 15 |
| | | | 4 hrs. | Lemon Dab .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Sole .. .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXIX 7 | Horn Reef Outer—*cont.* | 21 s. & oz. | Sept. 16th | Turbot .. | .. | .. | .. | .. | 3 | .. | 1 | .. | .. | .. | .. | 4 | 6½ | 4 | 6½ |
| O 233 | 55° 26⅛′ N., 6° 27¼′ E. | 24½ s. & oz. | 11 a.m. | Cod .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | 4 hrs. | Haddock .. | .. | .. | .. | 11 | 2 | .. | .. | .. | .. | .. | .. | 13 | 7 | 13 | 7 |
| | | | | Whiting .. | .. | 9 | 67 | 4 | .. | .. | .. | .. | .. | .. | .. | 80 | 9 | 80 | 9 |
| | | | | Hake.. .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | .. | .. | 4 | 13 | 4 | 13 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | ½ Basket. | 15 |
| | | | | Mackerel .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | .. | 2 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | .. | 2 | .. |
| XXXIX 8 | West part of Horn Reef Outer. | 24½ s. & oz. | Sept. 16th | Plaice .. | .. | .. | 214 | 38 | 1 | 1 | .. | .. | .. | .. | .. | 254 | 63 | 254 | 63 |
| O 234 | 55° 26′ N., 6° 11¾′ E. | 25 s. & oz. | 3.30 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 33 |
| | | | 4 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 1 | 1 | .. | .. | 1 | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | .. | .. | 33 | 6 | .. | .. | .. | .. | .. | .. | 39 | 19 | 39 | 19 |
| | | | | Whiting .. | .. | 8 | 295 | 26 | .. | .. | .. | .. | .. | .. | .. | 329 | 55 | 329 | 55 |
| | | | | Hake.. .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 2 | 2 | .. | 10 | .. | 10 | .. |
| | | | | Horse Mackerel | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Thornback.. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. |
| | | | | Lumpsucker | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXXIX 9 | West of Horn Reef Outer. | 25 s.m. | Sept. 16th | Plaice .. | .. | .. | 75 | 66 | 8 | 1 | .. | .. | .. | .. | .. | 150 | 63 | 150 | 63 |
| O 235 | 55° 26¾′ N., 5° 55′ E. | 26 s.m. | 8 p.m. | Witch .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | hrs. | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. | 17 |
| | | | | Haddock .. | .. | .. | 2 | 66 | 22 | 5 | .. | .. | .. | .. | .. | 95 | 66 | [285] | 198 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets. | 60 |
| | | | | Hake.. .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | 3 | .. | 3 | .. |
| XXXIX 10 | West of Horn Reef Outer. | 26 s.m. | Sept. 17th | Plaice .. | .. | .. | 78 | 51 | 9 | 1 | .. | .. | .. | .. | .. | 139 | 49 | 139 | 49 |
| O 236 | 55° 28′ N., 5° 59½′ E. | 26 s.m. | 12.30 a.m. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 4 hrs. | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Witch .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 6 | 15 | 15 | 8 | 7 | 1 | 2 | .. | .. | 54 | 69 | 54 | 69 |
| | | | | Haddock .. | .. | .. | .. | 32 | 14 | 1 | .. | .. | .. | .. | .. | 47 | 33 | [282] | 198 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Baskets. | 48 |
| | | | | Hake.. .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Skate .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| XXXIX 11 | West part of Horn Reef Outer. | 26 s.m. | Sept. 17th | Plaice .. | .. | .. | 159 | 65 | 9 | 2 | .. | .. | .. | .. | .. | 235 | 74 | 235 | 74 |
| O 237 | 55° 27′ N., 6° 7′ E. | 26 s.m. | 5 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | |
| | Net slightly torn. | | 4 hrs. | Haddock .. | .. | .. | .. | 25 | 8 | .. | .. | .. | .. | .. | .. | 33 | 19 | 33 | 19 |
| | | | | Whiting .. | .. | .. | 113 | 37 | .. | .. | .. | .. | .. | .. | .. | 150 | 29 | [403] | 78 |
| | | | | Hake.. .. | .. | .. | .. | .. | .. | 2 | 1 | 8 | 2 | .. | 1 | 14 | 45 | 14 | 45 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. (small) | |
| | | | | Horse Mackerel | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Skate .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXIX 12 | West of Horn Reef Outer. | 26 s.m. | Sept. 17th | Plaice .. | .. | .. | 50 | 56 | 4 | .. | .. | .. | .. | .. | .. | 110 | 39 | 110 | 39 |
| O 238 | 55° 25¼′ N., 5° 51⅜′ E. | 25½ f.g.s. & oz. | 10 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. | |
| | | | 4 hrs. | Long Rough Dab | .. | 3 | 36 | 1 | .. | .. | .. | .. | .. | .. | .. | 40 | 5 | 40 | 5 |
| | | | | Witch .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 3 | 18 | 10 | 7 | 4 | 1 | 1 | .. | .. | 44 | 51 | 44 | 51 |
| | | | | Haddock .. | .. | .. | 3 | 34 | 9 | 3 | 1 | .. | .. | .. | .. | 50 | 37 | [95] | 70 |
| | | | | Whiting .. | .. | .. | 65 | 65 | .. | .. | .. | .. | .. | .. | .. | 130 | 32 | [508] | 125 |
| | | | | Hake.. .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | 4 | 20 | 4 | 20 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. (small) | |
| | | | | Horse Mackerel | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXIX 13 | West of Horn Reef Outer. | 25½ f.g.s. & oz. | Sept. 17th | Plaice .. | .. | .. | 53 | 43 | 5 | 1 | .. | .. | .. | .. | .. | 102 | 38 | 102 | 38 |
| O 239 | 55° 24¾′ N., 6° 2½′ E. | 26½ s.m. | 2.40 p.m. | Lemon Dab .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 4 hrs. | Cod .. .. | .. | .. | 1 | 23 | 24 | 5 | 4 | .. | .. | .. | .. | 57 | 55 | 57 | 55 |
| | | | | Haddock .. | .. | .. | 9 | 136 | 52 | 7 | 1 | .. | .. | .. | .. | 205 | 133 | 205 | 133 |
| | | | | Whiting .. | .. | .. | 55 | 69 | .. | .. | .. | .. | .. | .. | .. | 124 | 32 | [759] | 196 |
| | | | | Hake .. .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Mackerel .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Skate .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XXXIX 14 | West of Horn Reef Outer. | 25½ f.g.s. | Sept. 17th | Plaice .. | .. | .. | 61 | 75 | 10 | .. | .. | .. | .. | .. | .. | 146 | 53 | 146 | 53 |
| O 240 | 55° 26′ N., 5° 58½′ E. | 26½ s.m. | 7 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | Belly torn. | | 4½ hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Witch .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets. | 63 |
| | | | | Haddock .. | .. | .. | 3 | 42 | 10 | 1 | .. | .. | .. | .. | .. | 56 | 33 | [490] | 289 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 Baskets. | 120 |
| | | | | Hake .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Skate .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXXIX 15 | West part of Horn Reef Outer. | 26½ s.m. | Sept. 18th | Plaice .. | .. | .. | 58 | 63 | 7 | 3 | .. | .. | .. | .. | .. | 131 | 53 | 131 | 53 |
| O 241 | 55° 27⅛′ N., 6° 1⅞′ E. | 26½ s.m. | 12.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | Belly torn. | | 4¼ hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets. | 68 |
| | | | | Haddock .. | .. | .. | 3 | 29 | 15 | 1 | .. | .. | .. | .. | .. | 48 | 30 | [334] | 209 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 Baskets. | 94 |
| | | | | Hake .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| XXXIX 16 | West of Horn Reef Outer. | 26½ s.m. | Sept. 18th | Plaice .. .. | .. | .. | 44 | 38 | 3 | 1 | .. | .. | .. | .. | .. | 81 | 30 | 86 | 30 |
| O 242 | 55° 33′ N., 6° 0½′ E. | 26½ s.m. | 6 a.m. | Turbot .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | | 1 | .. |
| | Belly torn. | | 4 hrs. | Cod .. .. | .. | .. | 2 | 15 | 8 | 4 | .. | .. | .. | .. | .. | 29 | 20 | 29 | 20 |
| | | | | Haddock .. | .. | .. | 3 | 44 | 5 | 2 | .. | .. | .. | .. | .. | 54 | 31 | 54 | 31 |
| | | | | Whiting .. | .. | .. | 59 | 64 | .. | .. | .. | .. | .. | .. | .. | 123 | 32 | 361] | 94 |
| | | | | Hake .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 2 | 1 | 6 | 33 | 6 | 33 |
| XXXIX 17 | West of Horn Reef Outer. | 27 s.m. | Sept. 18th | Plaice .. .. | .. | .. | 45 | 67 | 9 | .. | .. | .. | .. | .. | .. | 121 | 50 | 121 | 50 |
| O 243 | 55° 34¾′ N., 5° 56¾′ E. | 26½ s.m. | 11.30 a.m. | Dab .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Belly torn. | | 4½ hrs. | Lemon Dab | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Witch .. .. | .. | .. | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Cod .. .. | .. | .. | .. | 12 | 9 | 8 | 8 | 17 | 5 | 2 | .. | 61 | .. | 61 | .. |
| | | | | Haddock .. | .. | .. | 6 | 62 | 20 | 3 | .. | .. | .. | .. | .. | 91 | 59 | 91 | 59 |
| | | | | Whiting .. | .. | .. | 38 | 65 | .. | .. | .. | .. | .. | .. | .. | 103 | 30 | [316] | 92 |
| | | | | Hake .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 1 | 3 | 9 | .. | 9 | .. |
| | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XXXIX 18 | West of Horn Reef Outer. | 26½ s.m. | Sept. 18th | Plaice .. .. | .. | .. | 13 | 38 | 3 | .. | .. | .. | .. | .. | .. | 54 | 25 | 54 | 25 |
| O 244 | 55° 29¾′ N., 5° 55¼′ E. | 25 f.g.s. & oz. | 4.45 p.m. | Dab .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Net torn badly when hauling, | | 4¼ hrs. | Witch .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 11 | 7 | 5 | 3 | 2 | .. | 1 | .. | 29 | .. | 29 | .. |
| | | | | Haddock .. | .. | .. | 3 | 49 | 22 | 5 | 1 | .. | .. | .. | .. | 80 | 64 | [147] | 118 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket | |
| | | | | Mackerel .. | .. | .. | .. | 6 | 2 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| XXXIX 19 | West part of Horn Reef Outer. | 22 f.g.s. & oz. | Sept. 19th | Plaice .. .. | .. | .. | 14 | 4 | .. | 1 | .. | .. | .. | .. | .. | 19 | 8 | 19 | 8 |
| O 245 | 55° 21½′ N., 6° 18½′ E. | 26 s. & oz. | 8 a.m. | Cod .. .. | .. | .. | .. | 2 | 5 | .. | .. | .. | .. | .. | .. | 7 | 6 | 7 | 6 |
| | Belly torn. | | 3½ hrs. | Haddock .. | .. | .. | 2 | 33 | 10 | .. | 1 | .. | .. | .. | .. | 46 | 32 | 46 | 32 |
| | | | | Whiting .. | .. | .. | 66 | 54 | 2 | .. | .. | .. | .. | .. | .. | 122 | 33 | [196] | 53 |
| | | | | Mackerel .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXIX 20 | West part of Horn Reef Outer. | 26 s. & oz. | Sept. 19th | Plaice .. | .. | .. | 23 | 17 | 2 | .. | .. | .. | .. | .. | .. | 42 | 15 | 42 | 15 |
| O 246 | 55° 25½′ N., 6° 12¾′ E. | 23 s. & oz. | noon. | Cod .. .. | .. | .. | .. | 2 | 1 | 2 | .. | .. | .. | .. | .. | 5 | 6 | 5 | 6 |
| | Belly torn. | | 4¼ hrs. | Haddock .. | .. | .. | 1 | 54 | 26 | 4 | 1 | .. | .. | .. | .. | 86 | 65 | 86 | 65 |
| | | | | Whiting .. | .. | .. | 39 | 75 | 2 | .. | .. | .. | .. | .. | .. | 116 | 33 | 116 | 33 |
| XXXIX 21 | West part of Horn Reef Outer. | 23 f.g.s. | Sept. 19th | Plaice .. | .. | .. | 38 | 55 | 3 | 1 | .. | .. | .. | .. | .. | 97 | 36 | 97 | 36 |
| B 207 | 55° 25′ N., 6° 3¼′ E. | 26 s.m. | 4.45 p.m. | Cod .. .. | .. | .. | 3 | 8 | 2 | 2 | .. | .. | .. | 1 | .. | 16 | 18 | 16 | 18 |
| | | | 5¼ hrs. | Haddock .. | .. | .. | .. | 48 | 9 | .. | 1 | .. | .. | .. | .. | 58 | 35 | 58 | 35 |
| | | | | Whiting .. | .. | .. | 2 | 6 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| XXXIX 22 | West part of Horn Reef Outer. | 26 s.m. | Sept. 19th & 20th. | Plaice .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Baskets | 50 |
| B 208 | 55° 25⅝′ N., 6° 1½′ E. | 25 s. oz. | 10.30 p.m. (19th). | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | .. |
| | (Fish not measured). | | 5 hrs. | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Baskets. | 46 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | .. |
| XXXIX 23 | S.E. of Tail end of Dogger Bank. | 25 s. & oz. | Sept. 20th | Plaice .. | .. | .. | 16 | 22 | 2 | .. | .. | .. | .. | .. | .. | 40 | 17 | 40 | 17 |
| B 209 | 55° 23½′ N., 5° 44⅛′ E. | 23 s. & oz. | 4.15 a.m. | Cod .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 4½ hrs. | Haddock .. | .. | .. | 1 | 8 | 7 | 2 | .. | .. | .. | .. | .. | 18 | 13 | 18 | 13 |
| XXXIX 24 | S.E. of Tail end of Dogger Bank. | 23 s. & oz. | Sept. 20th | Plaice .. | .. | .. | 3 | 15 | 7 | .. | .. | .. | .. | .. | .. | 25 | 16 | 25 | 16 |
| B 210 | 55° 19¾′ N., 5° 29′ E. | 23 f.d.s. & oz. | 9.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | 4¾ hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Grey Gurnard .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| XXXIX 25 | S.E. of Tail end of Dogger Bank. | 23 f.d.s. & oz. | Sept. 20th | Plaice .. | .. | .. | .. | 27 | 2 | .. | .. | .. | .. | .. | .. | 29 | 18 | 29 | 18 |
| B 211 | 55° 16¼′ N., 5° 13′ E. | 23 f.d.s. &oz. | 2.30 p.m. | Dab .. .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | 4 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| XXXIX 26 | S.E. of Tail end of Dogger Bank. | 23 f.d.s. & oz. | Sept. 20th | Plaice .. | .. | .. | 1 | 51 | 4 | .. | .. | .. | .. | .. | .. | 56 | 30 | 56 | 30 |
| B 212 | 55° 11¾′ N., 5° 4¾′ E. | 25 f.s. & oz. | 7 p.m. | Cod .. .. | .. | .. | .. | 3 | 6 | 3 | 3 | 1 | .. | .. | .. | 16 | 29 | 16 | 29 |
| | | | 4 hrs. | Haddock .. | .. | .. | 2 | 82 | 25 | .. | .. | .. | .. | .. | .. | 109 | 65 | [220] | 131 |
| XL 1 | Extreme South of Leman Ground. | 17 f.d.g.s. | Sept. 27th | Plaice .. | .. | .. | 2 | 11 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| B 213 | 53° 4¼′ N., 2° 49⅛′ E. | 15 f.d.g.s. | 7.45 p.m. | Dab .. .. | .. | 62 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 63 | .. | 63 | .. |
| | | | 1¾ hrs. | Sole .. .. | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting.. .. | .. | .. | 17 | .. | .. | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | | Thornback .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Spur Dog .. | .. | .. | .. | 5 | 4 | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| XL 2 | Extreme South of Leman Ground. | 15 f.d.g.s. | Sept. 27th & 28th. | Plaice .. | .. | 2 | 8 | 22 | .. | .. | .. | .. | .. | .. | .. | 32 | 10 | 32 | 10 (gutted.) |
| B 214 | 53° 6½′ N., 2° 48⅛′ E. | 16 f.d.g.s. | 10 p.m (27th). | Dab .. .. | .. | 668 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 683 | 25 | 683 | 25 |
| | | | 4½ hrs. | Sole .. .. | .. | .. | 3 | 7 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Whiting .. | .. | 3 | 122 | 9 | .. | .. | .. | .. | .. | .. | .. | 134 | 18 | 134 | 18 |
| | | | | Grey Gurnard .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Latchet .. | .. | .. | 2 | .. | 2 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 36 | (many small.) |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 80 | .. |
| XL 4 | S.E. part of Leman Ground. | 17 f.d.s. | Sept. 28th | Plaice .. | .. | .. | 8 | 23 | 2 | .. | .. | .. | .. | .. | .. | 33 | .. | 33 | .. |
| B 215 | 53° 11′ N., 2° 58′ E. | 17 f.d.s. | 5.30 a.m. | Dab .. .. | 2 | 154 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 163 | 7½ | 163 | 7½ |
| | | | 2 hrs. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 8 | 2 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Grey Gurnard .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0 | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XL 5 | S.E. part of Leman Ground. | 17 f.d s. | Sept. 28th | Plaice .. | .. | .. | 1 | 11 | 4 | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| B 216 | 53° 11⅜′ N., 2° 58⅞′ E. | 17 f.d.s. | 8 a.m. | Dab .. .. | .. | 165 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 173 | .. | 173 | .. |
| .. | | | 2 hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Whiting .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Grey Gurnard | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| .. | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XL 8 | S.E. of Swarte Bank | 17 f.d.s. | Sept. 28th | Plaice .. | .. | .. | 9 | 23 | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| B 217 | 53° 13½′ N., 2° 50½′ E. | 16 f.d.s. | 11 a.m. | Dab .. .. | 1 | 93 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 99 | .. | 99 | .. |
| .. | | | 2 hrs. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Turbot .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Latchet .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | (small) |
| .. | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XL 10 | East of Swarte Bank | 16 f.d.s. | Sept. 28th | Plaice .. | .. | .. | 21 | 39 | 4 | .. | .. | .. | .. | .. | .. | 64 | .. | 64 | .. |
| B 218 | 53° 19⅜′ N., 2° 39¾′ E. | 16 f.d.s. | 2 p.m. | Dab .. .. | .. | 168 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 177 | .. | 177 | .. |
| .. | | | 2 hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Whiting .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| .. | | | | Grey Gurnard | .. | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| .. | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Greater Weever. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Thornback .. | .. | 2 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| XL 11 | East of Swarte Bank | 16 f.d.s. | Sept. 28th | Plaice .. | .. | .. | 3 | 29 | 5 | 1 | .. | .. | .. | .. | .. | 38 | .. | 39 | .. |
| B 219 | 53° 23¾′ N., 2° 33½′ E. | 15 f.d.s. | 4.15 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Bas | ket |
| .. | | | 2 hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| .. | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | (small) |
| .. | | | | John Dory .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| XL 13 | Leman Ground .. | 15 f.d.s. | Sept. 29th | Plaice .. | .. | 2 | 23 | 42 | 8 | .. | .. | .. | .. | .. | .. | 75 | 35 | 75 | 35 |
| B 220 | 53° 26¾′ N., 2° 31½′ E. | 12 f.spk.s. | 5.45 a.m. | Dab .. .. | .. | 523 | 72 | .. | .. | .. | .. | .. | .. | .. | .. | 595 | 37 | 595 | 37 |
| .. | | 15 f.d.s. | 5 hrs. | Whiting .. | .. | 5 | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| .. | | | | Grey Gurnard | .. | 9 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| .. | | | | Greater Weever. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| XL 14 | Leman Ground .. | 15 f.d.s. | Sept. 29th | Plaice .. | .. | .. | 22 | 69 | 7 | .. | .. | .. | .. | .. | .. | 98 | 40 | 98 | 40 |
| B 221 | 53° 25¾′ N., 2° 39′ E. | 17 f.d.s. | 11.15 a.m. | Dab .. .. | .. | 562 | 50 | 1 | .. | .. | .. | .. | .. | .. | .. | 613 | 32 | 613 | 32 |
| .. | | 14 f.d.s. | 5 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Whiting .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| .. | | | | Grey Gurnard | .. | 3 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| .. | | | | Greater Weever. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| .. | | | | Thornback .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Spur Dog .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XL 17 | Lynn Deep .. .. | 15 d.c.s. & ross. | Sept. 30th | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 222 | 52° 59¾′ N., 0° 23′ E. | 19 | 1.30 p.m. | | | | | | | | | | | | | | | | |
| .. | Ground rope parted, net badly torn. | 15 d.c.s. & ross. | 1½ hrs. | | | | | | | | | | | | | | | | |
| XL 41 | Off Sutton .. .. | 5 s.gvl. | Oct. 4th | Plaice .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| B 224 | 53° 16¾′ N., 0° 23 5/16′ E. | 9 s.gvl. | 1.30 p.m. | Dab .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | Pull out, net badly torn. | | 1 hr., 50 mins. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Whiting .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Grey Gurnard | .. | .. | 9 | 9 | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| .. | | | | Thornback .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| .. | | | | Spur Dog .. | .. | .. | .. | .. | .. | 1 | 19 | 8 | 2 | .. | .. | 30 | .. | 140 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XL 42 | Off Mablethorpe .. | 5 s.m. | Oct. 5th | Plaice .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 225 | 53° 18½′ N., 0° 19¾′ E. | 7 s.m. | 6.45 a.m. | Flounder .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 1 hr. | Whiting .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Thornback .. | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Skate .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | 3 | 20 | 5 | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| XL 44 | Off Mablethorpe .. | 7 s.gvl. | Oct. 5th | Plaice .. | .. | 19 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| B 226 | 53° 23½′ N., 0° 21′ E. | 8 s.gvl. | 9.15 a.m. | Dab .. .. | .. | 5 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | 2 hrs. | Sole .. .. | .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 40 | .. | .. | .. | .. | .. | .. | .. | .. | 40 | .. | 40 | .. |
| | | | | Grey Gurnard | .. | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Homelyn .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | 5 | 10 | 2 | .. | .. | 17 | .. | 919 | .. |
| XL 45 | Off Inner Dowsing Light-vessel. | 11½ c.s. | Oct. 5th | Plaice .. | .. | 5 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| B 227 | 53° 21¼′ N., 0° 38′ E. | 14 c.s.m. | 1.30 p.m. | Dab .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | 2 hrs. | Lemon Dab .. | .. | 7 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Sole .. .. | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Cod .. .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard | .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Homelyn .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLI 1 | Flamborough Head Ground. | 27 c.s.gvl. | Oct. 15th | Plaice .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 229 | 54° 8′ N., 0° 13½′ E. | 28 c.s.gvl. | 4.45 p.m. | Dab .. .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | Belly badly chafed. | | 1¼ hrs. | Sole .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 |
| | | | | Cod .. .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Pout .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XLI 5 | Flamborough Off .. | 30 f.g.s., sh. | Oct. 16th | Plaice .. | .. | .. | 2 | 4 | 8 | 1 | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| B 230 | 54° 8⅝′ N., 0° 33½′ E. | 30 f.g.s., sh. | 8.15 a.m. | Dab .. .. | .. | 92 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 97 | .. | 97 | .. |
| | Net slightly torn, broke fore roller. | | 2 hrs. | Lemon Dab .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 1 | 6 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | .. | 3 | .. | .. | . | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 16 | 27 | 1 | .. | .. | .. | .. | .. | .. | .. | 44 | .. | 44 | .. |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLI 6 | Flamborough Off .. | 30 f.g.s., sh. | Oct. 16th | Plaice .. | .. | .. | .. | 7 | 3 | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| B 231 | 54° 8⅞′ N., 0° 41⅝′ E. | 29 g.spk.s., sh. | 11.15 a.m. | Dab .. .. | .. | 64 | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 71 | .. | 71 | .. |
| | | | 2 hrs. | Lemon Dab .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Sole .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Haddock .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Grey Gurnard | .. | 16 | 19 | .. | .. | .. | .. | .. | .. | .. | .. | 35 | .. | 35 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLI 7 | Flamborough Off .. | 29 g.spk.s. & sh. | Oct. 16th | Plaice .. | .. | .. | .. | 6 | 3 | 1 | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| B 23[illegible] | 54° 8′ N., 0° 44′ E. | 28 g.br.s. | 1 40 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few. | .. |
| | | | 2 hrs. | Lemon Dab .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Sole .. .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | . |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLI 7 | Flamborough Off—*cont.* | 29 g.spk.s. & sh. | Oct. 16th | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | . | 1 | .. |
| B 232 | 54° 8′ N., 0° 44′ E. | 28 g.br.s. | 1.40 p.m. | Cod .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | 2 hrs. | Haddock .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLI 11 | Flamborough Off .. | 30 g.spk.s. | Oct. 18th | — | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| B 233 | 54° 4′ N., 0° 45½′ E. | 25 g.s. & sh. | 8 a.m. | — | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | 2 hrs. | | | | | | | | | | | | | | | | |
| XLI 12 | Flamborough Off .. | 25 g.s. & sh. | Oct. 18th. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 234 | 54° 10⅝′ N., 0° 54½′ E. | 27 g.spk.s. | 11 a.m. | | | | | | | | | | | | | | | | |
| | | | 2 hrs. | | | | | | | | | | | | | | | | |
| XLI 13 | Flamborough Off .. | 27 g.spk.s. | Oct.18th | Plaice .. | .. | .. | .. | 12 | 2 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| B 235 | 54° 9⅞′ N., 0° 59¾′ E. | 25½ d.g.s. | 1.30 p.m. | Dab .. .. | .. | 115 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 117 | .. | 117 | .. |
| | Belly torn. | | 2 hrs. | Lemon Dab.. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | .. | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Haddock .. | .. | 1 | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard | .. | 14 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 22 | .. | 22 | .. |
| XLI 14 | Flamborough Off .. | 25½ d.g.s. | Oct. 18th. | Plaice .. | .. | .. | .. | 12 | 2 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| B 236 | 54° 6⅞′ N., 1° 1⅛′ E. | 26 d.g.s. | 4.15 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 461 | .. |
| | | | 2 hrs. | Lemon Dab.. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Long Rough Dab. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 12 | 4 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Whiting .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Greater Weever | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Skate.. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLI 15 | Flamborough Off .. | 26 d.g.s. | Oct. 18th | Plaice .. | .. | .. | 1 | 9 | 2 | 1 | 1 | .. | .. | .. | .. | 14 | .. | 14 | .. |
| B 237 | 54° 4¼′ N., 1° 0⅝′ E. | 23 d.g.s. | 6.45 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | 2 hrs. | Lemon Dab.. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Whiting .. | .. | 1 | 16 | 2 | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Skate.. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLI 16 | Flamborough Off .. | 26 g.s.m. | Oct. 19th | Plaice .. | .. | .. | .. | 21 | 2 | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| B 238 | 54° 2¼′ N., 1° 4′ E. | 26 g.s.m. | 6.45 a.m. | Dab .. .. | .. | 90 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 90 | .. | 2⅛ Baskets. | 84 |
| | | | 2 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | . |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 26 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| XLI 17 | Flamborough Off .. | 26 g.s.m. | Oct. 19th | Plaice .. | .. | .. | .. | 9 | 1 | 1 | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| B 239 | 54° 1¼′ N., 0° 58¾′ E. | 26½ g.s.m. | 9.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1⅛ Baskets. | 44 |
| | | | 2 hrs. | Lemon Dab .. | .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Whiting .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| XLI 18 | Dogger Bank, S.E. of S.W. Patch. | 17 g.s.sh. | Oct. 19th | Plaice .. | .. | .. | 5 | 39 | 24 | 4 | .. | .. | .. | .. | .. | 72 | 54 | 72 | 54 |
| O 247 | 54° 20′ N., 2° 29¾′ E. | 16 g.s.sh. | 7.15 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1⅝ Baskets. | 57 |
| | | 17 g.s.sh. | 4¾ hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 4 | 2 | 23 | 1 | 1 | .. | .. | .. | .. | .. | 31 | 17 | 31 | 17 |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ⅓ Basket. | 15 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets. | 61 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Herring .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLI 19 | Dogger Bank, S.E. of S.W. Patch. | 17 g,s.sh. | Oct. 20th | Plaice .. | .. | .. | 1 | 17 | 7 | 1 | .. | .. | .. | .. | .. | 26 | 20 | 26 | 20 |
| O 248 | 54° 18¼′ N., 2° 27⅜′ E. | 17 g.s.sh. | 1.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Baskets. | 39 |
| | | 18 s.gvl. | 4¾ hrs. | Lemon Dab .. | .. | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 4 | 109 | 33 | 22 | 5 | 1 | .. | .. | .. | 174 | 158 | 174 | 158 |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3⅔ Baskets. | 121½ |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 36 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Mackerel .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | .. | 20 | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. | [150] | 28½ |
| XLI 20 | Dogger Bank, South of S.W. Patch. | 18 s.gvl. | Oct. 0th | Plaice .. | .. | .. | 1 | 5 | 4 | 2 | .. | .. | .. | .. | .. | 12 | 12½ | 12 | 12½ |
| O 249 | 54° 19⅝′ N., 2° 21½′ E. | 17 g.s. | 0 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 25½ |
| | | | 5 hrs. | Lemon Dab .. | .. | .. | 3 | 14 | .. | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 137 | 24 | 30 | 7 | 1 | .. | .. | .. | 200 | 170½ | 200 | 170½ |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2¼ Baskets. | 83 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22½ |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Herring .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Basket. | 36 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XLI 21 | Dogger Bank, South of S.W. Patch. | 17 g.s. | Oct. 20th | Plaice .. | .. | .. | .. | 12 | 4 | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| O 250 | 54° 20′ N., 2° 18¼′ E. | 17 g.spk.s. | noon. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 33 (gutted). |
| | | | 4½ hrs. | Lemon Dab .. | .. | .. | 3 | 9 | .. | .. | .. | .. | .. | .. | .. | 12 | 7 | 12 | 7 |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 4½ | 1 | 4½ |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | 6 | 2 | 6 |
| | | | | Cod .. .. | .. | .. | 5 | 59 | 2 | .. | .. | .. | .. | .. | .. | 66 | 27 | 66 | 27 (gutted). |
| | | | | Haddock .. | .. | .. | 40 | 32 | 7 | .. | .. | .. | .. | .. | .. | 79 | 27 | 79 | 27 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. | 14 (gutted). |
| | | | | Mackerel .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Also about 4 Baskets of small Whiting, Dabs, and Grey Gurnard. | | | | | | | | | | | | | | | |
| XLI 22 | Dogger Bank, South of S.W. Patch. | 17 g.spk.s. | Oct. 20th | Plaice .. | .. | .. | .. | 12 | 9 | 1 | .. | .. | .. | .. | .. | 22 | 27 | 22 | 27 |
| O 251 | 54° 18¾′ N., 2° 24¼′ E. | 18 g.spk.s., sh. | 5 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 |
| | | 17 g.spk.s. | 5 hrs. | Lemon Dab .. | .. | .. | 1 | 1 | .. | .. | . | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 5 | 131 | 17 | 6 | .. | .. | .. | .. | .. | 159 | 98 | 159 | 98 |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ⅔ Basket. | 26 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22 |
| | | | | Mackerel .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Also about 6 Baskets of small Whiting, Dabs, and Grey Gurnard. | | | | | | | | | | | | | | | |
| XLI 23 | Dogger Edge of Clay Deep. | 22 f.g.s. | Oct. 21st | Plaice .. | .. | .. | 4 | 24 | 5 | .. | .. | .. | .. | .. | .. | 33 | 20 | 33 | 20 |
| O 252 | 55° 0⅛′ N., 3° 37¾′ E. | 20 | 6.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | about 1 basket | |
| | Turn in aft wing, net slightly torn | 22 f.g.s. | 4 hrs. | Cod .. .. | .. | .. | .. | .. | 2 | 1 | 3 | 1 | .. | .. | .. | 7 | 17 | | |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets. | 62 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Mackerel .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLI 24 | Dogger Edge of Clay Deep. | 22 f.g.s. | Oct. 21st | Plaice .. | .. | .. | 3 | 19 | 10 | 2 | 1 | .. | .. | .. | .. | 35 | 30 | 25 | 30 |
| O 53 | 55° 1⅛′ N., 3° 41⅛′ E. | 19 f.g.s. | 11.30 a.m. | Lemon Dab | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | . | 3 | .. | 3 | .. |
| | | 18 f.g.s. | 5 hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | 6 | 2 | 2 | 2 | .. | .. | .. | 13 | 22 | 13 | 22 |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | [⅝ Basket. | 27 |
| | | | | Whiting .. | .. | .. | 2 | 35 | 2 | .. | .. | .. | .. | .. | .. | 39 | 17 | 39 | 17 |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ 0+ | 4+ 10+ | 8+ 20+ | 12+ 30+ | 15¾+ 40 + | 19¾+ 50 + | 23⅝+ 60 + | 27½+ 70 + | 31½+ 80 + | 35½+ 90 + | 39½+ 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLI 24 | Dogger Edge of Clay Deep—*cont.* | 22 f.g.s. | Oct. 21st | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| O 253 | 55° 1½′ N., 3° 41½′ E. | 19 f.g.s. | 11.30 a.m. | Mackerel .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 18 f.g.s. | 5 hrs. | Horse Mackerel. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Also about ½ Basket of small Dabs and Whiting. | | | | | | | | | | | | | | | |
| XLI 25 | Dogger Edge of Clay Deep. | 23 f.g.s. | Oct. 21st | Plaice .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| O 254 | 55° 2¾′ N., 3° 47¾′ E. | 23 f.g.s. | 5 p.m. | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 (Medium). | |
| | Had a pull out, hauled, net all right. | | 2¼ hrs. | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Baskets. | |
| | | | | Whiting .. | .. | .. | 47 | 48 | 5 | 2 | .. | .. | .. | .. | .. | 102 | .. | 153] | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| XLI 26 | Borkum Outer .. | 20 f.g.s. & oz. | Oct. 22nd | Plaice .. | .. | 2 | 150 | 13 | .. | .. | .. | .. | .. | .. | .. | 165 | 32 | 165 | 32 |
| O 255 | 54° 7¾′ N., 5° 42′ E. | 19 | 10 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few (small). | |
| | | 20 f.g.s., m. | 3 hrs. | Sole .. .. | .. | .. | 8 | 3 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Turbot .. | .. | .. | .. | 9 | 3 | .. | .. | .. | .. | .. | .. | 12 | 15 | 12 | 15 |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few (small). | |
| | | | | Spur Dog .. | .. | .. | .. | 3 | .. | .. | .. | .. | 1 | .. | .. | 4 | .. | 4 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XLI 27 | Borkum Outer .. | 20 f.g.s., m. | Oct. 22nd | Plaice .. | .. | .. | 131 | 15 | .. | .. | .. | .. | .. | .. | .. | 146 | 30 | 146 | 30 |
| O 256 | 54° 7⅞′ N., 5° 44′ E. | 20 | 2 p.m. | Sole .. .. | .. | 1 | 9 | 4 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | 20 f.g.s. & oz. | 4 hrs. | Turbot .. | .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | 7 | 8 | 7 | 8 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Also about 1 Basket of small Dabs and Whiting. | | | | | | | | | | | | | | | |
| XLI 28 | Borkum Outer .. | 20 f.g.s., oz. | Oct. 22nd | Plaice .. | .. | 4 | 158 | 28 | .. | .. | .. | .. | .. | .. | .. | 190 | 37 | 190 | 37 |
| O 257 | 54° 11′ N., 6° 2¾′ E. | 20 f.g.s., m. | 6.30 p.m. | Sole .. .. | .. | .. | 10 | 6 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | 20 f.g.s., m. | 5 hrs. | Turbot .. | .. | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | 8 | 8½ | 8 | 8½ |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Also about ¾ Basket of small Dabs and Whiting. | | | | | | | | | | | | | | | |
| XLI 29 | North of Borkum Flat. | 20 f.g.s., m. | Oct. 23rd | Plaice .. | .. | 2 | 159 | 25 | .. | .. | .. | .. | .. | .. | .. | 186 | 35 | 186 | 35 |
| O 258 | 54° 13¾′ N., 6° 14½′ E. | 20 f.g.s., oz. | 12.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | 21 f.g.s., oz. | 5 hrs. | Sole .. .. | .. | .. | 12 | 6 | 1 | .. | .. | .. | .. | .. | .. | 19 | 5 | 19 | 5 (gutted). |
| | | | | Turbot .. | .. | .. | .. | 4 | 5 | .. | .. | .. | .. | .. | .. | 9 | 12 | 9 | 12 (gutted). |
| | | | | Brill .. .. | .. | .. | 2 | 4 | 1 | .. | .. | .. | .. | .. | .. | 7 | 4 | 7 | 4 (gutted). |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| XLI 30 | North of Borkum Flat. | 21 f.g.s., oz. | Oct. 23rd | Plaice .. | .. | .. | 108 | 50 | 1 | .. | .. | .. | .. | .. | .. | 159 | 41 | 159 | 41 |
| O 259 | 54° 19′ N., 6° 18½′ E. | 21 f.g.s., m. | 5.45 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | about 1 Basket. | (small) |
| | | 21 f.g.s., m. | 5 hrs. | Sole .. .. | .. | .. | 14 | 4 | .. | .. | .. | .. | .. | .. | .. | 18 | 3½ | 18 | 3½ |
| | | | | Turbot .. | .. | .. | .. | 12 | 4 | 1 | .. | .. | .. | .. | .. | 17 | 25 | 17 | 25 |
| | | | | Brill .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. | 15 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Latchet .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Shad .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | 2 | 6 | .. | .. | 1 | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Tope .. .. | .. | .. | .. | 2 | 3 | 2 | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| XLI 31 | North of Borkum Flat. | 21 f.g.s., m. | Oct. 23rd | Plaice .. | .. | .. | 28 | 29 | .. | .. | .. | .. | .. | .. | .. | 57 | 17 | 57 | 17 |
| O 260 | 54° 20¼′ N., 6° 12½′ E. | 21 f.g.s., m. | 11.15 a.m. | Sole .. .. | .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | 21½ f.g.s., m. | hrs. | Turbot .. | .. | .. | .. | 10 | 4 | .. | .. | .. | .. | .. | .. | 14 | 20 | 14 | 20 |
| | | | | Latchet .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Mackerel .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 34 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ 0+ | 4+ 10+ | 8+ 20+ | 12+ 30+ | 15½+ 40 + | 19¾+ 50 + | 23⅝+ 60 + | 27½+ 70 + | 31½+ 80 + | 35½+ 90 + | 39½+ 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLI 32 | North of Borkum Flat. | 21½ f.g.s., m. | Oct. 23rd | Plaice .. | .. | .. | 31 | 22 | .. | .. | .. | .. | .. | .. | .. | 53 | 14 | 53 | 14 |
| O 261 | 54° 18½′ N., 6° 11½′ E. | 21 f.g.s., m. | 4.45 p.m. | Sole .. .. | .. | .. | 9 | 6 | 1 | .. | .. | .. | .. | .. | .. | 16 | 4 | 16 | 4 |
| | | 22 f.g.s., m. | 5 hrs. | Turbot .. | .. | .. | .. | 7 | 2 | 1 | .. | .. | .. | .. | .. | 10 | 15½ | 10 | 15½ |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 10 | 1 | 10 |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 10 | .. |
| | | | | Tope .. .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | About 1½ Baskets small Dabs and Whiting. | | | | | | | | | | | | | | | |
| XLI 33 | Borkum. Outer .. | 22 f.g.s., m. | Oct. 23rd & 24th. | Plaice .. | .. | .. | 107 | 16 | 1 | .. | .. | .. | .. | .. | .. | 124 | 24 | 124 | 24 |
| O 262 | 54° 13½′ N., 6° 29½′ E. | 21 f.g.s., m. | 10.15 p.m. (23rd.) | Sole .. .. | .. | .. | 13 | 4 | .. | .. | .. | .. | .. | .. | .. | 17 | 3 | 17 | 3 |
| | | 21 f.g.s., oz. | 6 hrs. | Turbot .. | .. | .. | .. | 12 | 7 | .. | .. | .. | .. | .. | .. | 19 | 21 | 19 | 21 |
| | | | | Brill .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Skate.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (large) | |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 (small) | |
| | | | | Also 1 Basket of small Dabs, Whiting, and Grey Gurnard. | | | | | | | | | | | | | | | |
| XLII 1 | Brighton .. .. | 12 c.s. | Oct. 28th | Plaice .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 240 | 50° 41¾′ N., 0° 1¾′ W. | 15½ c.s.m. | 7.10 a.m. | Dab .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 2 hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | . | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Pout .. .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Red Gurnard | .. | .. | 7 | 4 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Latchet .. | .. | .. | 5 | 1 | 1 | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Greater Weever. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Thornback .. | .. | 2 | 6 | .. | 1 | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Skate.. .. | .. | 17 | 33 | 6 | 1 | .. | .. | .. | .. | .. | .. | 57 | .. | 57 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Nursehound | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| XLII 2 | Brighton Outer .. | 24 m. | Oct. 28th | Plaice .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 241 | 50° 37⅝′ N., 0° 2⅝′ W. | 30 s.m. | 10 a.m. | Dab .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 2 hrs. | Sole .. .. | .. | .. | 2 | 3 | 2 | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Pout .. .. | .. | 24 | 24 | .. | .. | .. | .. | .. | .. | .. | .. | 48 | .. | 48 | .. |
| | | | | Red Gurnard | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Horse Mackerel | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | . |
| | | | | Thornback .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Skate .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | | Nursehound | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| XLII. 3 | Teignmouth Bay .. | 7 s.m. | Nov. 11th | Plaice .. | .. | .. | 9 | 6 | .. | 1 | .. | .. | .. | .. | .. | 16 | .. | 17 | .. |
| B (c.) 242 | 50° 30⅜′ N., 3° 28¾′ W. | 4 s.m. | 11.45 a.m. | Dab .. .. | .. | 39 | 27 | .. | .. | .. | .. | .. | .. | .. | .. | 66 | .. | 66 | .. |
| | Covered net experiment, No. 8. | 7 s.m. | 1¾ hrs. | Brill .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | . |
| | | | | Latchet .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Conger .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 4 | 15 | 4 | .. | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| | | | | Skate.. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15½+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLII 4 | Teignmouth Bay .. | 7 s.m. | Nov. 11th | Plaice .. | .. | .. | 27 | 19 | 1 | 1 | .. | .. | .. | .. | .. | 48 | .. | 48 | .. |
| B 243 | 50° 30⅝′ N., 3° 28⅞′ W. | 7-4½ | 2.15 p.m. | Dab .. .. | .. | 96 | 23 | .. | .. | .. | .. | .. | .. | .. | .. | 119 | .. | 119 | .. |
| | | 7 s.m. | 2¼ hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | (small) |
| | | | | Whiting .. | .. | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Latchet .. | .. | .. | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Sprat.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | 19 | 23 | 3 | 1 | .. | .. | .. | .. | .. | .. | 46 | .. | 46 | .. |
| | | | | Ray sp. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angel .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 30 | .. |
| | | | | Nursehound | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XLIII 1 | South of Eastern Deep Water. | 15½ f.d.s. | Nov. 17th | Plaice .. | .. | .. | 32 | 17 | 1 | .. | .. | .. | .. | .. | .. | 50 | .. | 50 | .. |
| B 244 | 52° 16¼′ N., 3° 18⅛′ E. | 16½ | 7 a.m | Dab .. .. | .. | 26 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 35 | 3 | 35 | 3 |
| | | 18 f.d.s. | 2 hrs. | Whiting .. | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Greater Weever. | .. | 5 | 48 | 3 | .. | .. | .. | .. | .. | .. | .. | 56 | 7 | 56 | 7 |
| | | | | Herring .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLIII 5 | Eastern Deep Water | 18 f.s., cl., sh. | Nov. 17th | Plaice .. | .. | .. | 25 | 14 | .. | .. | .. | .. | .. | .. | .. | 39 | .. | 39 | .. |
| B 245 | 52° 17¼′ N., 3° 7′ E. | 18½ f.spk.s. | 3 p.m. | Dab .. .. | .. | 40 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | 50 | [4] | 50 | [4] |
| | | | 2 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 3 | 18 | 5 | .. | .. | .. | .. | .. | .. | .. | 26 | 5 | 26 | 5 |
| | | | | Grey Gurnard | .. | 7 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | 2½ | 13 | 2½ |
| | | | | Greater Weever. | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| XLIV 1 | Off Sandettie Light-vessel. | 19 gvl. | Nov. 26th | Plaice .. | .. | .. | 42 | 56 | .. | .. | .. | .. | .. | .. | .. | 98 | 29 | 98 | 29 |
| B 247 | 51° 13⅞′ N., 1° 50¼′ E. | 20½ gvl. | 7.45 a.m. | Dab .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 1 hr. | Lemon Dab.. | .. | 1 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | 1 | .. | 4 | 13½ | 4 | 13½ |
| | | | | Whiting .. | .. | 1 | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | 7 | 4 | 7 | 4 |
| | | | | Pout .. .. | .. | 82 | 52 | 4 | .. | .. | .. | .. | .. | .. | .. | 138 | 17 | 138 | 17 |
| | | | | Grey Gurnard | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Latchet .. | .. | 1 | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Lesser Spotted Dog. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 2 | .. |
| XLIV 3 | N.W. of Sandettie Light-vessel. | 21 c.s. | Nov. 26th | Plaice .. | .. | .. | 38 | 43 | 3 | .. | .. | .. | .. | .. | .. | 84 | 28¼ | 84 | 28¼ |
| B 248 | 51° 15½′ N., 1° 48¾′ E. | 21 c.s. | noon | Lemon Dab.. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | 1 hr. | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 5 | 8 | 2 | .. | .. | .. | .. | .. | .. | 15 | 5½ | 15 | 5½ |
| | | | | Pout and Poor Cod. | .. | 105 | 57 | 2 | .. | .. | .. | .. | .. | .. | .. | 164 | 21½ | 164 | 21½ |
| | | | | Thornback .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Homelyn .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Lesser Spotted Dog. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XLIV 12 | Lowestoft Deep Water. | 21 br.spk.s. | Dec. 1st | Plaice .. | .. | .. | 1 | 2 | 3 | 2 | .. | .. | .. | .. | .. | 8 | 9 | 8 | 9 |
| B 250 | 52° 21¼′ N., 2° 6⅞′ E. | 20 d.s. | 11.45 a.m. | Dab .. .. | .. | 4 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | 20 s.m., sh. | 4½ hrs. | Lemon Dab | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sole .. .. | .. | .. | 23 | 3 | 1 | .. | .. | .. | .. | .. | .. | 27 | 6 | 27 | 6 |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) | Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLIV 12 | Lowestoft Deep Water—*cont.* | 21 | br.spk.s. | Dec. 1st | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 2 |
| B 250 | 52° 21¼′ N., 2° 6⅞′ E. | 20 | d.s. | 11.45 a.m. | Cod .. .. | .. | 5 | .. | 6 | 4 | 7 | 3 | 2 | .. | .. | .. | 27 | 43 | 27 | 43 |
| | | 20 | s.m.sh. | 4½ hrs. | Whiting .. | .. | 34 | 112 | 21 | 2 | 1 | .. | .. | .. | .. | .. | 170 | 42 | 170 | 42 |
| | | | | | Pout .. .. | .. | 17 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | | Sprat .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Conger .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 2 | .. | 2 | .. |
| | | | | | Thornback .. | 2 | 9 | 27 | 14 | 2 | .. | .. | .. | .. | .. | .. | 54 | .. | 54 | .. |
| | | | | | Skate .. | .. | 3 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | | Homelyn .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | | Spur Dog .. | .. | .. | .. | 6 | 3 | .. | 1 | 1 | .. | 1 | .. | 12 | .. | 12 | .. |
| | | | | | Lesser Spotted Dog. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLIV. 14 | Edge of Deep Water | 19 | s.m.gvl. | Dec. 2nd | Plaice .. | .. | .. | 1 | 4 | 3 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| B 251 | 52° 21′ N., 2° 2 7/16′ E. | 19½ | s.gvl. | 9 a.m. | Dab .. .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | 4 hrs. | Lemon Dab | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Sole .. .. | .. | .. | 9 | 4 | 1 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | | Cod .. .. | .. | .. | 1 | 8 | 31 | 10 | 14 | 15 | 5 | 1 | 2 | 87 | 255 | 87 | 255 |
| | | | | | Whiting .. | .. | 1 | 76 | 56 | 6 | .. | .. | .. | .. | .. | .. | 139 | 11 | [543] | 43 |
| | | | | | Pout .. .. | .. | 4 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | | Thornback .. | .. | 3 | 18 | 9 | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | | | | | Skate .. .. | .. | 3 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | | Homelyn .. | .. | .. | 3 | .. | 2 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| | | | | | Lesser Spotted Dog. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLV. 1 | North of Terschelling Light-vessel. | 20 | s.m. | Dec. 8th | Plaice .. | .. | .. | 1 | 4 | 2 | .. | 1 | .. | .. | .. | .. | 8 | .. | 8 | .. |
| * O 263 | 53° 44⅝′ N., 4° 47⅛′ E. | 19 | s.m. | 7.30 a.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | 4 hrs. | Turbot .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket | |
| | | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets (large fish) | |
| | | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few (small) | |
| | | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XLV 2 | North of Terschelling Light-vessel. | 19 | s.m. | Dec. 8th | Plaice .. | .. | .. | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| * O 264 | 53° 44′ N., 4° 51′ E. | 20 | s.m. | 2 p.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | 2½ hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (medium) | |
| | | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¾ Basket (large) | |
| XLV 4 | North of Terschelling Light-vessel. | 21 | m. | Dec. 9th | Plaice .. | .. | .. | 5 | 7 | 6 | 1 | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| * B 253 | 53° 48¼′ N., 4° 53⅝′ E. | 20 | s.m. | 8 a.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. |
| | | 19 | c.s. | 5 hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| | | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 (medium) | |
| | | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Baskets (large). | |
| | | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| XLV 5 | North of Terschelling Light-vessel. | 19 | c.s. | Dec. 9th | Plaice .. | .. | .. | 1 | .. | 5 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| * B 254 | 53° 45⅝′ N., 4° 47⅛′ E. | 19 | | 1.30 p.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 17 | .. |
| | | 20½ | m. | 5 hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 (medium) | |
| | | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1¼ Baskets (large). | |
| | | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 (small) | |
| XLV 6 | North of Terschelling Light-vessel. | 20½ | m. | Dec. 9th & 10th. | Plaice .. | .. | .. | .. | 3 | 5 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| * B 255 | 53° 40¼′ N., 4° 45¼′ E. | 19 | f.s. | 7 p.m. (9th). | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 28 | .. |
| | Net torn. | 13 | f.s., sh. | 5½ hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 (medium) | |
| | | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 (small) | |

* No Naturalists on board ; Captain in charge ; records of fish by Chief Steward.

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLV 7 | North of Terschelling Light-vessel. | 14½ d.s. | Dec. 10th | Plaice .. | .. | 39 | 62 | 28 | 1 | .. | .. | .. | .. | .. | .. | 130 | .. | 130 | .. |
| * B 256 | 53° 29½′ N., 4° 54′ E. | 13 | 8 a.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| | | 13 d.g.s. | 5½ hours. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 (medium) | |
| XLV 8 | North of Terschelling Light-vessel. | 13 d.g.s. | Dec. 10th | Plaice .. .. | .. | 48 | 85 | 81 | 3 | .. | .. | .. | .. | .. | .. | 217 | .. | 217 | .. |
| * B 257 | 53° 33⅓′ N., 4° 53⅓′ E. | 13 f.l.s. | 2 p.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. |
| | | | 5½ hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 (small) | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| XLV 9 | North of Terschelling Light-vessel. | 13 f.l.s. | Dec. 10th & 11th. | Plaice .. .. | .. | 6 | 43 | 106 | 7 | .. | .. | .. | .. | .. | .. | 167 | .. | 167 | .. |
| B 258 | 53° 34⅝′ N., 4° 54⅛′ E. | 12 f.g.s. | 8 p.m. (10th). | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. |
| | | | 5½ hrs. | Turbot .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 (small) | |
| XLV 10 | North of Terschelling Light-vessel. | 12 f.g.s. | Dec. 11th | Plaice .. .. | .. | 7 | 49 | 74 | 8 | 2 | .. | .. | .. | .. | .. | 140 | .. | 140 | .. |
| * B 259 | 53° 34½′ N., 4° 55⅔′ E. | 13½ f.d.s. | 2 a.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 44 | .. |
| | | | 5½ hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 (large) | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 (small) | |
| XLV 11 | Terschelling Ground | 13½ f.d.s. | Dec. 11th | Plaice .. .. | .. | 2 | 20 | 50 | 4 | 1 | .. | .. | .. | .. | .. | 77 | .. | 77 | .. |
| * B 260 | 53° 39′ N., 4° 59⅔′ E. | 15 f.d.s. | 8 a.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. |
| | | 16½ s.m. | 6 hrs. | Turbot .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | (large fish) |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 (medium) | |
| XLV 12 | Terschelling Ground | 16½ s.m. | Dec. 11th | Plaice .. .. | .. | .. | 41 | 65 | 4 | .. | 1 | .. | .. | .. | .. | 111 | .. | 111 | .. |
| * B 261 | 53° 39′ N., 5° 3′ E. | 13 f.d.s. | 2.30 p.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 53 | .. |
| | | | 6 hrs. | Turbot .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 (large) | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 (medium) | |
| XLV 13 | North of Terschelling Light-vessel. | 13 f.d.s. | Dec. 11th & 12th. | Plaice .. .. | .. | .. | 46 | 68 | 6 | .. | .. | .. | .. | .. | .. | 120 | .. | 120 | .. |
| * B 262 | 53° 34½′ N., 4° 54⅜′ E. | 13 | 9 p.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 59 | .. |
| | | 13 f.g.s. | 5½ hrs. | Turbot .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XLV 14 | Terschelling Ground | 12½ f.d.s. | Dec. 13th | Plaice .. .. | .. | 10 | 116 | 41 | 1 | .. | .. | .. | .. | .. | .. | 168 | .. | 168 | .. |
| * B 263 | 53° 33¼′ N., 5° 14⅜′ E. | 14 | 8 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket, and 20 large fish. | |
| | | 15 s.m. | 6 hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 (small) | |
| | | | | Flounder .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 (small) | |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| XLV 15 | Terschelling Ground | 16 f.d.s. | Dec. 13th | Plaice .. .. | .. | .. | 21 | 39 | 6 | .. | 1 | .. | .. | .. | .. | 67 | .. | 67 | .. |
| * B 264 | 53° 39⅜′ N., 5° 3⅞′ E. | 16 s.m. | 2.30 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | 6 hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 50 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |

* No Naturalists on board; Captain in charge; records of fish by Chief Steward.

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLV 16 | North of Terschelling Light-vessel. | 16 m. | Dec. 13th & 14th | Plaice .. | .. | .. | 38 | 126 | 12 | 1 | .. | .. | .. | .. | .. | 177 | .. | 177 | .. |
| * B 265 | 53° 36⅞′ N., 4° 50′ E. | 13 f.s.sh. | 9.30 p.m. (13th) 5 hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 75 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket. | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| XLV 17 | North of Terschelling Light-vessel. | 13 f.s.sh. | Dec. 14th | Plaice .. | .. | .. | 21 | 63 | 12 | 2 | 2 | .. | .. | .. | .. | 100 | .. | 100 | .. |
| * B 266 | 53° 36¾′ N., 4° 50¼′ E. | 17½ s.m. | 3 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 (small) | |
| | | | 5½ hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 30 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16 (large) | |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. |
| | | | | Spur Dog . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XLV 18 | North of Terschelling Light-vessel. | 17½ s.m. | Dec. 14th | Plaice .. | .. | 1 | 15 | 39 | 3 | .. | .. | .. | .. | .. | .. | 58 | .. | 58 | .. |
| * B 267 | 53° 37′ N., 4° 51¾′ E. | 15 s.m. | 9 a.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | 12 f.g.s. | 5 hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 (small) | |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| XLVI 1 | Lowestoft Deep Water. | 25 f.s. | Dec. 17th | Plaice .. | .. | .. | 5 | 13 | 3 | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| * B 268 | 52° 13¾′ N., 2° 30′ E. | 24 f.s. | noon. | Lemon Dab .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | Belly very badly torn. | | 4½ hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 (medium) | |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | | | Pout .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| | | | | Skate .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| XLVI 2 | East part of Lowestoft Deep Water. | 21 f.g.s. | Dec. 17th & 18th. | Plaice .. | .. | .. | 10 | 22 | 4 | .. | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| * B 269 | 52° 24⅛′ N., 2° 51⅛′ E. | 20 f.g.s. | 9.30 p.m. (17th). | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | 4¾ hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (medium) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | | | Pout .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| XLVI 3 | East part of Lowestoft Deep Water. | 20 f.s. | Dec. 18th | Plaice .. | .. | .. | 28 | 52 | 4 | 2 | 1 | .. | .. | .. | .. | 87 | .. | 87 | .. |
| * B 270 | 52° 30′ N., 2° 57¾′ E. | 20 | 2.45 a.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | 20 f.g.s. | 4¾ hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| XLVI 4 | East part of Lowestoft Deep Water. | 21 f.s., sh. | Dec. 18th | Plaice .. | .. | .. | 10 | 26 | 1 | 1 | .. | .. | .. | .. | .. | 38 | .. | 38 | .. |
| * B 271 | | 23 f.s., sh. | 1 p.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | 52° 33⅜′ N., 2° 49′ E. | 22 f.s., sh. | 5 hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (large) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |

* No Naturalists on board ; Captain in charge ; records of fish by Chief Steward.

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLVI 4 | East part of Lowestoft Deep Water—*cont.* | 21 f.s., sh. | Dec. 18th | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| *B 271 | 52° 33⅝′ N., 2° 49′ E. | 23 f.s., sh. | 1 p.m. | Pout .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| | | 22 f.s. sh. | 5 hrs. | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| XLVI 5 | East part of Lowestoft Deep Water. | 22 f.s., sh. | Dec. 18th & 19th | Plaice .. | .. | .. | 19 | 36 | 11 | 2 | .. | .. | .. | .. | .. | 68 | .. | 68 | .. |
| *B 272 | 52° 30¼′ N., 2° 51⅝ E. | 22 | 6.30 p.m. (18th) | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. |
| | | 21 f.s. | 6½ hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| XLVI 6 | East part of Lowestoft Deep Water. | 21 f.s. | Dec. 19th | Plaice .. | .. | .. | 46 | 32 | 2 | .. | .. | .. | .. | .. | .. | 80 | .. | 80 | .. |
| *B 273 | 52° 32′ N., 2° 56⅞′ E. | 22 | 1.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | 19 f.g.s. | 6 hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket. | |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| XLVI 7 | East part of Lowestoft Deep Water. | 19 f.g.s. | Dec. 19th | Plaice .. | .. | .. | .. | 26 | 30 | 13 | 4 | .. | .. | .. | .. | 73 | .. | 73 | .. |
| *B 274 | 52° 34⅓′ N., 2° 53½′ E. | 22 | 8.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | 21 f.g.s. | 6¾ hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (medium) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (medium) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 (small) | |
| XLVI 8 | East part of Lowestoft Deep Water. | 21 f.g.s. | Dec. 19th | Plaice .. | .. | .. | 18 | 40 | 13 | 1 | .. | .. | .. | .. | .. | 72 | .. | 72 | .. |
| *B 275 | 52° 57′ N., 2° 50′ E. | 22 f.g.s. | 3.30 p.m. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| | | 23 f.d.s. | 7½ hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 (small) | |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¾ Basket | |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (small) | |
| | | | 1905. | | | | | | | | | | | | | | | | |
| XLVII 1 | Bridlington Bay .. | 6 f.s. | Jan. 9th | Plaice .. | .. | 3 | 11 | 4 | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| B 276 | 54° 2′ N., 0° 9⅝′ W. | 6½ f.s. | 3.30 p.m. | Dab .. .. | 2 | 65 | 38 | 2 | .. | .. | .. | .. | .. | .. | .. | 107 | .. | 107 | .. |
| | | | ½ hr. | Cod .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XLVII 2 | Flamborough Head Ground. | 31 f.d.s. | Jan. 13th | Plaice .. | .. | .. | 3 | 25 | 12 | .. | .. | .. | .. | .. | .. | 40 | 26½ | 40 | 26½ |
| B 277 | 54° 11¾′ N., 0° 29⅛′ E. | 31 f.d.s. | 6.45 p.m. | Dab .. .. | .. | 27 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| | Came fast, probably to a wreck; net badly torn and beam broken. | | 2 hrs. | Lemon Dab.. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Long Rough Dab. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 4 | 9 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Haddock .. | .. | 8 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Whiting .. | .. | 3 | 21 | 6 | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | | | | Pout .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | 4 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |

* No Naturalists on board; Captain in charge; records of fish by Chief Steward.

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLVII 3 | Flamborough Head Ground. | 31 f.d.s. | Jan. 13th & 14th. | Plaice .. | .. | .. | 16 | 37 | 21 | 1 | .. | .. | .. | .. | .. | 75 | 44 | 75 | 44 |
| O 266 | 54° 12⅜′ N., 0° 29½′ E. | 31 f.d.s. | 11 p.m. (13th). | Dab .. .. | .. | 32 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| | | | 5 hrs. | Lemon Dab | .. | .. | 1 | 4 | .. | .. | .. | .. | . | .. | .. | 5 | .. | 5 | .. |
| | | | | Long Rough Dab. | .. | 4 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Sole .. .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 22 | 33 | 3 | .. | .. | 1 | .. | .. | .. | 59 | .. | 59 | .. |
| | | | | Haddock .. | .. | 1 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Whiting .. | .. | .. | 55 | 7 | .. | .. | .. | .. | .. | .. | .. | 62 | .. | 62 | .. |
| | | | | Pout .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 4 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Black Skate | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | 2 | 11 | 1 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| XLVII 4 | Flamborough Head Ground. | 31 f.d.s. | Jan. 14th | Plaice .. | .. | .. | 6 | 41 | 28 | .. | 1 | .. | .. | .. | .. | 76 | 47 | 76 | |
| O 267 | 54° 13½′ N., 0° 29½′ E. | 31 f.d.s. | 5 a.m. | Only Plaice measured; other contents of Trawl not recorded, species same as in XLVII. 3. | | | | | | | | | | | | | | | |
| | | | 5 hrs. | | | | | | | | | | | | | | | | |
| XLVII 5 | Flamborough Off .. | 26 f.s. | Jan. 20th | Plaice .. | .. | 1 | 16 | 35 | 3 | .. | .. | .. | .. | .. | .. | 55 | 19½ | 55 | |
| O 268 | 53° 59½′ N., 0° 36¾′ E. | 25½ f.s. | 11.45 a.m | Dab .. .. | .. | 266 | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | 279 | .. | 279 | .. |
| | | | 4 hrs. | Lemon Dab .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | John Dory .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 9 | 12 | 2 | 1 | .. | 1 | .. | 1 | .. | 26 | .. | 26 | .. |
| | | | | Whiting .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | . | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 1 | 12 | 4 | .. | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | | Herring .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLVII 7 | Eastern edge of Flamborough Off. | 23 f.s. | Jan. 21st | Plaice .. | .. | .. | 5 | 9 | 2 | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| O 269 | 54° 4′ N., 1° 11½′ E. | 27 f.s. | 9.15 a.m. | Dab .. .. | .. | 81 | 12 | . | .. | .. | .. | .. | .. | .. | .. | 93 | .. | 93 | .. |
| | Belly and fore wing badly torn. | 27 f.s. | 4 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 4 | 13 | 7 | 2 | 1 | 3 | 1 | 2 | .. | 33 | .. | 33 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 2 | 17 | 5 | .. | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Grey Gurnard | .. | 8 | 23 | 3 | .. | .. | .. | .. | .. | .. | .. | 34 | .. | 34 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cuckoo Ray.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLVII 12 | Dogger Bank, East of S.W. Patch. | 15 f.s. | Jan. 22nd | Plaice .. | .. | .. | 2 | 15 | 1 | .. | .. | .. | .. | .. | .. | 18 | 10 | 18 | 10 |
| O 270 | 54° 26¼′ N., 2° 41⅜′ E. | 17 f.s. | 8 a.m. | Dab .. .. | .. | 124 | 52 | 7 | .. | .. | .. | .. | .. | .. | .. | 183 | 16 | 183 | 16 |
| | | | 5 hrs. | Sole .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | 2 | 2 | .. | .. | 1 | 4 | 1 | 2 | .. | .. | 12 | .. | 12 | .. |
| | | | | Haddock .. | .. | .. | .. | 28 | 50 | .. | .. | .. | .. | .. | .. | 78 | 63 | 360 | [291] |
| | | | | Whiting .. | .. | 12 | 136 | 41 | 5 | 1 | 1 | .. | .. | .. | .. | 196 | 43 | 196 | 43 |
| | | | | Grey Gurnard | .. | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Herring .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLVII 15 | Dogger Bank, Eastern Shoal. | 17 f.s. | Jan. 22nd | Plaice .. | .. | .. | 6 | 7 | .. | 1 | .. | .. | .. | .. | .. | 14 | 6½ | 14 | 6½ |
| O 271 | 54° 36⅜′ N., 2° 42⅜′ E. | 16 . | 2 p.m. | Dab .. .. | .. | 23 | 25 | 19 | .. | .. | .. | .. | .. | .. | .. | 67 | 14 | 67 | 14 |
| | | 11½ f.s. | 5 hrs. | Cod .. .. | .. | .. | 2 | 2 | .. | 4 | 2 | 3 | 1 | 1 | .. | 15 | .. | 15 | .. |
| | | | | Haddock .. | .. | 1 | .. | 27 | 52 | 1 | 1 | .. | .. | .. | .. | 82 | 71 | 82 | 71 |
| | | | | Whiting .. | .. | .. | 52 | 28 | 1 | .. | 1 | .. | .. | .. | .. | 82 | 20 | 82 | 20 |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot. and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLVII 18 | Dogger Bank, North of Eastern Shoal. | 11½ f.s. | Jan. 22nd & 23rd | Plaice .. | .. | .. | 2 | 11 | 1 | 1 | 1 | .. | .. | .. | .. | 16 | 11 | 16 | 11 |
| O 272 | 54° 44⅜′ N., 2° 38⅞′ E. | 11½ | 8 p.m. (22nd) | Dab .. .. | .. | 11 | 58 | 96 | .. | .. | .. | .. | .. | .. | .. | 165 | 62 | 165 | 62 |
| | | 12 f.s. | 5 hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | 1 | 6 | 4 | 1 | .. | .. | 12 | .. | 12 | .. |
| | | | | Haddock .. | .. | .. | .. | 12 | 34 | 1 | 1 | .. | .. | .. | .. | 48 | 47 | 48 | 47 |
| | | | | Whiting .. | .. | .. | 18 | 9 | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| XLVII 19 | Dogger Bank, North of Eastern Shoal. | 12 f.s. | Jan. 23rd | Plaice .. | .. | .. | 4 | 4 | 2 | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| O 273 | 54° 54¼′ N., 2° 36½′ E. | 11 f.s. | 2 a.m. | Dab .. .. | 1 | 85 | 31 | 34 | 1 | .. | .. | .. | .. | .. | .. | 152 | 26 | 152 | 26 |
| | | 14 f.s. & sh. | 5 hrs. | Cod .. .. | .. | 5 | 2 | .. | 3 | 2 | 2 | .. | 1 | .. | .. | 15 | 20 | 15 | 20 |
| | | | | Haddock .. | .. | 1 | .. | 13 | 34 | 3 | 1 | .. | .. | .. | .. | 52 | 49 | 52 | 49 |
| | | | | Whiting .. | .. | 7 | 25 | 8 | .. | .. | .. | .. | .. | .. | .. | 40 | 8 | 40 | 8 |
| XLVII 22 | Dogger Bank, North of Eastern Shoal. | 14 f.s. & sh. | Jan. 23rd | Plaice .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| O 274 | 54° 53⅞′ N., 2° 42¼′ E. | 11 f.s. & sh. | 8 a.m. | Dab .. .. | .. | 11 | 5 | 5 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | 10 f.s. & sh. | 5 hrs. | Cod .. .. | .. | .. | 2 | 2 | .. | .. | .. | 1 | .. | 1 | .. | 6 | .. | 6 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | 10 | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Whiting .. | .. | .. | 15 | 5 | .. | .. | . | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Herring .. | .. | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| XLVII 25 | Clay Deep, Edge of Dogger. | 20 f.s. | Jan. 25th | Plaice .. | .. | .. | 1 | 5 | 1 | 1 | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| O 275 | 54° 51¾′ N., 3° 25′ E. | 22 f.s. & oz. | 5 p.m. | Dab .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | . |
| | | | 2¾ hrs. | Cod .. .. | .. | .. | 3 | 2 | 1 | 4 | 3 | 2 | 9 | .. | .. | 24 | .. | 24 | .. |
| | | | | Haddock .. | .. | 1 | .. | 41 | 65 | 1 | .. | .. | .. | .. | .. | 108 | .. | 108 | .. |
| | | | | Whiting .. | .. | 1 | 21 | 11 | .. | .. | .. | .. | .. | .. | .. | 33 | .. | 33 | .. |
| XLVII 26 | East of Leman Ground. | 19 f.s. & m. | Jan. 25th | Plaice .. | .. | 1 | 37 | 20 | 11 | 1 | .. | .. | .. | .. | .. | 70 | 30 | 70 | 30 |
| O 276 | 53° 19¼′ N., 3° 0¼′ E. | 20 | 4 a.m. | Dab .. .. | .. | 253 | 26 | 5 | .. | .. | .. | .. | .. | .. | .. | 284 | .. | 284 | .. |
| | | 17½ f.s. & m. | 5 hrs. | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | 2 | 3 | .. | .. | 1 | 6 | .. | 6 | .. |
| | | | | Haddock .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 176 | 70 | 2 | .. | .. | .. | .. | .. | .. | 248 | .. | [341] | .. |
| | | | | Pout .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLVII 29 | Leman Ground .. | 17½ f.s. & m. | Jan. 25th | Plaice .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| O 277 | 53° 27¼′ N., 2° 51¾′ E. | 17 f.g.s. | 9.50 a.m. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 2⅙ hrs. | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Herring .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLVIII 2 | S.E. of Smith's Knoll light-vessel. | 22 s. & m. | Feb. 14th | Plaice .. | .. | 7 | 65 | 17 | 4 | .. | .. | .. | .. | .. | .. | 93 | 30 | 93 | 30 |
| B 278 | 52° 48 7/16′ N., 2° 18 3/16′ E. | 24 s. & ross. | 5.45 p.m. | Dab .. .. | .. | 16 | 5 | .. | .. | . | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | 3 hrs. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | .. | .. | 7 | 38½ | 7 | 38½ |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | 2 | 1 | 1 | .. | .. | .. | .. | .. | 5 | 8½ | 5 | 8½ |
| | | | | Black Skate | . | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XLVIII 5 | Extreme South of Leman Ground. | 20½ s. | Feb. 14th 15th. | Plaice .. | .. | 1 | 6 | 4 | 1 | 1 | .. | .. | .. | .. | .. | 13 | 6½ | 13 | 6½ |
| B 279 | 53° 1⅛′ N., 2° 35⅔′ E. | 18 f.s. | 10.40 p.m. (14th.) | Dab .. .. | .. | 10 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | 3 hrs. | Whiting .. | .. | 3 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | 1 | 3 | 13 | 6 | 1 | 1 | 1 | .. | .. | .. | .. | 26 | 26 | 26 | 26 |
| | | | | Skate .. .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| XLVIII 8 | Leman Ground .. | 18 f.s. | Feb. 15th | Plaice .. | .. | 2 | 11 | 4 | 4 | .. | .. | .. | . | .. | .. | 21 | 10 | 21 | 10 |
| B 280 | 53° 16¼′ N., 2° 50⅜′ E. | 16½ f.s. | 3.55 a.m. | Dab .. .. | .. | 56 | 10 | 1 | .. | .. | . | .. | .. | .. | .. | 67 | 5½ | 67 | 5½ |
| | | | 4 hrs. | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLVIII 8 | Leman Ground—*cont.* | 18 f.s. | Feb. 15th | Thornback .. | 1 | 1 | 8 | 6 | 1 | 2 | 1 | .. | .. | .. | .. | 20 | 20 | 20 | 20 |
| B 280 | 53° 16¼′ N., 2° 50⅝′ E. | 16½ f.s. | 3.55 a.m. | Skate .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | | 1 | |
| | | | 4 hrs. | Spur Dog .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLVIII 10 | East part of Leman Ground. | 16½ f.s. | Feb. 15th | Plaice .. | .. | 2 | 21 | 11 | 3 | .. | .. | .. | .. | .. | .. | 37 | 9 | 37 | 9 |
| B 281 | 53° 32¼′ N., 2° 56′ E. | 17 f.d.s. | 9.40 a.m. | Dab .. .. | .. | 208 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 224 | .. | 224 | .. |
| | | | 4 hrs. | Flounder .. | .. | .. | 11 | 10 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | 6 | .. | .. | . | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Black Skate .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| XLVIII 12 | Botney Ground .. | 18½ f.d.s. | Feb. 15th | Plaice .. | .. | 10 | 45 | 23 | 5 | 1 | .. | .. | .. | .. | .. | 84 | 22 | 84 | 22 |
| B 282 | 53° 33¼′ N., 3° 13¼′ E. | 16½ f.d.s. | 2.45 p.m. | Dab .. .. | .. | 38 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 46 | 3 | [383] | 25 |
| | | | 6 hrs. | Flounder .. | .. | .. | 17 | 20 | .. | .. | .. | .. | .. | .. | .. | 37 | 12 | 37 | 12 |
| | | | | Sole .. .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 4½ | 1 | 4½ |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 2 | 56 | 7 | 1 | .. | .. | .. | .. | .. | .. | 66 | 11 | 66 | 11 |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. | 2 | .. |
| XLVIII 14 | S.W. part of New Zealand. | 15 f.s. | Feb. 16th | Plaice .. | .. | 12 | 42 | 12 | 6 | 1 | .. | .. | .. | .. | .. | 73 | 20½ | 73 | 20½ |
| B 283 | 53° 15¾′ N., 3° 41⅜′ E. | 14 f.d.s. | 4 a.m. | Dab .. .. | .. | 201 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 216 | 12 | [450] | 25 |
| | | | 5 hrs. | Flounder .. | .. | 1 | 30 | 23 | 3 | .. | .. | .. | .. | .. | .. | 57 | 19 | 57 | 19 |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Herring .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sprat .. .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | 2 | .. | 9 | 2 | 1 | .. | .. | .. | .. | .. | .. | 14 | 8 | 14 | 8 |
| | | | | Homelyn .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 5½ | 2 | 5½ |
| | | | | Black Skate .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | | 2 | |
| XLVIII 16 | N.W. part of Texel Ground. | 15½ f.s. | Feb. 16th | Plaice .. | .. | .. | 9 | 9 | 4 | .. | .. | .. | .. | .. | .. | 22 | 10 | 22 | 10 |
| B 284 | 53° 5⅝′ N., 4° 2½′ E. | 17 f.s. | 10.45 a.m. | Dab .. .. | .. | 16 | 21 | 1 | .. | .. | .. | .. | .. | .. | .. | 38 | 5 | 38 | 5 |
| | Came fast to wreck, broke both trawl heads; net torn. | 15 f.s. | 3½ hrs. | Flounder .. | .. | .. | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Sole .. .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Turbot .. | .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | 5 | 8½ | 5 | 8½ |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 71 | 50 | .. | .. | .. | .. | .. | .. | .. | 121 | 32½ | [508] | 136½ |
| | | | | Greater Weever. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLVIII 18 | Texel Ground .. | 16 f.g.s. | Feb. 16th | Plaice .. | .. | 9 | 31 | 12 | 4 | 1 | .. | .. | .. | .. | .. | 57 | 16 | 57 | 16 |
| B 285 | 53° 0¾′ N., 4° 12½′ E. | 16½ f.g.s. | 3.45 p.m. | Dab .. .. | .. | 183 | 33 | 2 | .. | .. | .. | .. | .. | .. | .. | 218 | 15 | 218 | 15 |
| | Ground rope parted, and belly split. | | 4 hrs. | Flounder .. | .. | .. | 12 | 7 | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Sole .. .. | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Turbot .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 | 1 | .. | 5 | 23 | 5 | 23 |
| | | | | Whiting .. | .. | 2 | 10 | 4 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| XLVIII 20 | Brown Ridges .. | 14 f.g.s. | Feb. 17th | Plaice .. | .. | 34 | 88 | 22 | 3 | .. | .. | .. | .. | .. | .. | 147 | 25 | 147 | 25 |
| B 286 | 52° 50½′ N., 3° 44¾′ E. | 17 f.g.s. | 4 a.m. | Dab .. .. | .. | 134 | 42 | .. | .. | .. | .. | .. | .. | .. | .. | 176 | 15 | 176 | 15 |
| | | 14 f.br.s. | 5 hrs. | Flounder .. | .. | .. | 7 | 6 | 1 | .. | .. | .. | .. | .. | .. | 14 | 5 | 14 | 5 |
| | | | | Sole .. .. | .. | .. | 3 | 5 | .. | .. | .. | .. | .. | .. | .. | 8 | 5 | 8 | 5 |
| | | | | Brill .. . | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | .. | 4 | 45 | 4 | 45 |
| XLVIII 22 | Western Edge of Lowestoft Deep Water. | 23 f.g.s. & pebbles. | Feb. 17th. | Plaice .. | .. | .. | 8 | 4 | 4 | .. | .. | .. | .. | .. | .. | 16 | 6 | 16 | 6 |
| B 287 | 52° 25′ N., 2° 7′ E. | 20 f.d.s. | 5.10 p.m. | Sole .. .. | .. | 1 | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | 4 hrs. | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 3 | 20 | 3 | 20 |
| | | | | Whiting .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | . | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) | Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLVIII 22 | Western Edge of Lowestoft Deep Water—*cont.* | 23 | f.g.s. & pebbles. | Feb. 17th | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| B 287 | 52° 25′ N., 2° 7′ E. | 20 | f.d.s. | 5.10 p.m. | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | 4 hrs. | Thornback .. | .. | 1 | 4 | 1 | .. | 1 | .. | .. | .. | .. | .. | 7 | 8 | 7 | 8 |
| | | | | | Homelyn .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Black Skate .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLIX 1 | Knoll Deep .. .. | 22 | sharp s. | Feb. 28th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 288 | 52° 34¼′ N., 2° 16½′ E. | 22 | ross | 5.30 p.m. | Lemon Dab .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Came fast to a ross bank, net very badly torn. | | | ¾ hr. | Cod .. .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Whiting .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Thornback .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Homelyn .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLIX 2 | Winterton Shoal .. | 19½ | blk.spk.s. | March 1st | Plaice .. | .. | 17 | 69 | 10 | .. | .. | .. | .. | .. | .. | .. | 96 | 15 | 96 | 15 |
| B 289 | 52° 40⅓′ N., 2° 58¾′ E. | 16 | blk.spk.s. | 9.30 a.m. | Dab .. .. | .. | 422 | 101 | .. | .. | .. | .. | .. | .. | .. | .. | 523 | 31 | 523 | 31 |
| | | | | 4 hrs. | Lemon Dab .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Flounder .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | | Cod .. .. | .. | 7 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | | Whiting .. | .. | 5 | 123 | 12 | .. | .. | .. | .. | .. | .. | .. | 140 | 16½ | 140 | 16½ |
| | | | | | Pout .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Grey Gurnard | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | | Greater Weever. | .. | .. | 16 | 3 | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| XLIX 5 | Leman Ground .. | 17 | f.d.s. | March 1st & 2nd. | Plaice .. | .. | 7 | 14 | 12 | .. | .. | .. | .. | .. | .. | .. | 33 | 6 | 33 | 6 |
| B 290 | 53° 15′ N., 2° 30¼′ E. | 16 | f.g.s. | 8.30 p.m. (1st). | Dab .. .. | .. | 35 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| | | 15 | f.g.s. | 5 hrs. | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 3 | 1 | 3 |
| | | | | | Whiting .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | | Grey Gurnard | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | | Thornback . | 1 | .. | 8 | 7 | 2 | 2 | .. | .. | .. | .. | .. | 20 | 19¼ | 20 | 19¼ |
| | | | | | Black Skate .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 3¾ | 1 | 3¾ |
| XLIX 6 | Leman Ground .. | 12 | f.blk.spk.s. | Mar. 2nd | Plaice .. | .. | 11 | 64 | 74 | 6 | 1 | .. | .. | .. | .. | .. | 156 | 46½ | 156 | 46½ |
| B 291 | 53° 26½′ N., 2° 23¼′ E. | 13 | f.d.s. | 11.30 a.m. | Dab .. .. | .. | 105 | 25 | 2 | .. | .. | .. | .. | .. | .. | .. | 132 | .. | 132 | .. |
| | | | | 3 hrs. | Flounder .. | .. | .. | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1¾ | 1 | .. |
| | | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 3¾ | 1 | .. |
| | | | | | Whiting .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | | Grey Gurnard | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLIX 10 | Markham's Hole .. | 20 | f.s. | Mar. 2nd & 3rd | Plaice .. | .. | 3 | 23 | 45 | 16 | 1 | .. | .. | .. | .. | .. | 88 | 36 | 88 | 6 |
| B 292 | 53° 46¼′ N., 2° 41½′ E. | 33 | s. & m. | 9.30 p.m. (2nd) | Dab .. .. | .. | 57 | 16 | 1 | .. | .. | .. | .. | .. | .. | .. | 74 | 5 | 74 | 5 |
| | | 19 | sharp s. | 4 hrs. | Lemon Dab .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Sole .. .. | .. | .. | 1 | 5 | 1 | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Cod .. .. | .. | 2 | 5 | .. | .. | .. | .. | 1 | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | | Whiting .. | .. | .. | 33 | 16 | 1 | .. | .. | .. | .. | .. | .. | 50 | 11½ | 50 | 11½ |
| | | | | | Pout .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Grey Gurnard | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLIX 24 | Flamborough Off .. | 24 | f.d.s. | Mar. 3rd | Plaice .. | .. | .. | .. | 5 | 3 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| O 278 | 54° 8½′ N., 1° 8¾′ E. | 29 | | 7 p.m. | Dab .. .. | .. | 96 | 9 | 1 | .. | .. | .. | .. | .. | .. | .. | 106 | .. | 106 | .. |
| | Ground rope parted, net very badly torn; had a trawl beam and head in our trawl. | 23 | f.d.s. | 5 hrs. | Lemon Dab .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | 2 | .. | 4 | 1 | .. | 7 | .. | 7 | .. |
| | | | | | Whiting .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | | Grey Gurnard | .. | 1 | 7 | 2 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XLIX 25 | The Hills .. .. | 26 f.d.s. | Mar. 4th | Plaice .. | .. | 1 | 4 | 16 | 11 | 2 | .. | .. | .. | .. | .. | 34 | 23 | 34 | 23 |
| O 279 | 54° 17′ N., 1° 15′ E. | 30 f.d.s. | 9.45 a.m. | Dab .. .. | .. | 49 | 14 | 2 | .. | .. | .. | .. | .. | .. | .. | 65 | .. | 65 | .. |
| | | 24 f.d.s. | 4 hrs. | Long Rough Dab. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | .. | 1 | 3 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 1 | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Herring .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Starry Ray .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| XLIX 26 | The Hills .. .. | 24 f.g.s. | Mar. 4th | Plaice .. | .. | .. | 8 | 21 | 6 | 1 | .. | .. | .. | .. | .. | 36 | 18 | 36 | 18 |
| O 280 | 54° 17⅞′ N., 1° 10⅝′ E. | 27 f.d.s. | 2.15 p.m. | Dab .. .. | 1 | 50 | 6 | 2 | .. | .. | .. | .. | .. | .. | .. | 59 | .. | 59 | .. |
| | | 15 f.s. | 4 hrs. | Long Rough Dab. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | . | .. | .. | . | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | .. | 8 | 12 | .. | .. | .. | .. | .. | .. | 20 | 16½ | 20 | 16½ |
| | | | | Whiting .. | .. | 1 | 2 | 8 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Grey Gurnard | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Starry Ray .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| L 8 | North of Hartlepool | 10 c.s. | Mar. 10th | Plaice .. | .. | 38 | 44 | 15 | .. | .. | .. | .. | .. | .. | .. | 97 | .. | 97 | .. |
| B 294 | 54° 44⅝′ N., 1° 13⅜′ E. | 6½ f.s. | 6.45 a.m. | Dab .. .. | .. | 9 | 13 | 3 | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | Came fast, probably to a wreck; beam broken; lost aft trawl head, ground rope etc., net very badly torn. | 5 c.s. | ⅝ hr. | Flounder .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 1 | 3 | .. | 1 | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Whiting .. | .. | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Herring .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| L 9 | Hartlepool Ground.. | 14 f.d.s. | Mar. 17th | Plaice .. | .. | 1 | 4 | 6 | 3 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| O 281 | 54° 41¾′ N., 1° 0⅝′ W. | 20 f.d.s. | 8 a.m. | Dab .. .. | .. | 20 | 17 | 2 | .. | .. | .. | .. | . | .. | .. | 39 | 6½ | 39 | 6½ |
| | Net slightly torn. | 25 f.d.s. | 2 hrs. | Long Rough Dab. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Flounder .. | .. | .. | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 2 | 4 | 12 | 5 | 9 | 11 | 1 | .. | .. | .. | 44 | 61 | 44 | 61 |
| | | | | Haddock .. | .. | 23 | 9 | 6 | .. | .. | .. | .. | .. | .. | .. | 38 | .. | 38 | .. |
| | | | | Whiting .. | .. | 11 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Grey Gurnard | .. | .. | 24 | 14 | .. | .. | .. | .. | .. | .. | .. | 38 | 11 | 38 | 11 |
| | | | | Cat fish .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sprat .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| L 12 | Hartlepool Ground | 27 f.d.s. & m. | Mar. 17th | Plaice .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| O 282 | 54° 42⅜′ N., 0° 55½′ W. | 27 f.d.s. & m. | noon | Dab .. .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | 2 hrs. | Lemon Dab | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Whiting .. | .. | 3 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 15 | 14 | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 5 | 1 | 5 |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| L 13 | Whitby Ground .. | 34 f.d.s. | Mar. 17th | Plaice .. | .. | .. | 1 | 7 | 3 | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| O 283 | 54° 42¾′ N., 0° 20⅛ W. | 34 f.d.s. | 6.45 p.m. | Dab.. .. | .. | 142 | 15 | 2 | .. | .. | .. | .. | .. | .. | .. | 159 | .. | 159 | .. |
| | | | 2 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | 3 | 4 | .. | .. | .. | .. | 1 | 8 | 6 | 2 | 24 | .. | 24 | .. |
| | | | | Haddock .. | .. | 5 | 5 | 2 | 2 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Whiting .. | .. | .. | 30 | 10 | .. | .. | .. | .. | .. | .. | .. | 40 | .. | 40 | .. |
| | | | | Grey Gurnard | .. | 4 | 18 | 4 | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | | | | Starry Ray .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15½+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L 16 | Whitby Ground .. | 34 f.d.s. | Mar 17th and 18th. | Plaice .. | .. | .. | 3 | 23 | 3 | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| O 284 | 54° 42⅛′ N., 0° 17¼′ W. | 35 f.d.s. | 10 p.m. (17th.) | Dab .. .. | .. | 273 | 30 | 2 | .. | .. | .. | .. | .. | .. | .. | 305 | .. | 305 | .. |
| | | | 5 hrs. | Lemon Dab.. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Flounder .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Long Rough Dab. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | 1 | .. | .. | 2 | 8 | 12 | 5 | 29 | .. | 29 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | Ca. 6 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cat Fish . | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| L 17 | Whitby Ground .. | 35 f.d.s. | Mar. 18th | Plaice .. | .. | .. | .. | 7 | 4 | 1 | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| O 285 | 54° 41⅛′ N., 0° 17′ W. | 35 f.d.s. | 4 .m. | Dab .. .. | .. | 236 | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 247 | .. | 247 | .. |
| | | | 5 hrs. | Lemon Dab | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | 13 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 5 | 2 | 1 | .. | .. | .. | 7 | 4 | 1 | 20 | .. | 20 | .. |
| | | | | Haddock .. | .. | 5 | 6 | 1 | 2 | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Whiting .. | .. | 1 | 49 | 20 | .. | .. | .. | .. | .. | .. | .. | 70 | .. | 70 | .. |
| | | | | Grey Gurnard .. | 7 | 103 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 122 | .. | 122 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Starry Ray .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| L 24 | West of Brucey's Garden. | 42 f.d.s. | Mar. 18th | Dab .. .. | .. | 70 | 47 | 8 | .. | .. | .. | .. | .. | .. | .. | 125 | .. | 125 | .. |
| O 286 | 54° 57′ N., 0° 24′ E. | 43 f.d.s. | 3.50 p.m. | Lemon Dab | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Had a "pull out," hauled, found net all right. | | 2½ hrs. | Long Rough Dab. | .. | 18 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | | | | Cod .. .. | .. | 1 | 6 | 4 | .. | .. | 1 | 3 | .. | .. | 1 | 16 | .. | 16 | .. |
| | | | | Haddock .. | .. | 29 | 13 | 4 | 1 | .. | .. | .. | .. | .. | .. | 47 | .. | 47 | .. |
| | | | | Whiting .. | .. | .. | 63 | 20 | 1 | .. | .. | .. | .. | .. | .. | 84 | .. | 84 | .. |
| | | | | Grey Gurnard .. | 3 | 19 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | .. | 2 | .. |
| | | | | Herring .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| L 25 | West of Brucey's Garden. | 43 f.d.s. | Mar. 18th | Dab .. .. | .. | 264 | 88 | 14 | 1 | .. | .. | .. | .. | .. | .. | 367 | 30 | [538] | 44 |
| O 287 | 55° 0¼′ N., 0° 37¾′ E. | 37 f.d.s. | 7 p.m. | Lemon Dab | .. | .. | 1 | 14 | 1 | .. | .. | .. | .. | .. | .. | 16 | 10 | 16 | 0 |
| | | | 5 hrs. | Long Rough Dab. | .. | 54 | 39 | .. | .. | .. | .. | .. | .. | .. | .. | 93 | .. | 93 | .. |
| | | | | Cod .. .. | .. | .. | 16 | 18 | 17 | 8 | 3 | 6 | 3 | 5 | 1 | 77 | .. | 77 | .. |
| | | | | Haddock .. | .. | 15 | 89 | 77 | 48 | 1 | .. | .. | .. | .. | .. | 230 | .. | 230 | [109] |
| | | | | Whiting .. | .. | .. | 68 | 51 | 4 | 1 | .. | .. | .. | .. | .. | 124 | .. | 124 | .. |
| | | | | Coal Fish .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | | .. |
| | | | | Pout .. .. | .. | 1 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Grey Gurnard .. | 7 | 59 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 81 | .. | 81 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Cat Fish .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Herring .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| L 31 | Dogger Bank, North of S.W. Patch. | 11½ f.g.s. | Mar. 19th | Plaice .. | .. | .. | 3 | 7 | 6 | 1 | .. | .. | .. | .. | .. | 17 | 12 | 17 | 12 |
| O 289 | 54° 37¼′ N., 1° 54⅝′ E. | 13 f.g.s. | 10.10 a.m. | Dab .. .. | .. | 17 | 11 | 1 | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| | Piston of winch broken; gear hauled with tackle. | | 5 hrs. | Cod .. .. | .. | 1 | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Whiting .. | .. | .. | 11 | 2 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Grey Gurnard .. | 1 | 8 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| LI 2 | Brielle Ground .. | 13 f.s. | Mar. 31st | Plaice .. | .. | 86 | 30 | .. | .. | .. | .. | .. | .. | .. | .. | 116 | .. | 116 | .. |
| B 295 | 52° 5¾′ N., 3° 41⅜′ E. | 11 f.s. & sh. | 4.10 a.m. | Dab .. .. | .. | 88 | 31 | .. | .. | .. | .. | .. | .. | .. | .. | 119 | .. | 119 | .. |
| | | | 2 hrs. | Flounder .. | .. | 3 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Greater Weever. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Thornback .. | 1 | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ 0 | 4+ 10+ | 8+ 20+ | 12+ 30+ | 15¾+ 40 | 19¾+ 50 | 23⅝+ 60 | 27½+ 70 | 31½+ 80 | 35½+ 90 | 39½+ 100 | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LI 3 | Brielle Ground .. | 11 f.s. & sh. | Mar. 31st | Plaice .. | .. | 8 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| B 296 | 52° 8¾′ N., 3° 41¼′ E. | 13 f.br.s. | 6.30 a.m. | Dab .. .. | .. | 25 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 31 | .. | 31 | .. |
| | | | 2 hrs. | Flounder .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LI 4 | Brielle Ground .. | 14½ f.s. | Mar. 31st | Plaice .. | .. | 225 | 173 | 2 | .. | .. | .. | .. | .. | .. | .. | 400 | .. | 400 | .. |
| B 297 | 52° 15¾′ N., 3° 49⅜′ E. | 13 f.g.br.s. | 9.30 a.m. | Dab .. .. | .. | 36 | 20 | .. | .. | .. | .. | .. | .. | .. | .. | 56 | .. | 56 | .. |
| | | | 2 hrs. | Flounder .. | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Brill .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LI 5 | Brielle Ground .. | 13 f.g.br.s. | Mar. 31st | Plaice .. | .. | 299 | 184 | 1 | .. | .. | .. | .. | .. | .. | .. | 484 | .. | 484 | .. |
| B 298 | 52° 18¼′ N., 3° 58¼′ E. | 13 f.s. | noon | Dab .. .. | .. | 49 | 24 | .. | .. | .. | .. | .. | .. | .. | .. | 73 | .. | 73 | .. |
| | | | 2 hrs. | Flounder .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| LII 22 | Lowestoft Flats .. | 17 c.s. | Apr. 8th | Dab .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B (c.) 299 | 52° 24′ N., 1° 59½′ E. | 19½ s. & ross. | 6 a.m. | Sole .. .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | Covered net experiment No. 9. | | 1½ hrs. | Cod .. .. | .. | .. | .. | .. | 4 | .. | 1 | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LIII 1 | Off Scheveningen .. | 10 d.s. | Apr. 18th | Plaice .. | .. | 20 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| O 290 | 52° 11½′ N., 4° 9½′ E. | 11 d.s. | 1.25 p.m. | Dab .. .. | .. | 96 | 60 | .. | .. | .. | .. | .. | .. | .. | .. | 156 | .. | 156 | .. |
| | | | 1 hr. | Flounder .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LIII 2 | Off Scheveningen .. | 11 d.s. | Apr. 18th | Plaice .. | .. | 37 | 31 | .. | .. | .. | .. | .. | .. | .. | .. | 68 | .. | 68 | .. |
| O 291 | 52° 12⅜′ N., 4° 5½′ E. | 12 d.br.s. | 2.50 p.m. | Dab .. .. | .. | 124 | 62 | .. | .. | .. | .. | .. | .. | .. | .. | 186 | .. | 186 | .. |
| | | | 1 hr. | Flounder .. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Sprat .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LIII 3 | N.W. of Scheveningen | 12 f.br.s. | Apr. 18th | Plaice .. | .. | 224 | 127 | 2 | .. | .. | .. | .. | .. | .. | .. | 353 | .. | 353 | .. |
| O 292 | 52° 13′ N., 3° 59½′ E. | 12 f.br.s. | 4.15 p.m. | Dab .. .. | .. | 228 | 128 | .. | .. | .. | .. | .. | .. | .. | .. | 356 | .. | 356 | .. |
| | | | 2 hrs. | Flounder .. | .. | 1 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 1 | 82 | 2 | .. | .. | .. | .. | .. | .. | .. | 85 | .. | 85 | .. |
| | | | | Greater Weever. | .. | .. | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| LIII 5 | N.W. of Scheveningen | 10½ g.br.s. | Apr. 19th | Plaice .. | .. | 35 | 76 | 1 | .. | .. | .. | .. | .. | .. | .. | 112 | .. | 112+½ Basket | |
| O 293 | 52° 16¼′ N., 4° 4⅜′ E. | 12 g.br.s. | 6.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket | |
| | | | 1½ hrs. | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Several | .. |
| LIII 6 | N.W. of Scheveningen | 12 g.br.s. | Apr. 19th | Plaice .. | .. | 80 | 53 | .. | .. | .. | .. | .. | .. | .. | .. | 133 | .. | 133 | .. |
| O 294 | 52° 16¼′ N., 3° 57½′ E. | 12½ g.br.s. | 8.15 a.m. | Dab .. .. | .. | 24 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| | | | 1½ hrs. | Whiting .. | .. | 1 | 72 | 9 | .. | .. | .. | .. | .. | .. | .. | 82 | .. | 82 | .. |
| | | | | Mackerel .. | .. | .. | 75 | .. | .. | .. | .. | .. | .. | .. | .. | 75 | .. | 75 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LIII 7 | Northern Edge of Brielle Ground. | 12½ g.br.s. | Apr. 19th | Plaice .. | .. | 17 | 110 | .. | .. | .. | .. | .. | .. | .. | .. | 127 | .. | 127 | — |
| O 295 | 52° 16¾′ N., 3° 51¼′ E. | 13 g.br.s. | 10.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¼ Basket | |
| | | | 1½ hrs. | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket | |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| LIII 8 | Northern Edge of Brielle Ground. | 13 g.br.s. | Apr. 19th | Plaice .. | .. | 71 | 324 | 8 | .. | .. | .. | .. | .. | .. | .. | 403 | .. | 403 | .. |
| O 296 | 52° 19¼′ N., 3° 47′ E. | 14 g.br.s. | 12.10 p.m. | Dab .. .. | .. | 95 | 31 | .. | .. | .. | .. | .. | .. | .. | .. | 126 | .. | 126 | .. |
| | | | 1⁷⁄₁₂ hrs. | Turbot .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | 1 | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | .. | 224 | 28 | .. | .. | .. | .. | .. | .. | .. | 252 | .. | 252 | .. |
| | | | | Grey Gurnard | .. | 3 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Greater Weever. | .. | .. | 36 | 3 | 1 | .. | .. | .. | .. | .. | .. | 40 | .. | 40 | |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15½+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIV 1 | West of Middle Ground. | 23 g.s. & sh. | Apr. 28th | Plaice .. | .. | 5 | 33 | 13 | .. | .. | .. | .. | .. | .. | .. | 51 | .. | 51 | .. |
| O 297 | 52° 17½′ N., 2° 36½′ E. | 23 g.s. | 4 a.m., | Dab .. | .. | 95 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 106 | .. | 106 | .. |
| | | | 2 hrs. | Lemon Dab.. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 15 | 1 | 1 | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | | Whiting .. | .. | 3 | 157 | 34 | 1 | .. | .. | .. | .. | .. | .. | 195 | .. | 195 | .. |
| | | | | Pout .. .. | .. | .. | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Grey Gurnard | .. | 1 | 10 | 4 | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Latchet .. | .. | .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | . |
| | | | | Red Gurnard | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 137 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Spotted Dog. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| LIV 2 | Middle Ground .. | 23 g.s. | Apr. 28th | Plaice .. | .. | 1 | 5 | 5 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| O 298 | 52° 19½′ N., 2° 41½′ E. | 24 g.br.s. | 6.30 a.m. | Dab .. .. | .. | 31 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| | | | 1½ hrs. | Cod .. .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 6 | 67 | 20 | .. | .. | .. | .. | .. | .. | .. | 93 | .. | 93 | .. |
| | | | | Grey Gurnard | .. | .. | 9 | 2 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Latchet .. | .. | .. | 1 | 4 | .. | 1 | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Mackerel .. | .. | .. | 20 | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 89 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Spotted Dog | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LIV 3 | Middle Ground .. | 21 g.br.s. & sh. | Apr. 28th | Plaice .. | .. | 9 | 103 | 16 | .. | .. | .. | .. | .. | .. | .. | 128 | .. | 128 | .. |
| O 299 | 52° 20′ N., 2° 46¼′ E. | 20 g.br.s. & sh. | Noon | Dab .. .. | .. | 47 | 20 | .. | .. | .. | .. | .. | .. | .. | .. | 67 | .. | 67 | .. |
| | | | 1½ hrs. | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 1 | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | 2 | 287 | 26 | .. | .. | .. | .. | . | .. | .. | 315 | .. | 315 | .. |
| | | | | Pout .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 9 | 2 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Latchet .. | .. | 1 | 5 | 12 | 5 | 1 | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Mackerel .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 108 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LV 2 | Leman Ground .. | 15½ f.d.s. | May 10th | Plaice .. | .. | 15 | 55 | 31 | 3 | 5 | .. | .. | .. | .. | .. | 109 | .. | 109 | .. |
| O 301 | 53° 27′ N., 2° 42⅛′ E. | 16 f.d.s. | 6 a.m. | Dab .. .. | .. | 550 | 48 | 4 | .. | .. | .. | .. | .. | .. | .. | 602 | 28 | 602 | 28 |
| | | | 4 hrs. | Lemon Dab | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Haddock .. | .. | 85 | 87 | .. | .. | .. | .. | .. | .. | .. | .. | 172 | 12 | 172 | 12 |
| | | | | Whiting .. | .. | 13 | 178 | 33 | .. | .. | .. | .. | .. | .. | .. | 224 | 33 | [468] | 69 |
| | | | | Grey Gurnard. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Baskets. | 27 |
| | | | | Mackerel .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Sprat .. . | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LV 3 | Eastern Edge of Leman Ground. | 16 f.d.s. | May 10th | Plaice .. | .. | 1 | 7 | 13 | 4 | 6 | .. | .. | .. | .. | .. | 31 | 19 | 31 | 19 |
| O 302 | 53° 22′ N., 3° 4½′ E. | 13½ f.d.s. | 10.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets. | 60 |
| | | | 4 hrs. | Sole .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | 2 | 3 | .. | .. | .. | .. | .. | 6 | 10 | 6 | 10 |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | 154 | 164 | .. | .. | .. | .. | .. | .. | .. | .. | 318 | 2 | 318 | 26 |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LV 3 | Eastern Edge of Leman Ground— | 16 f.d.s. | May 10th | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Baskets. | 51 |
| O 302 | *cont.* | 13¾ f.d.s. | 10.30 a.m. | Grey Gurnard. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 basket. | 40 (small). |
| | 53° 22′ N., 3° 4½′ E. | | 4 hrs. | Latchet .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Salmon Trout. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| LV 4 | North of Brown Bank | 13½ f.d.s. | May 10th | Plaice .. | .. | 2 | 13 | 28 | 12 | 4 | .. | .. | .. | .. | .. | 59 | 33 | 59 | 33 |
| O 303 | 53° 16½′ N., 3° 19¼′ E. | 15 f.d.s. | 3 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 775 | 47½ |
| | | | 4 hrs. | Lemon Dab .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 31 | 9 | .. | .. | .. | .. | .. | .. | .. | 40 | .. | 341 | 57 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 83 | .. |
| | | | | Red Mullet .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sprat .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LV 5 | N.E. of Brown Bank | 15 f.d.s. | May 10th | Plaice .. | .. | 41 | 98 | 115 | 4 | .. | .. | .. | .. | .. | .. | 258 | 67 | 258 | 67 |
| O 304 | 53° 12⅛′ N., 3° 36⅜′ E. | 13½ f.d.s. | 7.30 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 686 | 51 |
| | | | 4½ hrs. | Sole .. .. | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 2 | .. | .. | .. | 1 | .. | .. | .. | 1 | 4 | .. | 4 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 502 | 61 |
| | | | | Grey Gurnard and Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket | |
| | | | | Latchet .. | .. | 1 | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LV 6 | East of Brown Bank | 13½ f.d.s. | May 11th | Plaice .. | .. | 83 | 354 | 51 | .. | .. | .. | .. | .. | .. | .. | 488 | 85 | 488 | 85 |
| O 305 | 53° 6⅓′ N., 3° 54′ E. | 14½ f.g.s. | 12.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 388 | 22 |
| | | | 4½ hrs. | Sole .. .. | .. | .. | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 446 | 63 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | 27½ |
| | | | | Latchet .. | .. | .. | 5 | 19 | 4 | 2 | .. | .. | .. | .. | .. | 30 | 20 | 30 | 20 |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 31½ |
| | | | | Red Mullet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| LV 7 | Texel Ground .. | 14½ f.g.s. | May 11th | Plaice .. | .. | 84 | 391 | 23 | .. | .. | .. | .. | .. | .. | .. | 498 | 73 | 498 | 73 |
| O 306 | 52° 57⅜′ N., 4° 7⅞′ E. | 16 f.g.s. | 5.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 450 | 30 |
| | | | 4½ hrs. | Sole .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 82 | 14 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 218 | .. |
| | | | | Latchet .. | .. | .. | 32 | 14 | 3 | 4 | .. | .. | .. | .. | .. | 53 | 23 | 62 | 23 + 9 small fish. |
| | | | | Mackerel .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date. Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ 0+ | 4+ 10+ | 8+ 20+ | 12+ 30+ | 15¾+ 40 + | 19¾+ 50 + | 23⅝+ 60 + | 27½+ 70 + | 31½+ 80 + | 35½+ 90 + | 39½+ 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LV 7 | Texel Ground—*cont.* | 14½ f.g.s. | May 11th | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 35 | .. |
| O 306 | 52° 57⅜′ N., 4° 7⅞′ E. | 16 f.g.s. | 5.30 a.m. | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 245 | .. |
| | | | 4½ hrs. | Red Mullet.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LV 8 | Texel Ground .. | 16 f.g.s. | May 11th | Plaice .. | .. | 252 | 188 | 1 | .. | .. | .. | .. | .. | .. | .. | 441 | 38 | [2193] | 189 |
| O 307 | 52° 52½′ N., 4° 19½′ E. | 13 f.g.s. | 10.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 29 |
| | | 12 f.g.s. | 4½ hrs. | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 12 | 5 | .. | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 216 | 30 |
| | | | | Latchet .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | (small) |
| | | | | Mackerel .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | Greater Weever. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 396 | 53 |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LV 9 | Texel Ground .. | 12 f.g.s. | May 11th | Plaice .. | .. | 147 | 53 | .. | .. | .. | .. | .. | .. | .. | .. | 200 | 14½ | [2448] | 177½ |
| O 308 | 52° 54¾′ N., 4° 23′ E. | 13½ f.g.s. | 3.30 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22 |
| | | | 4 hrs. | Sole .. .. | .. | .. | 14 | 6 | .. | .. | .. | .. | .. | .. | .. | 20 | 6 | 20 | 6 |
| | | | | Turbot .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | [216 | 30] |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | [396 | 53] |
| LV 10 | Texel Ground .. | 13½ f.g.s. | May 11th | Plaice .. | .. | 167 | 33 | .. | .. | .. | .. | .. | .. | .. | .. | 200 | 11 | [3091] | 170 |
| O 309 | 52° 52′ N., 4° 25⅛′ E. | 11 f.g.s. | 8 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¾ Basket. | 24 |
| | | | 4 hrs. | Sole .. .. | .. | .. | 25 | 15 | .. | .. | .. | .. | .. | .. | .. | 40 | 10 | 40 | 10 |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket. | 31 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Red Mullet.. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | . | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket | |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 (large) | |
| LV 11 | S.W. of Kykduin, L.H. | 7 f.d.s. | May 12th | Plaice .. | 6 | 160 | 33 | 1 | .. | .. | .. | .. | .. | .. | .. | 200 | 11 | [2327] | 128 |
| B (c.) 300 | 52° 47¼′ N., 4° 34½′ E. | 9 f.d.s. & m. | 5.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 34 |
| | Covered net experiment (No. 10). | | 1½ hrs. | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 Basket | |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LV 12 | S.W. of Kykduin, L.H. | 7 f.d.s. | May 15th | Plaice .. | 6 | 490 | 218 | 6 | .. | .. | .. | .. | .. | .. | .. | 720 | 55½ | 720 | 55½ |
| B (c.) 301 | 52° 47⅝′ N., 4° 34⅝′ E. | 10 f.d.s. | 3.20 p.m. | Dab .. .. | 3 | 299 | 138 | .. | .. | .. | .. | .. | .. | .. | .. | 440 | 32 | 440 | 32 |
| | Covered net experiment (No. 11). | | 2 hrs. | Lemon Dab | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Flounder .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 67 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 68 | .. | 68 | .. |
| | | | | Latchet .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 40 | .. |
| | | | | Sprat.. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Thornback .. | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| LV 13 | Brown Ridges .. | 15 f.g.s. | May 16th | Plaice .. | .. | 29 | 208 | 67 | .. | .. | .. | .. | .. | .. | .. | 304 | 62 | 304 | 62 |
| O 310 | 52° 44⅛′ N., 3° 27⅜′ E. | 16 f.g.br.s. | 4.40 a.m. | Dab .. .. | .. | 292 | 51 | .. | .. | .. | .. | .. | .. | .. | .. | 343 | 19 | 343 | 19 |
| | | | 4⅓ hrs. | Turbot .. | .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | 4 | 11 | 4 | 11 |
| | | | | Cod .. .. | .. | .. | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Whiting .. | .. | 3 | 444 | 43 | 1 | .. | .. | .. | .. | .. | .. | 491 | 81 | 491 | 81 |
| | | | | Grey Gurnard | .. | 25 | 85 | 2 | .. | .. | .. | .. | .. | .. | .. | 112 | 14 | 112 | 14 |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15½+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LV 13 | Brown Ridges—*cont.* | 15 f.g.s. | May 16th | Latchet .. | .. | .. | 11 | 7 | 2 | 1 | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| O 310 | 52° 44½′ N., 3° 27⅜′ E. | 16 f.g.br.s. | 4.40 a.m. | Red Mullet.. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | 4¼ hrs. | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 293 | 43 |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LV 14 | West part of Brown Ridges. | 16 f.g.br.s. | May 16th | Plaice .. | .. | 38 | 241 | 87 | .. | .. | .. | .. | .. | .. | .. | 366 | .. | 366 | .. |
| O 311 | 52° 45½′ N., 3° 14½′ E. | 16 f.g.s. | 9.30 a.m. | Dab .. .. | .. | 328 | 59 | .. | .. | .. | .. | .. | .. | .. | .. | 387 | .. | 387 | .. |
| | | | 5 hrs. | Sole .. .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Whiting .. | .. | .. | 116 | 6 | .. | .. | .. | .. | .. | .. | .. | 122 | .. | 122 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 131 | .. |
| | | | | Latchet .. | .. | .. | 7 | 7 | 1 | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Red Mullet.. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 74 | .. |
| | | | | Thornback .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 54 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| LVI 9 | Bridlington Bay .. | 5 f.d.s. | May 24th | Plaice .. | .. | 31 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| B 302 | 54° 2¾′ N., 0° 9′ W. | 6 f.d.s. | 6.45 a.m. | Dab .. .. | .. | 15 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | | | 1 hr. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Angler .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 10 | Bridlington Bay .. | 6 f.d.s. | May 24th | Plaice .. | .. | 22 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 35 | .. | 35 | .. |
| B 303 | 54° 1⅝′ N., 0° 9′ W. | 6 f.d.s. | 8.15 a.m. | Dab .. .. | .. | 17 | 15 | 1 | .. | .. | .. | .. | .. | .. | .. | 33 | .. | 33 | .. |
| | | | 1 hr. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Skate.. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 11 | Bridlington Bay .. | 6 f.d.s. | May 24th | Plaice .. | .. | 29 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| B 304 | 54° 1½′ N., 0° 9′ W. | 6½ f.d.s. | 9.35 a.m. | Dab .. .. | .. | 20 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| | | | 1 hr. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Sprat.. .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| LVI 13 | N.E.of Brown Ridges | 15 f.d.s. | May 25th | Plaice .. | .. | 1 | 41 | 1 | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| B 305 | 52° 52⅝′ N., 3° 51¾′ E. | 14 f.d.s. | 6.30 a.m. | Dab .. .. | .. | 6 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | 1¼ hrs. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 4 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Greater Weever. | .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 14 | Texel Ground .. | 15 f.d.s. | May 25th | Plaice .. | .. | 96 | 44 | 1 | .. | .. | .. | .. | .. | .. | .. | 141 | .. | 141 | .. |
| B 306 | 52° 54¼′ N, 4° 17¾′ E. | 13 f.d.s. | 10.10 a.m. | Dab .. .. | .. | 9 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | 1 hr. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Greater Weever. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15⅝+ / 40 + | 19⅝+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LVI 15 | Texel Ground .. | 13 \| f.d.s. | May 25th | Plaice .. | .. | 94 | 62 | .. | .. | .. | .. | .. | .. | .. | .. | 156 | .. | 156 | .. |
| B 307 | 52° 54⅝′ N., 4° 20¼′ E. | 13 \| f.d.s. | 11.35 a.m. | Dab .. .. | 1 | 30 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 39 | .. | 39 | .. |
| | | | 1 hr. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| LVI 16 | Texel Ground .. | 13 \| f.d.s. | May 25th | Plaice .. | .. | 36 | 32 | .. | .. | .. | .. | .. | .. | .. | .. | 68 | .. | 68 | .. |
| B 308 | 52° 56′ N., 4° 19⅜′ E. | 13½ \| f.d.s. | 1 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 39 | .. |
| | | | 1 hr. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | [5] | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | [18] | .. |
| LVI 17 | Texel Ground .. | 13½ \| f.d.s. | May 25th | Plaice .. | .. | 43 | 27 | 1 | .. | .. | .. | .. | .. | .. | .. | 71 | .. | 71 | .. |
| B 309 | 52° 57′ N., 4° 19½′ E. | 13½ \| f.d.s | 2.25 p.m. | Dab .. .. | .. | 11 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | 1 hr. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Latchet .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| LVI 18 | Texel Ground .. | 13½ \| f.d.s. | May 25th | Plaice .. | .. | 44 | 34 | .. | .. | .. | .. | .. | .. | .. | .. | 78 | .. | 78 | .. |
| B 310 | 52° 56⅝′ N., 4° 17¼′ E. | 14 \| f.g.s. | 4 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ca. 12 | .. |
| | | | 1 hr. | Sole .. .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| LVI 19 | Texel Ground .. | 14 \| f.g.s. | May 25th | Plaice .. | .. | 7 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| B 311 | 52° 56⅞′ N , 4° 13⅞′ E. | 17 \| f.g.s. | 5.20 p.m. | Dab .. .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | 1 hr. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 20 | Texel Ground .. | 17 \| f.g.s. | May 5th | Plaice .. | .. | 9 | 121 | 1 | .. | .. | .. | .. | .. | .. | .. | 131 | .. | 121 | .. |
| B 312 | 52° 59¾′ N., 4° 12⅜′ E. | 17 \| f.g.s. | 6.45 p.m. | Dab .. .. | .. | 61 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 69 | .. | 69 | .. |
| | | | 1½ hr. | Sole .. .. | .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 31 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 28 | Dogger Bank, North part of S.W. Patch. | 11½ \| f.g.s. & sh. | May 26th | Plaice .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B (c.) 313 | 54° 37¼′ N., 1° 48¼ E. | 12 \| f.g.s. & sh. | 7.20 p.m. | Dab .. .. | .. | 15 | 18 | 2 | .. | .. | .. | .. | .. | .. | .. | 35 | .. | 35 | .. |
| | Covered net experiment (No. 12). | | 1 hr. | Cod .. .. | .. | .. | 3 | 3 | 2 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Haddock .. | .. | 1 | 10 | 4 | 4 | 1 | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Whiting .. | .. | 6 | 11 | 2 | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Grey Gurnard | .. | 10 | 19 | .. | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| LVI 30 | Off Saltfleet .. .. | 7 \| c.d.s. | May 29th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 314 | 53° 20¾′ N., 0° 18½′ E. | 7 \| d.s. & gvl. | 4 p.m. | Dab .. .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | 1 hr. | Flounder .. | .. | .. | 2 | 11 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Sole .. .. | .. | 1 | 23 | 9 | .. | .. | .. | .. | .. | .. | .. | 33 | .. | 33 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | 1 | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Black Skate .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Homelyn .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ 0 | 4+ 10+ | 8+ 20+ | 12+ 30+ | 15⅝+ 40 + | 19¾+ 50 + | 23⅝+ 60 + | 27½+ 70 + | 31½+ 80 + | 35½+ 90 + | 39½+ 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LVI 31 | Off Mablethorpe .. | 7 s. & gvl. | May 29th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 315 | 53° 22¾′ N., 0° 20¾′ E. | 6 s. & gvl. | 6.10 p.m. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 1 hr. | Brill .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | 4 | 6 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Homelyn .. | .. | 2 | 3 | 3 | 1 | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| LVI 32 | Off Mablethorpe .. | 6 s. & gvl. | May 29th | Sole .. .. | .. | .. | 3 | 6 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| B 316 | 53° 23¼′ N., 0° 22¾′ E. | 7 s. & gvl. | 7.30 p.m. | Pout .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 1 hr. | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Homelyn .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 33 | Flamborough Off .. | 25 c.d.s. | May 30th | Plaice .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| B 317 | 53° 58′ N., 0° 41⅛′ E. | 26 f.d.s. | 3.30 a.m. | Dab .. .. | 1 | 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | 1 hr. | Lemon Dab... | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Cod .. .. | .. | 6 | 10 | 1 | 1 | .. | .. | .. | 1 | .. | .. | 19 | .. | 19 | .. |
| | | | | Haddock .. | .. | 18 | 12 | 2 | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| | | | | Grey Gurnard | .. | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| LVI 34 | Flamborough Off .. | 26 f.d.s. | May 30th | Plaice .. | .. | 1 | 4 | 12 | 9 | 1 | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| B 318 | 54° 3¼′ N., 0° 43¼′ E. | 27 f.d.s. | 5 a.m. | Dab .. .. | .. | 276 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 287 | .. | 287 | .. |
| | | | 4 hrs. | Lemon Dab... | .. | .. | 1 | 6 | 1 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | .. | 4 | 4 | 1 | 2 | .. | 1 | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Haddock .. | .. | 19 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Whiting .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 23 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| LVI 35 | Flamborough Off .. | 27 f.d.s. | May 30th | Plaice .. | .. | .. | 2 | 4 | 3 | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| O 312 | 54° 5′ N., 0° 41⅛′ E. | 27 f.d.s. | 9.45 a.m. | Dab .. .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | Round turn in middle of net when hauled. | | 4 hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 13¾ | 1 | 13¾ |
| | | | | Cod .. .. | .. | .. | 1 | 3 | 1 | .. | .. | .. | 1 | 1 | .. | 7 | .. | 7 | .. |
| | | | | Haddock .. | .. | 76 | 17 | 5 | 1 | .. | .. | .. | .. | .. | .. | 99 | .. | 99 | .. |
| | | | | Whiting .. | .. | 6 | 10 | 3 | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Coal Fish .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | . |
| | | | | Grey Gurnard | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 36 | Flamborough Off .. | 27 f.d.s. | May 30th | Plaice .. | .. | .. | .. | 4 | 4 | 1 | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| B (c.) 3 9 | 54° 1½′ N., 0° 40⅝′ E. | 26 g.s. & sh. | 2.30 p.m. | Dab .. .. | .. | 23 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| | Covered net experiment, No. 13. | | 1 hr. | Lemon Dab... | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 3 | 1 | 2 | 1 | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Haddock .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 38 | South of The Hills .. | 27 f.g.s. | May 30th | Plaice .. | .. | 1 | 4 | 27 | 6 | .. | .. | .. | .. | .. | .. | 38 | 21 | 38 | 21 |
| O 313 | 54° 11′ N., 0° 58¾′ E. | 29 f.g.s. | 7 p.m. | Dab .. .. | .. | 298 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 307 | 12 | [512] | 20 |
| | | | 2 hrs. | Lemon Dab | .. | .. | .. | 7 | 2 | .. | .. | .. | .. | .. | .. | 9 | 6½ | 9 | 6½ |
| | | | | Long Rough Dab. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | 5 | 40 | 11 | 7 | .. | 1 | 1 | 3 | 1 | 1 | 70 | 65 | 70 | 65 |
| | | | | Haddock .. | .. | 83 | 52 | 2 | .. | .. | .. | .. | .. | .. | .. | 137 | 12 | [879] | 77 |
| | | | | Whiting .. | .. | 6 | 122 | 8 | .. | .. | .. | .. | .. | .. | .. | 136 | 23 | [315] | 53 |
| | | | | Coal Fish .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | 19½ | 2 | 19½ |
| | | | | Grey Gurnard. | .. | 69 | 56 | 1 | .. | .. | .. | .. | .. | .. | .. | 126 | 11 | 126 | 11 |
| | | | | Greater Weever. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Starry Ray.. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LVI 40 | Dogger Bank, North of S.W. Patch. | 14½ f.g.s. & sh. | May 31st | Plaice .. | .. | .. | 5 | 6 | 1 | .. | .. | .. | .. | .. | .. | 12 | 5½ | 12 | 5½ |
| O 314 | 54° 43¼′ N., 2° 19½′ E. | 10½ f.g.s. & sh. | 4.45 a.m. | Dab .. .. | .. | 211 | 117 | 25 | .. | .. | .. | .. | .. | .. | .. | 353 | 35 | [1225] | 121½ |
| | | | 4 hrs. | Turbot .. | .. | .. | .. | .. | 2 | 1 | 1 | .. | .. | .. | .. | 4 | 17 | 4 | 17 |
| | | | | Cod .. .. | .. | .. | 30 | 4 | 1 | 1 | 1 | .. | .. | .. | .. | 37 | 12 | 37 | 12 |
| | | | | Haddock .. | .. | 174 | 170 | 7 | 4 | .. | .. | .. | .. | .. | .. | 355 | 34 | [449] | 43 |
| | | | | Whiting .. | .. | 2 | 48 | 15 | .. | .. | .. | .. | .. | .. | .. | 65 | 11 | [236] | 40 |
| | | | | Grey Gurnard. | .. | 111 | 123 | 5 | .. | .. | .. | .. | .. | .. | .. | 239 | 20 | 239 | 20 |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LVI 42 | Dogger Bank, North Edge of Eastern Shoal. | 10½ f.g.s. & sh. | May 31st | Plaice .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B(c.) 320 | 54° 42½′ N., 2° 29½′ E. | 10½ f.g.s. & sh. | 9.25 a.m. | Dab .. .. | 7 | 35 | 25 | 7 | .. | .. | .. | .. | .. | .. | .. | 74 | .. | 74 | .. |
| | Covered net experiment, No. 14. | | 1 hr. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard. | .. | 10 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Greater Weever. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 43 | Dogger Bank, Eastern Shoal. | 11 f.g.s. & sh. | May 31st | Plaice .. | .. | .. | 2 | 13 | 2 | .. | .. | .. | .. | .. | .. | 17 | 9 | 17 | 9 |
| O 315 | 54° 38⅞′ N., 2° 43′ E. | 16 f.d.g.s. | noon. | Dab .. .. | .. | 21 | 40 | 7 | .. | .. | .. | .. | .. | .. | .. | 68 | 13 | [246 | 47 |
| | | | 4 hrs. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Haddock .. | .. | 40 | 60 | 9 | 15 | .. | .. | .. | .. | .. | .. | 124 | 28 | [248] | 56 |
| | | | | Whiting .. | .. | 1 | 114 | 42 | 1 | .. | .. | .. | .. | .. | .. | 158 | 29 | 158 | 29 |
| | | | | Grey Gurnard. | .. | 19 | 75 | 6 | .. | .. | .. | .. | .. | .. | .. | 100 | 12 | [183 | 22 |
| | | | | Mackerel .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVI 45 | Dogger Bank, Hospital. | 18½ f.d.g.s. | May 31st | Plaice .. | .. | .. | 3 | 11 | 4 | 1 | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| O 316 | 54° 30¼′ N., 2° 57½′ E. | 19½ f.d.g.s. | 5.30 p.m. | Dab .. .. | .. | 156 | 44 | 7 | .. | .. | .. | .. | .. | .. | .. | 207 | .. | 207 | .. |
| | | | 3 hrs. | LemonDab .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | 118 | 97 | 39 | 47 | 1 | .. | .. | .. | .. | .. | 302 | .. | 302 | .. |
| | | | | Whiting .. | .. | 2 | 69 | 42 | 2 | .. | .. | .. | .. | .. | .. | 115 | .. | 115 | .. |
| | | | | Grey Gurnard | .. | 20 | 58 | .. | .. | .. | .. | .. | .. | .. | .. | 78 | .. | 78 | .. |
| | | | | Starry Ray.. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LVI 47 | North of Cleaver Bank | 25 s. & m. | June 1st | Plaice .. | .. | .. | 20 | 36 | 1 | .. | .. | .. | .. | .. | .. | 57 | 19½ | 57 | 19½ |
| O 317 | 54° 22′ N., 3° 29′ E. | 23 f.d.s. | 6 a.m. | Dab .. .. | 1 | 355 | 22 | 2 | .. | .. | .. | .. | .. | .. | .. | 380 | 16½ | 380 | 16½ |
| | | | 3 hrs. | Turbot .. | .. | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | 6 | 13 | 6 | 13 |
| | | | | Cod .. .. | .. | .. | 10 | 1 | .. | .. | 1 | 1 | 1 | .. | .. | 14 | .. | 14 | .. |
| | | | | Haddock .. | .. | 107 | 189 | 22 | 26 | .. | .. | .. | .. | .. | .. | 344 | 63½ | 523] | 96½ |
| | | | | Whiting .. | .. | 3 | 92 | 36 | 1 | .. | .. | .. | .. | .. | .. | 132 | 36½ | 132 | 36½ |
| | | | | Grey Gurnard | .. | 99 | 87 | 3 | .. | .. | .. | .. | .. | .. | .. | 189 | 17 | 189 | 17 |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 2 | .. | 2 | .. |
| LVI 53 | Between CleaverBank and New Zealand. | 21 f.g.s. | June 1st | Plaice .. | .. | 2 | 10 | 3 | 1 | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| B 321 | 54° 49⅔′ N., 3° 33½′ E. | 19 f.g.s. | 5.25 p.m. | Dab .. .. | .. | 143 | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | 152 | .. | 152 | .. |
| | | | 2 hrs. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | 24 | 12 | .. | .. | .. | .. | . | .. | .. | .. | 36 | .. | 36 | .. |
| | | | | Whiting .. | .. | 3 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | 47 | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 55 | .. | 55 | .. |
| | | | | Red Mullet.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback . | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| LVI 56 | Brown Bank.. .. | 15 f.g.s. | June 2nd | Plaice .. | .. | 9 | 16 | 35 | 7 | .. | .. | .. | .. | .. | .. | 67 | .. | 67 | .. |
| B 322 | 53° 11⅔′ N., 3° 19¼′ E. | 13½ f.g.s. | 2.30 a.m. | Dab .. .. | .. | 62 | 20 | 3 | .. | .. | .. | .. | .. | .. | .. | 85 | .. | 85 | .. |
| | | | 2 hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | 36 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LVI 56 | Brown Bank—*cont.* | 15 f.g.s. | June 2nd | Whiting .. | .. | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| B 322 | 53° 11⅝′ N., 3° 19¼′ E. | 13½ f.g.s. | 2.30 a.m. | Grey Gurnard | .. | 35 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 39 | .. | 39 | .. |
| | | | 2 hrs. | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LVI 57 | Brown Bank .. .. | 13½ f.g.s. | June 2nd | Plaice .. | .. | .. | 4 | 14 | 1 | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| B 323 | 53° 12⅜′ N., 3° 21′ E. | 17½ f.g.s. | 5 a.m. | Dab .. .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | ⅛ Basket. | 11 | .. |
| | | | 2 hrs. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 9 | .. |
| | | | | Whiting .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 69 | (small) |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. |
| LVII 21 | Lynn Deep .. .. | 9 s.m. | June 16th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 324 | 52° 57⅛′ N., 0° 19′ E. | 12 | 4.10 a.m. | Dab .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 14 s.m. | 1½ hrs. | Sole .. .. | .. | .. | 13 | 6 | .. | .. | .. | .. | .. | .. | .. | 19 | 3½ | 19 | 3½ |
| | | 16 c.s. & m. | | Brill .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | 1 | 4 | .. | .. | 2 | .. | .. | .. | .. | .. | 7 | 9½ | 7 | 9½ |
| | | | | Black Skate | .. | 3 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | 2½ | 13 | 2½ |
| | | | | Homelyn .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVII 22 | Off Mablethorpe .. | 7½ spk. s. | June 16th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 325 | 53° 21¼′ N., 0° 22⅝′ E. | 8 | 8.50 a.m. | Sole .. .. | .. | .. | 7 | 6 | 1 | .. | .. | .. | .. | .. | .. | 14 | 4 | 14 | 4 |
| | | 9 s.m. | 3 hrs. | Brill .. .. | .. | .. | .. | .. | | .. | .. | .. | .. | .. | .. | 2 | 2½ | 2 | 2½ |
| | | 7½ spk.s. | | Cod .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Pout .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Black Skate | .. | 1 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | 2 | 6 | 2 |
| | | | | Homelyn .. | .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | 5 | 6½ | 5 | 6½ |
| LVII 29 | North of Blakeney Overfall. | 11 s. & sh. | June 16th | Plaice .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| B 326 | 53° 5⅓′ N., 0° 58½′ E. | 12 s. & sh. | 2.30 p.m. | Dab .. .. | .. | 10 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | 1 hr. | Lemon Dab.. | .. | 9 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Sole .. .. | .. | .. | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Cod .. .. | .. | 3 | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 14 | 2 | 14 | 2 |
| | | | | Pout .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Homelyn .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| LVIII 3 | Between Knoll Deep and Middle Ground | 24½ f.spk.s. | June 20th | Plaice .. | .. | .. | 26 | 8 | 1 | 1 | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| B 328 | 52° 27⅛′ N., 2° 38½′ E. | 26 f.spk.s. | 5.40 a.m. | Dab .. .. | .. | 33 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. | 42 | .. |
| | | | 3¾ hrs. | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Haddock .. | .. | 18 | 29 | .. | .. | .. | .. | .. | .. | .. | .. | 47 | .. | 47 | .. |
| | | | | Whiting .. | .. | 3 | 38 | 11 | .. | .. | .. | .. | .. | .. | .. | 52 | .. | 52 | .. |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Poor Cod .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Grey Gurnard | .. | 2 | 12 | 2 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Red Gurnard | .. | .. | 18 | 9 | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| | | | | Thornback .. | .. | 1 | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. |
| | | | | Lesser Spotted Dog. | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| LVIII 4 | North of Middle Ground. | 26 f.spk.s. | June 20th | Plaice .. | .. | 1 | 25 | 6 | 1 | .. | .. | .. | .. | .. | .. | 33 | .. | 33 | .. |
| B 329 | 52° 27⅜′ N., 2° 51½′ E. | 23½ f.g.s. | 9.30 a.m. | Dab .. .. | .. | 24 | 11 | 2 | .. | .. | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| | Came fast, hauled, found net all right. | | 2½ hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | .. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | .. | Cod .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LVIII 4 | North of Middle Ground—*cont.* | 26 f. spk. s. | June 20th | Whiting .. | .. | 6 | 21 | .. | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| B 329 | 52° 27⅜′ N., 2° 51½′ E. | 23½ f.g.s. | 9.30 a.m. | Pout .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | . | .. | .. | 1 | .. | 1 | .. |
| | Came fast, hauled, found net all right. | | 2½ hrs. | Grey Gurnard | .. | 3 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Red Gurnard | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Thornback .. | .. | .. | 2 | 2 | .. | 3 | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LVIII 6 | North of Middle Ground. | 23½ f.g.s. | June 20th | Plaice .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| B 330 | 52° 29½′ N., 3° 2½′ E. | 20 f.g.s. & sh. | 12.50 p.m | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| | Fore wing and belly badly torn. | | 3½ hrs. | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LVIII 8 | Between Winterton Shoal and Brown Ridges. | 20 f.g.s. & s.h. | June 20th | Plaice .. | .. | .. | 28 | 15 | 1 | .. | .. | .. | .. | .. | .. | 44 | .. | 44 | .. |
| B 331 | 52° 36½′ N., 3° 12⅜′ E. | 19 f.g.s. & s.h. | 6 p.m. | Dab .. .. | .. | 107 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 120 | .. | 120 | .. |
| | | | 3 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | . | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Haddock .. | .. | 4 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Whiting .. | .. | .. | 29 | 1 | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | | | | Grey Gurnard | .. | 16 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 22 | .. | 22 | .. |
| | | | | Greater Weever. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| LVIII 10 | North part of Brown Ridges. | 16½ f.d.s. | June 21st | Plaice .. | .. | 7 | 52 | 18 | .. | .. | .. | .. | .. | .. | .. | 77 | .. | 77 | .. |
| B 332 | 52° 45¼′ N., 3° 20⅜′ E. | 15 | 3.15 a.m. | Dab .. .. | .. | 90 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 99 | .. | 99 | .. |
| | | 21 | 3 hrs. | Lemon Dab | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 19 | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 16 f.g.s. | | Cod .. .. | .. | 2 | 9 | 3 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Haddock .. | .. | 2 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Whiting .. | .. | 12 | 37 | .. | .. | .. | .. | .. | .. | .. | .. | 49 | .. | 49 | .. |
| | | | | Grey Gurnard | .. | 13 | 11 | 1 | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | | | | Greater Weever. | .. | .. | 12 | 4 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LVIII 12 | North part of Brown Ridges. | 16 f.g.s. | June 21st | Plaice .. | .. | 10 | 92 | 26 | .. | .. | .. | .. | .. | .. | .. | 128 | .. | 128 | .. |
| B 333 | 52° 46¾′ N., 3° 24⅜′ E. | 15 | 6.45 a.m. | Dab .. .. | 1 | 238 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 245 | .. | 245 | .. |
| | | 18 | 4½ hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 20 f.g.s. & sh. | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | 3 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Whiting .. | .. | 3 | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Grey Gurnard | .. | 23 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| | | | | John Dory .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Red Guruard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Thornback .. | .. | 7 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| LVIII 14 | Brown Ridges .. | 20 f.g.s. & sh. | June 21st | Plaice .. | .. | 3 | 75 | 26 | 1 | .. | .. | .. | .. | .. | .. | 105 | .. | 105 | .. |
| B 334 | 52° 39½′ N., 3° 22⅜′ E. | 17 | 11.50 a.m. | Dab .. .. | .. | 49 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 56 | .. | 56 | .. |
| | | 18 f.g.s. & sh. | 4½ hrs. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | 1 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Whiting .. | .. | .. | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Grey Gurnard | .. | 3 | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Red Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | 1 | 24 | 24 | 1 | .. | 1 | .. | .. | 51 | .. | 790 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15½+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LVIII 16 | Brown Ridge .. | 18 f.g.s. & sh. | June 21st | Plaice .. | .. | 3 | 89 | 15 | 1 | .. | .. | .. | .. | .. | .. | 108 | .. | 108 | .. |
| B 335 | 52° 36′ N., 3° 29′ E. | 15 | 5.10 p.m. | Dab .. .. | .. | 144 | 19 | 1 | .. | .. | .. | .. | .. | .. | .. | 164 | .. | 164 | .. |
| | | 14½ | 5½ hrs. | Sole .. .. | .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | 16 f.g.s. | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | 19 | 12 | 2 | .. | .. | .. | .. | .. | .. | .. | 33 | .. | 33 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 29 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. |
| LVIII 18 | North part of Brown Ridges. | 16 f.g.s. | June 21st & 22nd. | Plaice .. | .. | 3 | 214 | 41 | 1 | .. | .. | .. | .. | .. | .. | 259 | .. | 259 | .. |
| B 336 | 52° 44½′ N., 3° 30¾′ E. | 15 | 10.50 p.m. (21st.) | Dab .. .. | .. | 390 | 64 | .. | .. | .. | .. | .. | .. | .. | .. | 454 | .. | 454 | .. |
| | | 17 | 5⅛ hrs. | Sole .. .. | .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | 16 f.g.s. | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Whiting .. | .. | 14 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| | | | | Grey Gurnard | .. | 39 | 18 | .. | .. | .. | .. | .. | .. | .. | .. | 57 | .. | 57 | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 98 | .. |
| LVIII 20 | North part of Brown Ridges. | 16 f.g.s. | June 22nd | Plaice .. | .. | 10 | 91 | 20 | .. | .. | .. | .. | .. | .. | .. | 121 | .. | 121 | .. |
| B 337 | 52° 46⅜′ N., 3° 33⅝′ E. | 15 | 4.50 a.m. | Dab .. .. | .. | 236 | 22 | .. | .. | .. | .. | .. | .. | .. | .. | 258 | .. | 258 | .. |
| " | | 14½ | 5½ hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| " | | 18½ f.g.s. | | Turbot .. | .. | .. | .. | .. | 1 | . | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| " | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| " | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| " | | | | Haddock .. | .. | 8 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| " | | | | Whiting .. | .. | 2 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| " | | | | Grey Gurnard | .. | 44 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 53 | .. | 53 | .. |
| " | | | | Latchet .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| " | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 37 | .. |
| " | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LVIII 22 | Eastern Edge of Brown Ridges. | 18½ f.g.s. | June 22nd | Plaice .. | .. | 4 | 89 | 20 | .. | .. | .. | .. | .. | .. | .. | 113 | .. | 113 | .. |
| B 338 | 52° 45⅝′ N., 3° 36½′ E. | 17 | 10.30 a.m. | Dab .. .. | .. | 175 | 18 | .. | .. | .. | .. | .. | .. | .. | .. | 193 | .. | 193 | .. |
| " | | 16 f.g.s. | 5 hrs. | Turbot .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 25 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 27 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LVIII 24 | North of Brown Ridges. | 16 f.g.s. | June 22nd | Plaice .. | .. | 3 | 74 | 21 | .. | .. | .. | .. | .. | .. | .. | 98 | .. | 98 | .. |
| B 339 | 52° 49¼′ N 3° 26⅜′ E. | 15 | 4 p.m. | Dab .. .. | .. | 151 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | 161 | .. | 161 | .. |
| | | 17 | hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 17 f.g.s. | | Turbot .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | . |
| | | | | Haddock .. | .. | 6 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Whiting .. | .. | 19 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 34 | .. | 34 | .. |
| | | | | Grey Gurnard | .. | 16 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | | | | John Dory .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Red Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 17 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | .. | 2 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date. Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0 | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LVIII. 26 | Winterton Twenties | 7 f.g.s. | June 22nd & 23rd. | Plaice .. | .. | 5 | 100 | 40 | .. | .. | .. | .. | .. | .. | .. | 145 | .. | 145 | .. |
| B 340 | 52° 49⅝′ N., 3° 7′ E. | 19½ | 9.30 p.m. (22nd.) | Dab.. .. | .. | 426 | 60 | 1 | .. | .. | .. | .. | .. | .. | .. | 487 | .. | 487 | .. |
| | | 20 f.g.s. | 5 hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Haddock .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | 21 | 82 | 3 | .. | .. | .. | .. | .. | .. | .. | 106 | .. | 106 | .. |
| | | | | Grey Gurnard | .. | 15 | 21 | 1 | .. | .. | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | John Dory .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | 2 | .. | .. | 1 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 2 | .. |
| LVIII 28 | Winterton Twenties | 20 f.g.s. | June 23rd | Plaice .. | .. | 2 | 32 | 29 | 1 | .. | .. | .. | .. | .. | .. | 64 | .. | 64 | .. |
| B 341 | 52° 51⅝′ N., 2° 44′ E. | 19 | 3 a.m. | Dab.. .. | 2 | 128 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 142 | .. | 142 | .. |
| | | 22 | 6 hrs. | Flounder .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 20½ f.g.s. | | Sole .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | 2 | 28 | 2 | .. | .. | .. | .. | 1 | .. | .. | 33 | .. | 33 | .. |
| | | | | Haddock .. | .. | 28 | 75 | .. | .. | .. | .. | .. | .. | .. | .. | 103 | .. | 103 | .. |
| | | | | Whiting .. | .. | 41 | 140 | 18 | .. | .. | .. | .. | .. | .. | .. | 199 | .. | 199 | .. |
| | | | | Grey Gurnard | .. | 8 | 33 | 2 | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| | | | | Latchet .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | John Dory .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Red Gurnard | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Thornback .. | 1 | 1 | 4 | 6 | 2 | 1 | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| LVIII 30 | Between Winterton Twenties & Knoll Deep. | 20½ f.g.s. | June 23rd | Plaice .. | .. | .. | 1 | 7 | 1 | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| B 342 | 52° 47¾′ N., 2° 27′ E. | 27 c.s. & ross | 9.30 p.m. | Dab .. .. | .. | 60 | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | 66 | .. | 66 | .. |
| | | | 5 hrs. | Cod .. .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | 4 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Whiting .. | .. | 29 | 81 | 12 | 1 | .. | .. | .. | .. | .. | .. | 123 | .. | 123 | .. |
| | | | | Poor Cod .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | .. | 28 | 2 | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | | | | Red Gurnard | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | John Dory .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Black Skate | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LVIII 32 | Between Winterton Twenties & Knoll Deep. | 27 c.s. & ross | June 23rd | Plaice .. | .. | .. | 7 | 23 | 2 | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| B 343 | 52° 39½′ N., 2° 32⅛′ E. | 25 c.s. & ross | 3 p.m. | Dab .. .. | .. | 37 | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| | | | 5 hrs. | Lemon Dab | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | 4 | .. | 1 | 1 | 1 | .. | 8 | .. | 8 | .. |
| | | | | Haddock .. | .. | 7 | 27 | .. | .. | .. | .. | .. | .. | .. | .. | 34 | .. | 34 | .. |
| | | | | Whiting .. | . | 1 | 20 | 10 | .. | .. | .. | .. | .. | .. | .. | 31 | .. | 31 | .. |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 18 | 3 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Red Gurnard | .. | .. | 34 | 16 | .. | .. | .. | .. | .. | .. | .. | 50 | .. | 50 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 9 | 7 | 5 | 1 | .. | .. | .. | .. | .. | 22 | .. | 22 | .. |
| | | | | Black Skate | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Spotted Dog | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIX 1 | Dogger Bank, North of S.W. Patch. | 9 g.br.s. | June 27th | Plaice .. | .. | .. | 1 | 1 | 3 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| O 318 | 54° 38¼′ N., 2° 18′ E. | 11 | 8.15 a.m. | Dab .. .. | .. | 165 | 116 | 28 | .. | .. | .. | .. | .. | .. | .. | 309 | 39 | [784] | 99 |
| | | 15 | 5 hrs. | Lemon Dab .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 12 f.s. & sh. | | Cod .. .. | .. | .. | 93 | 50 | 2 | 1 | .. | .. | .. | .. | .. | 146 | .. | 146 | .. |
| | | | | Haddock .. | .. | 29 | 229 | 13 | 7 | .. | .. | .. | .. | .. | .. | 278 | 42 | [410] | 67 |
| | | | | Whiting .. | .. | .. | 8 | 25 | 2 | .. | .. | .. | .. | .. | .. | 35 | [6¾] | 1017 | [197½] |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 166 | 20 |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LIX 4 | Dogger Bank, North of S.W. Patch. | 12 f.s. & sh. | June 27th | Plaice .. | .. | .. | 2 | 18 | 5 | 1 | .. | .. | .. | .. | .. | 26 | 19 | 26 | 19 |
| O 319 | 54° 49½′ N., 2° 24¾′ E. | 12½ | 3.25 p.m. | Dab .. .. | .. | 257 | 111 | 6 | .. | .. | .. | .. | .. | .. | .. | 374 | 32 | [3833] | 328 |
| | | 13 f.s. & sh. | 5 hrs. | Turbot .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Haddock .. | .. | 26 | 62 | 3 | 9 | 1 | .. | .. | .. | .. | .. | 101 | .. | [380] | .. |
| | | | | Whiting .. | .. | .. | 48 | 8 | .. | .. | .. | .. | .. | .. | .. | 56 | 1 0 | [280] | 50 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 62 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | (large) |
| LIX 6 | Dogger Bank, Middle | 12 f.s. & sh. | June 27th & 28th | Plaice .. | .. | .. | .. | 22 | 10 | 8 | 3 | .. | .. | .. | .. | 43 | 50 | 43 | 50 |
| O 320 | 54° 49¾′ N., 2° 24¾′ E. | 12½ | 9.30 p.m. | Dab .. .. | .. | 18 | 54 | 9 | 1 | .. | .. | .. | .. | .. | .. | 82 | 15 | [568] | 104 |
| | | 13 f.s. & sh. | 5½ hrs. | Lemon Dab... | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 66 | 16 | 11 | 8 | 2 | 8 | 7 | 7 | 5 | 130 | .. | 130 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 82* | .. | 831 | 244½ |
| | | | | Whiting .. | .. | .. | 24 | 10 | .. | .. | .. | .. | . | .. | .. | 34 | 9 | [170] | 45 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 291 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | (large) |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| LIX 8 | Dogger Bank, Middle | 16½ f.s. & sh. | June 28th | Plaice .. | .. | .. | 1 | 6 | 9 | 5 | .. | .. | .. | .. | .. | 21 | 24 | 21 | 24 |
| O 321 | 55° 10⅜′ N., 2° 30⅜′ E. | 17 | 3.50 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 25 |
| | | 17½ f.g.s. | 5 hrs. | Lemon Dab... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | 1 | 4 | 1 | .. | .. | . | .. | 6 | .. | 6+† | 34 Kgs.† |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 91 |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 100 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Starry Ray.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LIX 10 | Dogger Bank, Middle | 17½ f.g.s. | June 28th & 29th. | Plaice .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 32 | .. |
| O 322 | 55° 4⅜′ N., 2° 33′ E. | 15 | 8.15 p.m. (28th) | Dab . .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2¾ | Baskets |
| | | 15 f.g.s. & sh. | 6½ hrs. | Lemon Dab.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | (large) |
| | | | | Cod .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 25 | .. |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7½ | Baskets |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | Baskets |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 50 | .. |
| | | | | Mackerel .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LIX 11 | Dogger Bank, Middle | 15 f.g.s. & sh. | June 29th | Plaice .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | 5 | 5 | 5 | 5 |
| O 323 | 55° 4½′ N., 2° 34′ E. | 15 f.g.s. & sh. | 3 a.m. | Dab .. .. | 1 | 247 | 64 | 14 | .. | .. | .. | .. | .. | .. | .. | 326 | 25 | 326 | 25 |
| | | | 2 hrs. | Cod .. | .. | 1 | 17 | 3 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Haddock .. | .. | 31 | 109 | 15 | 20 | .. | .. | .. | .. | .. | .. | 175 | [44] | 175 | [44] |
| | | | | Whiting .. | .. | .. | 89 | 29 | .. | .. | .. | .. | .. | .. | .. | 118 | 23 | 118 | 23 |
| | | | | Grey Gurnard | .. | 17 | 40 | 3 | .. | .. | .. | .. | .. | .. | .. | 59 | .. | 59 | . |

* Sizes selected.

† Catch consisted of 6 fish measured and 34 kilograms unmeasured.

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIX 12 | Dogger Bank, Middle | 15 f.g.s. & sh. | June 29th | Plaice .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| MOMb B (c.) 344 | 55° 4′ N., 2° 35′ E. | 14 f.g.s. & sh. | 5.45 a.m. | Dab .. .. | 8 | 97 | 9 | 6 | .. | .. | .. | .. | .. | .. | .. | 120 | .. | 120 | .. |
| | Covered net experiment, No. 15. | | 1 hr. | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| LIX 14 | Dogger Bank, N.W. Slope. | 19½ f.g.s. & sh. | June 29th | Plaice .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | 4 | 6 | 4 | 6 |
| O 324 | 55° 16½′ N., 2° 30½′E. | 20 f.g.s. & sh. | 12.10 p.m. | Dab .. .. | 2 | 23 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | | | 2 hrs. | Cod .. .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Haddock .. | .. | 15 | 43 | 11 | 3 | .. | .. | .. | .. | .. | .. | 72 | 17 | 72 | 17 |
| | | | | Grey Gurnard | .. | 8 | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LIX 17 | North of the Dogger Bank. | 44 s. & m. | June 30th | Plaice .. | .. | .. | .. | 2 | 2 | 3 | 1 | .. | .. | .. | .. | 8 | 13 | 8 | 13 |
| O 325 | 55° 53′ N., 2° 47⅝′ E. | 44 s. & m. | 2.30 a.m. | Dab .. .. | .. | 233 | 24 | .. | .. | .. | .. | .. | .. | .. | .. | 257 | .. | 257 | .. |
| | | | 2 hrs. | Long Rough Dab. | .. | 121 | 51 | .. | .. | .. | .. | .. | .. | .. | .. | 172 | .. | 172 | .. |
| | | | | Cod .. .. | .. | .. | 14 | 3 | 6 | 2 | 2 | .. | 1 | .. | .. | 28 | .. | 28 | .. |
| | | | | Haddock .. | .. | 99 | 314 | 152 | 1 | .. | .. | .. | .. | .. | .. | 566 | 108 | 566 | 108 |
| | | | | Whiting .. | .. | 1 | 45 | 15 | 1 | .. | .. | .. | .. | .. | .. | 62 | 9 | 62 | 9 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 30 | .. |
| | | | | Whitch .. | .. | .. | .. | 2 | 14 | 2 | .. | .. | .. | .. | .. | 18 | 15 | 18 | 15 |
| | | | | Starry Ray.. | 2 | 3 | 26 | 2 | .. | .. | .. | .. | .. | .. | .. | 33 | 16 | 33 | 16 |
| | | | | Black Skate.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LIX 21 | North of the Dogger Bank. | 40 f.s. & m. | June 30th | Plaice .. | .. | .. | .. | 4 | 3 | 5 | 1 | .. | .. | .. | .. | 13 | 21 | 13 | 21 |
| O 326 | 56° 23½′ N. 3° 12⅜′ E. | 38½ f.s. & m. | 2.30 p.m. | Dab .. .. | .. | 138 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 143 | .. | 143 | .. |
| | | | 2 hrs. | Long Rough Dab. | .. | 50 | 26 | .. | .. | .. | .. | .. | .. | .. | .. | 76 | .. | 76 | .. |
| | | | | Cod .. .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Haddock .. | .. | 40 | 101 | 71 | 4 | .. | .. | .. | .. | .. | .. | 216 | 51 | 216 | 51 |
| | | | | Whiting .. | .. | 1 | 6 | 2 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Whitch .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cat fish .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray .. | .. | 4 | 20 | 3 | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| LIX 24 | N.W. of Dogger Bank | 53 f.s. & m. | July 1st | Plaice .. | .. | .. | .. | .. | 11 | 4 | .. | .. | .. | .. | .. | 15 | 19 | 15 | 19 |
| O 327 | 56° 10¼′ N. 1° 36¾′ E. | 48 f.s. & m. | 3.30 a.m. | Dab .. .. | .. | 63 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 65 | .. | 65 | .. |
| | | | 2 hrs. | Lemon Dab.. | .. | 1 | 1 | 5 | 1 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Long Rough Dab. | .. | 48 | 20 | .. | .. | .. | .. | .. | .. | .. | .. | 68 | .. | 68 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 10 | 10 | 3 | 1 | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Haddock .. | .. | 7 | 120 | 91 | 5 | .. | .. | .. | .. | .. | .. | 223 | 69 | 523 | 148 |
| | | | | Whiting .. | .. | .. | 22 | 4 | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | | | | Coal fish .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | 1 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| LIX 28 | N.W. of Brucey's Garden. | 39 f.g.s. & sh. | July 1st | Plaice .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| O 328 | 55° 7′ N., 0° 41′ E. | 44 f.s. & m. | 2.30 p.m. | Dab .. .. | .. | 163 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | 173 | .. | 173 | .. |
| | | | 2 hrs. | Lemon Dab | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Long Rough Dab. | .. | 61 | 31 | .. | .. | .. | .. | .. | .. | .. | .. | 92 | .. | 92 | .. |
| | | | | Halibut .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | 16 | 2 | 16 |
| | | | | Whitch .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 30 | 30 | 4 | 6 | 2 | 2 | .. | .. | .. | 74 | 46 | 74 | 46 |
| | | | | Haddock .. | .. | 39 | 135 | 94 | 3 | .. | .. | .. | .. | .. | .. | 271 | 66 | [402] | 98 |
| | | | | Whiting .. | .. | .. | 14 | 3 | 1 | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | Coal fish .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | .. | 2 | .. |
| | | | | Pout .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIX 28 | N.W. of Brucey's Garden—*cont.* | 39 f.g.s. & sh. | July 1st | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| O 328 | 55° 7′ N., 0° 41′ E. | 44 f.s. & m. | 2.30 p.m. | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 3 | .. | 3 | .. |
| | | | 2 hrs. | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cat fish .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | 10 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | 20 | 7 | 20 | 7 |
| LIX 29 | Bridlington Bay .. | 4¾ f.d.s. | July 7th | Plaice .. | .. | 145 | 35 | .. | .. | .. | .. | .. | .. | .. | .. | 180 | .. | 180 | .. |
| B 345 | 54° 07′ N., 0° 9⅜′ W. | 3½ | 1 p.m. | Dab .. .. | 1 | 186 | 75 | .. | .. | .. | .. | .. | .. | .. | .. | 262 | 20 | 262 | 20 |
| | | 5 f.d.s. | 2 hrs. | Sole .. .. | .. | .. | 7 | 6 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | 1 | 38 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 44 | .. | 44 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LIX 30 | Flamborough Head Ground. | 29½ f.s. | July 7th | Plaice .. | .. | .. | 1 | 19 | 15 | 3 | .. | .. | .. | .. | .. | 38 | .. | 38 | .. |
| O 329 | 54° 17¾′ N., 0° 32¼′ E. | 36 f.d.s. | 3.45 a.m. | Dab .. .. | .. | 105 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 108 | .. | 108 | .. |
| | | | 5 hrs. | Lemon Dab... | .. | .. | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Long Rough Dab | .. | 3 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Cod .. .. | .. | 2 | 21 | 15 | 12 | 3 | .. | .. | .. | .. | .. | 53 | .. | 53 | .. |
| | | | | Haddock .. | .. | 47 | 257 | 44 | 1 | 1 | .. | .. | .. | .. | .. | 350 | 58 | 350 | 58 |
| | | | | Whiting .. | .. | 1 | 76 | 13 | .. | .. | .. | .. | .. | .. | .. | 90 | 14 | 90 | 14 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 77 | .. |
| | | | | Red Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LIX 32 | The Hills .. .. | 31½ f.d.s. | July 8th | Plaice .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| O 330 | 54° 20⅛′ N., 0° 47⅜′ E. | 27 | 11.30 a.m. | Dab .. .. | .. | 80 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 81 | .. | 81 | .. |
| | Belly badly torn. | 22 f.g.s. | 5 hrs. | Lemon Dab... | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | 3 | 21 | 6 | 10 | 3 | 1 | .. | | .. | .. | 45 | .. | 45 | .. |
| | | | | Haddock .. | .. | 173 | 279 | 18 | .. | .. | .. | .. | .. | .. | .. | 470 | 54 | 470 | 54 |
| | | | | Whiting .. | .. | 3 | 41 | 2 | 1 | .. | .. | .. | .. | .. | .. | 47 | .. | 47 | .. |
| | | | | Poor Cod .. | .. | 6 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 117 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LIX 35 | Dogger North Ground. | 27 f.d.g.s. | July 9th. | Plaice .. | .. | .. | 1 | 9 | 6 | 2 | 1 | .. | .. | .. | .. | 19 | 18 | 19 | 18 |
| O 331 | 55° 33½′ N., 1° 11⅝′ E. | 16 | 2.45 a.m. | Dab .. .. | 2 | 333 | 33 | 1 | .. | .. | .. | .. | .. | .. | .. | 369 | 17 | 1436 | 69 |
| | | 21 | 5 hrs. | Lemon Dab.. | .. | .. | 2 | 6 | .. | .. | .. | .. | .. | .. | .. | 8 | 5 | 8 | 5 |
| | | 27 f.d.g.s. | | Long Rough Dab. | .. | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 102 | 29 | 7 | 1 | .. | .. | .. | .. | .. | 139 | .. | 139 | .. |
| | | | | Haddock .. | .. | 29 | 221 | 8 | .. | .. | .. | .. | .. | .. | .. | 258 | 33 | 1736 | 213 |
| | | | | Whiting .. | .. | .. | 127 | 28 | .. | .. | .. | .. | .. | .. | .. | 155 | 29 | 348 | 66 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 510 | 41 |
| | | | | Starry Ray.. | .. | 3 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| LIX 38 | North part of Dogger North Ground. | 27 f.d.g.s. | July 9th | Plaice .. | .. | .. | .. | 5 | 3 | 1 | .. | .. | .. | .. | .. | 9 | 7 | 9 | 7 |
| O 332 | 54° 47⅜′ N., 1° 8½′ E. | 25½ f.d.g.s. | 11.30 a.m. | Dab .. .. | 2 | 416 | 13 | 1 | .. | .. | .. | .. | .. | .. | .. | 432 | 20 | 432 | 20 |
| | | | 2 hrs. | Long Rough Dab. | .. | 28 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 39 | .. | 39 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 4½ | 1 | 4½ |
| | | | | Cod .. .. | .. | .. | 4 | 1 | 2 | 1 | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Haddock .. | .. | 62 | 80 | 5 | 1 | 1 | .. | .. | .. | .. | .. | 149 | 19 | 149 | 19 |
| | | | | Whiting .. | .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 180 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIX 40 | East of Brucey's Garden. | 32 f.s.m. | July 10th | Plaice .. | .. | .. | .. | 2 | 6 | .. | .. | .. | .. | .. | .. | 8 | 9 | 8 | 9 |
| O 334 | 55° 0½′ N., 1° 4⅝′ E. | 32 f.s.m. | 1 p.m. | Dab .. .. | 1 | 519 | 27 | 2 | 1 | .. | .. | .. | .. | .. | .. | 550 | 24 | 550 | 24 |
| | | | 2 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | . | .. | 1 | .. | 1 | .. |
| | | | | Long Rough Dab. | .. | 55 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 67 | .. | 67 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 2 | 14 | 6 | 3 | .. | .. | .. | .. | 1 | .. | 26 | .. | 26 | .. |
| | | | | Haddock .. | .. | 152 | 97 | 30 | 4 | .. | .. | .. | .. | .. | .. | 283 | .. | 283 | .. |
| | | | | Whiting .. | .. | 1 | 33 | 1 | .. | .. | .. | .. | .. | .. | .. | 35 | 5½ | 35 | 5½ |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 78 | .. |
| | | | | Cat Fish .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | 8 | 20 | .. | .. | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| LIX 43 | N.E. of Brucey's Garden. | 32 f.s.m. | July 10th | Plaice .. | .. | .. | .. | 2 | 11 | .. | .. | .. | .. | .. | .. | 13 | 13 | 13 | 23 |
| O 335 | 55° 2⅜′ N., 1° 5½′ E. | 32 f.s.m | 6.15 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 Baskets | |
| | | | 4¾ hrs. | Lemon Dab | .. | .. | 1 | 6 | 3 | .. | .. | .. | .. | .. | .. | 10 | 9 | 10 | 9 |
| | | | | Long Rough Dab. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ? | .. |
| | | | | Cod .. .. | .. | .. | 7 | 9 | 11 | 6 | 1 | .. | .. | .. | 1 | 35 | .. | 35 | .. |
| | | | | Haddock .. | .. | .. | . | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 780 large fish 12 Baskets small. | |
| | | | | Whiting .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 Basket | |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | Few | .. |
| | | | | Starry Ray.. | .. | .. | 25 | 2 | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| LIX 44 | Dogger Bank, North of West part. | 43 f.s.m. | July 11th | Plaice .. | .. | .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | 5 | 6 | 5 | 6 |
| O 336 | 55° 27⅜′ N., 1° 23½′ E. | 36 f.s.m. | 7.45 a.m. | Dab .. .. | .. | 209 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 209 | .. | 209 | .. |
| | | | 2 hrs. | Lemon Dab | .. | .. | .. | 9 | 1 | .. | .. | .. | .. | .. | .. | 10 | 8 | 10 | 8 |
| | | | | Long Rough Dab. | .. | 60 | 23 | .. | .. | .. | .. | .. | .. | .. | .. | 83 | .. | 83 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 3 | 3 | 1 | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Haddock .. | .. | 67 | 95 | 26 | 1 | .. | .. | .. | .. | .. | .. | 189 | 30 | 189 | 30 |
| | | | | Whiting .. | .. | 3 | 21 | 1 | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Starry Ray.. | 5 | 8 | 13 | 6 | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| LIX 46 | Dogger Bank, N.W. of West part. | 43 f.s.m. | July 11th | Plaice .. | .. | .. | .. | .. | 2 | .. | . | .. | .. | .. | .. | 2 | .. | 2 | .. |
| O 337 | 55° 13¼′ N., 0° 26 E. | 40 f.s.m. | 3.30 p.m. | Dab .. .. | .. | 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | Ground rope parted and belly very badly torn. | | 2 hrs. | Long Rough Dab. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Cod .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | 11 | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Whiting .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Coal fish .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Cat fish .. | . | .. | .. | .. | .. | 1 | .. | .. | .. | . | .. | 1 | .. | 1 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LIX 50 | N.E. of Brucey's Garden. | 31 f.s.m. | July 12th | Plaice .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B (c) 346 | 55° 1¾′ N., 1° 6′ E. | 33 f.s.m. | 5.45 a.m. | Dab .. .. | .. | 142 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 146 | .. | 146 | .. |
| | Covered net Experiment. (No. 16.) | | 1 hr. | Long Rough Dab. | .. | 25 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Haddock .. | .. | 16 | 27 | 9 | .. | .. | .. | .. | .. | .. | .. | 52 | 10 | 52 | 10 |
| | | | | Whiting .. | .. | 3 | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | . |
| | | | | Norway Pout | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 2 | 11 | 1 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Starry Ray .. | .. | 6 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| LIX 51 | West of Brucey's Garden. | 41 f.s.m. | July 12th | Plaice .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | 3 | 9½ | 3 | 9½ |
| O 338 | 54° 57⅞′ N., 0° 20⅜′ E. | 46 f.s.m. | 11.15 a.m. | Dab .. .. | .. | 27 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 31 | .. | 31 | .. |
| | | | 2 hrs. | Lemon Dab.. | .. | .. | .. | 11 | 4 | .. | .. | .. | .. | .. | .. | 15 | 12 | 15 | 12 |
| | | | | Long Rough Dab. | .. | 36 | 19 | .. | .. | .. | .. | .. | .. | .. | .. | 55 | .. | 55 | .. |
| | | | | Cod .. .. | .. | 3 | 25 | 21 | 6 | 6 | 3 | .. | .. | .. | .. | 64 | 33 | 64 | 33 |
| | | | | Haddock .. | .. | 87 | 182 | 43 | 6 | .. | .. | .. | .. | .. | .. | 318 | 57 | 318 | 57 |
| | | | | Whiting .. | .. | 3 | 8 | 2 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15⅜+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIX 51 | West of Brucey's Garden—*cont.* | 41 f.s.m. | July 12th | Grey Gurnard | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| O 338 | 54° 57⅞′ N., 0° 20⅞′ E. | 46 f.s.m. | 11.15 a.m. | Cat Fish .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 1 | .. | 5 | 33 | 5 | 33 |
| | | | 2 hrs. | Angler .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 1 | .. | 4 | .. | 4 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | 2 | 5 | 21 | 5 | 21 |
| | | | | Starry Ray .. | .. | 1 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| LIX 56 | Hartlepool Ground... | 24½ c.s. | July 13th | Lemon Dab.. | .. | 3 | 7 | 4 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| O 339 | 54° 40⅜′ N., 0° 55′ W. | 23 s.m. | 4.30 a.m. | Long Rough Dab. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Ground rope parted, net very badly torn; large stone in trawl. | | 2 hrs. | Cod .. .. | .. | 5 | 7 | 6 | 2 | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Haddock .. | .. | 73 | 38 | 2 | .. | 1 | .. | .. | .. | .. | .. | 114 | 12 | 114 | 12 |
| | | | | Whiting .. | .. | 4 | 37 | 6 | .. | .. | .. | .. | .. | .. | .. | 47 | 8 | 47 | 8 |
| | | | | Poor Cod .. | .. | 2 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Grey Gurnard | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 2 | .. | 2 | .. |
| | | | | Cat Fish .. | .. | 1 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Angler .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LX 1 | South of Horn Reef | 9 f.d.s. & sh. | July 23rd | Plaice .. | .. | 278 | 91 | .. | .. | .. | .. | .. | .. | .. | .. | 369* | .. | [1184]* | .. |
| O 340 | 55° 22⅞′ N., 7° 57⅞′ E. | 10 f.d.s. | 8.40 p.m. | Dab .. .. | 8 | 70 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 87 | .. | 87 | .. |
| | | | 1 hr. | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 29 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 38 | .. | 38 | .. |
| | | | | Latchet .. | .. | .. | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Horse Mackerel. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | 3 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LX 2 | Horn Reef Outer .. | 20½ f.d.s. & sh. | July 24th | Plaice .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| O 341 | 55° 40⅞′ N., 6° 39⅞′ E. | 20½ f.d.s. | 8 a.m. | Dab .. .. | .. | 11 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | 1 hr. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Haddock .. | .. | 7 | 66 | 2 | .. | .. | .. | .. | .. | .. | .. | 75 | .. | 75 | .. |
| | | | | Whiting .. | .. | .. | 55 | 12 | .. | .. | .. | .. | .. | .. | .. | 67 | .. | 67 | .. |
| | | | | Grey Gurnard | .. | 4 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Latchet .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LX 3 | South of Horn Reef | 10½ f.d.s. & sh. | July 24th | Plaice .. | .. | 361 | 38 | .. | .. | .. | .. | .. | .. | .. | .. | 399 | .. | 399 | .. |
| O 342 | 55° 23′ N., 7° 55′ E. | 9 f.d.s. & sh. | 4.30 p.m. | Dab .. .. | .. | 14 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | ½ hr. | Grey Gurnard | .. | 15 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| | | | | Latchet .. | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | .. | .. | .. | 3 | 1 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Spur Dog . | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | .. | 2 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |
| LXI 36 | Leman Ground .. | 17 f.d.s. | Aug. 3rd | Plaice .. | .. | 2 | 27 | 21 | .. | .. | .. | .. | .. | .. | .. | 50 | 14 | 50 | 14 |
| B 347 | 53° 18⅛′ N., 2°25½′ E. | 13 f.s. | 9-10 p.m. | Dab .. .. | .. | 174 | 28 | .. | .. | .. | .. | .. | .. | .. | .. | 202 | .. | 202 | .. |
| | Towing 48 revolutions | | hrs. | Sole .. .. | .. | .. | 2 | 5 | 1 | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Cod .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 4 | 17 | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Grey Gurnard | .. | 36 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 48 | .. | 48 | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Trout.. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | .. | .. | 4 | 1 | .. | .. | 1 | .. | .. | .. | .. | 6 | .. | 6 | .. |
| LXI 37 | Leman Ground .. | 13 f.s. | Aug. 9th | Plaice .. | .. | 5 | 24 | 13 | .. | .. | .. | .. | .. | .. | .. | 42 | 10 | 42 | 10 |
| B 348 | 53° 18′ N., 2° 25⅞′ E. | 17 f.d.s. | 12.30 a.m. | Dab .. .. | .. | 368 | 18 | .. | .. | .. | .. | .. | .. | .. | .. | 386 | 16 | 386 | 16 |
| | Towing 52 revolutions | | 2 hrs. | Sole .. .. | .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Whiting .. | .. | 2 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Grey Gurnard | .. | 19 | 17 | .. | .. | .. | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

* Large Plaice marked, and sample of remainder measured.

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration | Ins. .. / Cm .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100+ | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXI 38 | Leman Ground .. | 16 f.g.s. | Aug. 9th | Plaice .. | .. | 16 | 27 | 12 | 3 | .. | .. | .. | .. | .. | .. | 58 | 14 | 58 | 14 |
| B 349 | 53° 20⅞′ N., 2° 25½′ E. | 17 f.g.s. | 5 a.m. | Dab .. .. | 1 | 356 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 370 | 15 | 370 | 15 |
| | Towing 58 revolutions. | | 2 hrs. | Haddock .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 32 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| | | | | Greater Weever. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXI 39 | Leman Ground .. | 17 f.g.s. | Aug. 9th | Plaice .. | .. | 16 | 35 | 11 | .. | .. | .. | .. | .. | .. | .. | 62 | 11½ | 62 | 11½ |
| B 350 | 53° 20′ N., 2° 25½′ E. | 13 f.g.s. | 7.20 a.m. | Dab .. .. | 4 | 424 | 22 | .. | .. | .. | .. | .. | .. | .. | .. | 450 | 18½ | 450 | 18½ |
| | Towing 42 revolutions. | | 2 hrs. | Grey Gurnard | .. | 31 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 | .. |
| | | | | Latchet .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXI 40 | Leman Ground .. | 12 f.g.s. | Aug. 9th | Plaice .. | .. | 8 | 24 | 18 | .. | 1 | .. | .. | .. | .. | .. | 51 | 14½ | 51 | 14½ |
| B 351 | 53° 20′ N., 2° 24⅛′ E. | 10 f.g.s. | 10 a.m. | Dab .. .. | 1 | 282 | 27 | .. | .. | .. | .. | .. | .. | .. | .. | 310 | 16 | 310 | 16 |
| | Towing 54 revolutions. | | 2 hrs. | Whiting .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 26 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 29 | .. |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXI 41 | Leman Ground .. | 10 f.g.s. | Aug. 9th | Plaice .. | .. | 6 | 17 | 2 | .. | .. | .. | .. | .. | .. | .. | 25 | 5½ | 25 | 5½ |
| B 352 | 53° 19¾ N., 2° 24⅝′ E. | 17 f.g.s. | 12.20 p.m. | Dab .. .. | .. | 285 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 300 | 15 | 300 | 15 |
| | Towing 46 revolutions. | | 2 hrs. | Grey Gurnard | .. | 32 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 38 | .. | 38 | .. |
| | | | | Greater Weever. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXI 42 | Leman Ground .. | 17½ f.g.s. | Aug. 9th | Plaice .. | .. | 7 | 21 | 19 | .. | .. | .. | .. | .. | .. | .. | 47 | 13 | 47 | 13 |
| B 353 | 53° 20′ N., 2° 24⅜′ E. | 14½ f.g.s. | 3.15 p.m. | Dab .. .. | .. | 342 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | 356 | .. | 356 | .. |
| | Towing 54 revolutions. | | 2 hrs. | Whiting .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 58 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 62 | .. | 62 | .. |
| | | | | Greater Weever. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| LXI 44 | Leman Ground .. | 15 f.g.s. | Aug. 9th | Plaice .. | .. | 6 | 23 | 11 | 1 | .. | .. | .. | .. | .. | .. | 41 | 11 | 41 | 11 |
| B 354 | 53° 18½′ N., 2° 25¾′ E. | 13 f.g.s. | 6.10 p.m. | Dab .. .. | .. | 272 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 288 | 14½ | 288 | 14½ |
| | Towing 58 revolutions. | | 2 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 40 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | 50 | .. | 50 | .. |
| | | | | Greater Weever. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Thornback .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXI 45 | Brown Bank .. .. | 15½ f.g.s. | Aug. 10th | Plaice .. | .. | 1 | 51 | 18 | 1 | .. | .. | .. | .. | .. | .. | 71 | 17½ | 71 | 17½ |
| B 355 | 53° 9¾′ N., 3° 44¾′ E. | 13½ f.g.s. | 7.50 a.m. | Dab.. .. | .. | 72 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 85 | 6½ | 85 | 6½ |
| | Towing 52 revolutions | | 2 hrs. | Sole.. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | 91 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 95 | .. | 95 | .. |
| | | | | Greater Weever. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| LXI 46 | Brown Bank.. .. | 13½ f.g.s. | Aug. 10th | Plaice .. | .. | 5 | 32 | 7 | .. | .. | .. | .. | .. | .. | .. | 44 | 9 | 44 | 9 |
| B 356 | 53° 10⅜′ N., 3° 44⅞′ E. | 15¼ f.g.s. | 10.15 a.m. | Dab .. .. | .. | 50 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 51 | .. | 51 | .. |
| | Towing 62-64 revolutions. | | 2 hrs. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Cod end insecurely fastened, some fish escaped. | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 25 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Black Skate.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXI 47 | Brown Bank.. .. | 15¼ f.g.s. | Aug. 10th | Plaice .. | .. | .. | 17 | 4 | .. | .. | .. | .. | .. | .. | .. | 21 | 6 | 21 | 6 |
| B 357 | 53° 9⅝′ N., 3° 46⅜′ E. | 15 f.g.s. | 1.30 p.m. | Dab .. .. | .. | 16 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | Towing 58 revolutions | | 2 hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 17 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| | | | | Greater Weever. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXI 48 | Brown Bank.. .. | 15 f.g.s. | Aug. 10th | Plaice .. | .. | .. | 10 | 5 | 1 | .. | .. | .. | .. | .. | .. | 16 | 5½ | 16 | 5½ |
| B 358 | 53° 10¼′ N., 3° 44¾′ E. | 15 f.g.s. | 4.15 p.m. | Dab .. .. | .. | 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | Towing 54 revolutions | | 2 hrs. | Grey Gurnard | .. | 36 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 39 | .. | 39 | .. |
| | | | | Greater Weever. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| LXI 49 | Off Southwold .. | 13 c.s. | Aug. 12th | Plaice .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| B 359 | 52° 18¾′ N., 1° 48′ E. | 15 c.s. | 9.15 a.m. | Dab .. .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | Towing 48 revolutions | | 2 hrs. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback.. | .. | 2 | 1 | 2 | 3 | .. | .. | .. | .. | .. | .. | 8 | 7½ | 8 | 7½ |
| | | | | Homelyn .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 8 | .. |
| LXI 50 | Off Southwold .. | 12 c.s. | Aug. 12th | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B 360 | 52° 20¼′ N. 1° 49′ E. | 12 c.s. gvl. | 11.45 a.m. | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | Towing 60-68 revolutions. | | 2 hrs. | Horse Mackerel. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Black Skate | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXI 51 | Off Southwold .. | 11 f.s. | Aug. 12th | Plaice . | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| B 361 | 52° 19⅜′ N., 1° 47⅝′ E. | 12 c.s. & sh. | 3.25 p.m. | Dab .. .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | Towing 38 revolutions. | | 2 hrs. | Lemon Dab.. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Cod .. .. | .. | 1 | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Whiting .. | .. | 6 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Pout .. .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | .. | 5 | 7 | 6 | 3 | .. | .. | .. | .. | .. | .. | 21 | 13 | 21 | 13 |
| | | | | Homelyn .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Tope .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXI 52 | Off Southwold .. | 12 c.s. & st. | Aug. 12th | Dab .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 362 | 52° 17½′ N., 1° 46⅜′ E. | 12 c.s. & st. | 5.45 p.m. | Sole .. .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | Towing 54 revolutions. | | 2 hrs. | Whiting .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Pout .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback . | .. | 2 | 5 | 2 | 1 | .. | .. | .. | .. | .. | .. | 10 | 8 | 10 | 8 |
| | | | | Homelyn .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | | 1 | |
| LXI 54 | North part of Winterton Shoal. | 17 f.s. | Aug. 13th | Plaice .. | .. | 4 | 33 | 1 | .. | .. | .. | .. | .. | .. | .. | 38 | 6½ | 38 | 6½ |
| B 363 | 52° 50⅜′ N., 2° 56¾′ E. | 22 f.s. | 10.45 a.m. | Dab .. .. | .. | 73 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 75 | 4 | 75 | 4 |
| | Towing 44 revolutions. | | 2 hrs. | Grey Gurnard | .. | 21 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 32 | .. | 32 | .. |
| | | | | Greater Weever. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Thornback .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| LXI 55 | North part of Winterton Shoal. | 22 f.s. | Aug. 13th | Plaice .. | .. | .. | 15 | 3 | .. | .. | .. | .. | .. | .. | .. | 18 | 4 | 18 | 4 |
| B 364 | 52° 51¾′ N., 2° 57½′ E. | 22 f.s. | 1.15 p.m. | Dab .. .. | .. | 40 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 47 | 3 | 47 | 3 |
| | Towing 54 revolutions. | | 2hrs. | Turbot .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 10 | 1 | 10 |
| | | | | Whiting .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Greater Weever. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 3 | 5 | 1 | 1 | .. | .. | .. | .. | .. | .. | 10 | 7 | 10 | 7 |
| LXI 56 | North part of Winterton Shoal. | 22 f.s. | Aug. 13th | Plaice .. | .. | .. | 32 | 8 | .. | .. | .. | .. | .. | .. | .. | 40 | 9 | 40 | 9 |
| B 365 | 52° 40½′ N., 2° 57⅝′ E. | 22 f.s. | 4.30 p.m. | Dab .. .. | .. | 138 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 153 | .. | 153 | .. |
| | Towing 34 revolutions. | | 2 hrs. | Sole .. .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | 6 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Latchet .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | 5 | 4 | 1 | .. | .. | .. | .. | .. | .. | 11 | 7 | 11 | 7 |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXI 57 | North part of Winterton Shoal. | 22 f.s. | Aug. 13th | Plaice .. | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| B 366 | 52° 49⅛′ N., 2° 56⅝′ E. | 17 f.s. | 6.50 p.m. | Dab .. .. | .. | 30 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| | Towing 44 revolutions. | | 2 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Thornback .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXI 59 | Off Smith's Knoll Light-vessel. | 23 f.d.s. | Aug. 14th | Plaice .. | . | 1 | 17 | 25 | 2 | 1 | .. | .. | .. | .. | .. | 46 | 20 | 46 | 20 |
| B 367 | 52° 50½′ N., 2° 17¼′ E. | 26 s. blk. m. | 5.15 a.m. | Dab .. .. | .. | 22 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | Towing 44 revolutions. | | 2 hrs. | Sole .. .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Cod .. .. | .. | 1 | 8 | 3 | .. | 2 | 1 | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Whiting .. | .. | 10 | 50 | 9 | .. | .. | .. | .. | .. | .. | .. | 69 | 11 | 69 | 11 |
| | | | | Poor Cod .. | .. | 8 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Thornback .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Black Skate.. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXI 60 | Off Smith's Knoll Light-vessel. | 26 f.s.m. | Aug. 14th | Plaice .. | .. | .. | 9 | 5 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| B 368 | 52° 49½′ N., 2° 16¼′ E. | 26 blk. spk. s. | 7.45 a.m. | Dab .. .. | .. | 17 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | Towing 66 revolutions. | | 2 hrs. | Sole .. .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 5 | 1 | 5 |
| | | | | Cod .. .. | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Whiting .. | .. | 29 | 271 | 18 | .. | .. | .. | .. | .. | .. | .. | 318 | 42 | 318 | 42 |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Poor Cod .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXI 61 | Off Smith's Knoll Light-vessel. | 26 s.m. | Aug. 14th | Plaice .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 369 | 52° 49½′ N., 2° 15⅓′ E. | 21 f.s. | 11.35 a.m. | Dab .. .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | Towing 34 revolutions. | | 1½ hrs. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | . | .. | .. | 4 | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| LXI 62 | Off Smith's Knoll Light-vessel. | 25 f.s. | Aug. 14th | Plaice .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B 370 | 52° 51½′ N., 2° 16¼′ E. | 23 c.s. | 1.30 p.m. | Dab .. .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | Towing 44-54 revolutions. | | 1½ hrs. | Lemon Dab.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 5 | 4 | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | 2 | 1 | 1 | .. | .. | .. | 5 | 13 | 5 | 13 |
| | | | | Whiting .. | .. | 9 | 78 | 6 | .. | .. | .. | .. | .. | .. | .. | 93 | 14 | 93 | 14 |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Poor Cod .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXII 19 | Off Sutton .. .. | 6 f.d.s. | Aug. 24th | Plaice .. | .. | 14 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| B 371 | 53° 19½′ N., 0° 19′ E. | 6½ f.d.s. | 9.30 a.m. | Dab .. .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | Belly badly torn. | 7 gvl. | 1 hr. | Sole .. .. | .. | 1 | 23 | 4 | .. | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| | | | | Whiting .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Latchet .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Thornback .. | .. | 10 | 8 | 5 | 1 | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Black Skate .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| LXII 20 | Off Mablethorpe .. | 8½ gvl. | Aug. 24th | Plaice .. | .. | 18 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| B 372 | 53° 20½′ N., 0° 22′ E. | 9 s. | 12.15 p.m. | Dab .. .. | .. | 17 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | 7 | 2¼ hrs. | Sole .. .. | .. | 3 | 21 | .. | .. | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | 7 s. gvl. | | Brill .. .. | .. | .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Cod .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 7 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Grey Gurnard | 1 | 1 | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Latchet .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Thornback .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Homelyn .. | .. | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39 + / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXII 33 | Off Horn Reef Light-vessel. | 17 f.g.s. & sh. | Aug. 29th | Plaice .. | .. | 228 | 345 | .. | .. | .. | .. | .. | .. | .. | .. | 573 | .. | 573 | .. |
| B 373 | 55° 31′ N., 7° 19⅓′ E. | 15 f.g.s. | 9.30 a.m. | Dab .. .. | 1 | 449 | 47 | .. | .. | .. | .. | .. | .. | .. | .. | 497 | .. | 497 | .. |
| | | | 2 hrs. | Cod .. .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Haddock .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 13 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| | | | | Thornback .. | .. | .. | .. | 4 | 8 | 1 | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | 2 | .. |
| LXIII 1 | Leman Ground .. | 17 f.g.s. | Sept. 5th | Plaice .. | .. | 4 | 41 | 25 | 2 | .. | .. | .. | .. | .. | .. | 72 | .. | 72 | .. |
| O 343 | 53° 19¼′ N., 2° 32½′ E. | 15½ f.g.s. | 3 a.m. | Dab .. .. | .. | 365 | 19 | .. | .. | .. | .. | .. | .. | .. | .. | 384 | .. | 384 | .. |
| | | | 4 hrs. | Lemon Dab... | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 12 | 215 | 5 | .. | .. | .. | .. | .. | .. | .. | 232 | .. | 232 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 42 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | (small) |
| LXIII 3 | Leman Ground .. | 15½ f.g.s. | Sept. 5th | Plaice .. | .. | 8 | 35 | 23 | 2 | .. | .. | .. | .. | .. | .. | 68 | .. | 68 | .. |
| O 344 | 53° 19½′ N., 2° 31¾′ E. | 17 f.g.s. | 7.30 a.m. | Dab .. .. | 1 | 408 | 14 | 1 | .. | .. | .. | .. | .. | .. | .. | 424 | .. | 424 | .. |
| | | | 4 hrs. | Sole .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 3 | 150 | 10 | .. | .. | .. | .. | .. | .. | .. | 163 | .. | 163 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 40 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22 | .. |
| | | | | Mackerel .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Red Mullet.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXIII 4 | Leman Ground .. | 17 f.d.g.s.' | Sept. 5th | Plaice .. | .. | 6 | 28 | 17 | 3 | 1 | .. | .. | .. | .. | .. | 55 | .. | 55 | .. |
| O 345 | 53° 16′ N., 2° 47⅜′ E. | 16 f.d.g.s. | 1.30 p.m. | Dab .. .. | .. | 221 | 21 | 1 | .. | .. | .. | .. | .. | .. | .. | 243 | .. | 243 | .. |
| | | | 4 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 4 | 97 | 7 | .. | .. | .. | .. | .. | .. | .. | 108 | .. | 108 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | | Thornback .. | .. | 9 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15 | (small) |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | (large) |
| LXIII 5 | Eastern edge of Leman Ground. | 16 f.d.g.s. | Sept. 6th | Plaice .. | .. | 9 | 39 | 17 | 2 | .. | .. | .. | .. | .. | .. | 67 | .. | 67 | .. |
| O 346 | 53° 12′ N., 3° 1⅚′ E. | 15½ f.d.g.s. | 4.30 a.m. | Dab .. .. | 2 | 472 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 485 | 20 | 485 | 20 |
| | | | 4 hrs. | Sole .. .. | .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 22 | 52 | 1 | .. | .. | .. | .. | .. | .. | .. | 75 | 7½ | 75 | 7½ |
| | | | | Grey Gurnard | .. | 6 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24 | (small) |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | (small) |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins... / Cm... | 0+ 0+ | 4+ 10+ | 8+ 20+ | 12+ 30+ | 15⅝+ 40 + | 19¾+ 50 + | 23⅝+ 60 + | 27½+ 70+ | 31½+ 80+ | 35½+ 90 + | 39½+ 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXIII 9 | North part of Brown Bank. | 16½ f.d.g.s. | Sept. 6th | Plaice .. | .. | 4 | 127 | 26 | 2 | .. | .. | .. | .. | .. | .. | 159 | .. | 159 | .. |
| O 347 | 53° 8¾′ N., 3° 16⅝′ E. | 15½ f.s. | 3.50 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1½ Basket | |
| .. | | | 4 hrs. | Sole .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| .. | | | | Brill .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXIII 11 | Texel Ground .. | 8 f.g.s. | Sept. 13th | Plaice .. | .. | 149 | 42 | 2 | .. | .. | .. | .. | .. | .. | .. | 193 | 16 | 193 | 16 |
| O 348 | 52° 50½′ N., 4° 32¾′ E. | 12 f.g.s. | 5.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 180 | 13½ |
| .. | | | 2 hrs. | Flounder .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Cod .. .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Whiting .. | .. | 1 | 10 | 1 | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| .. | | | | Grey Gurnard | .. | 17 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 22 | .. | 22 | .. |
| .. | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 275 | 47 |
| .. | | | | John Dory .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Mackerel .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXIII 16 | Texel Ground .. | 12 f.g.s. | Sept. 13th | Plaice .. | .. | 126 | 119 | 2 | .. | .. | .. | .. | .. | .. | .. | 247 | 22 | 247 | 22 |
| O 349 | 52° 52½′ N., 4° 24⅝′ E. | 13 f.g.s. | 3.55 p.m. | (No other fish recorded.) | | | | | | | | | | | | | | | |
| .. | | | 4 hrs. | | | | | | | | | | | | | | | | |
| LXIII 18 | Texel Ground .. | 14 f.g.s. | Sept. 14th | Plaice .. | .. | 62 | 295 | 20 | .. | .. | .. | .. | .. | .. | .. | 377 | 53 | 377 | 53 |
| O 350 | 52° 55¼′ N., 4° 10⅝′ E. | 14 f.g.s. | 6.15 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1¾ Baskets. | 54 |
| .. | | | 4 hrs. | Turbot .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 |
| .. | | | | Latchet .. | .. | .. | 2 | 5 | 7 | 1 | .. | .. | .. | .. | .. | 15 | 12 | 15 | 12 |
| .. | | | | John Dory .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Red Mullet (striped.) | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 219 | 37 |
| .. | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| LXIII 20 | East part of Brown Bank. | 14 f.g.s. | Sept. 14th | Plaice .. | .. | 29 | 188 | 33 | 1 | .. | .. | .. | .. | .. | .. | 251 | 42 | 251 | 43 |
| O 351 | 52° 59⅛′ N., 3° 52⅞′ E. | 14½ f.g.s. | 10.50 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ¾ Basket. | 23 |
| .. | .. | | 5 hrs. | Latchet .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 19 | .. |
| .. | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket. | .. |
| .. | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| .. | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXIII 22 | Brown Bank .. .. | 14½ f.g.s. | Sept. 14th | Plaice .. | .. | 4 | 135 | 18 | .. | .. | .. | .. | .. | .. | .. | 157 | 28 | 157 | 28 |
| O 352 | 53° 4⅝′ N., 3° 32¾′ E. | 16 f.g.s. | 4.20 p.m. | (No other fish recorded.) | | | | | | | | | | | | | | | |
| .. | .. | | 4½ hrs. | | | | | | | | | | | | | | | | |
| LXIV 1 | South part of Lowestoft Flats. | 14½ c.s. | Sept. 19th | Plaice .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 378 | 52° 21½′ N., 2° 0½′ E. | 18 | 12.45 p.m. | Dab .. .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | Belly torn. | 20 c.br.s. | 2 hrs. | Sole .. .. | .. | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| .. | | | | Cod .. .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Whiting .. | .. | 22 | 27 | 2 | .. | .. | .. | .. | .. | .. | .. | 51 | .. | 51 | .. |
| .. | | | | Pout.. .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Thornback .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| .. | | | | Homelyn .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| LXIV 3 | South part of Lowestoft Flats. | 19 c.br.s. | Sept. 19th | Sole .. .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| B 379 | 52° 20⅜′ N., 1° 58⅜′ E. | 16½ c.s. & sh. | 3.45 p.m. | Cod .. .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | 2 hrs. | Whiting .. | .. | 11 | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | 24 | .. | 24 | .. |
| .. | | | | Pout .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| .. | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. |
| .. | | | | Thornback .. | .. | 2 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| .. | | | | Homelyn .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| .. | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40+ | 19¾+ / 50+ | 23⅝+ / 60+ | 27½+ / 70+ | 31½+ / 80+ | 35½+ / 90+ | 39½+ / 100+ | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXIV 4 | Western Deep Water | 30 c.s. & sh. | Sept. 20th | Plaice .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| B 380 | 52° 5′ N., 2° 24⅝′ E. | 27 | 7.20 a.m. | Dab .. .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | Belly torn. | 22½ f.g.s. | 4 hrs. | Turbot .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 1 | 24 | .. | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Red Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. |
| | | | | Thornback .. | .. | .. | 3 | 4 | 2 | 1 | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Homelyn .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | 2 | 4 | 1 | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | .. | 4 | .. | 4 | .. |
| | | | | Spotted Dog.. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXIV 6 | Eastern Deep Water | 21 c.s. | Sept. 21st | Plaice .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| B 381 | 52° 10¾′ N., 2° 40½′ E. | 24 f.g.s. | 8.45 a.m. | Brill .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 4 hrs. | Cod .. .. | .. | .. | .. | 3 | 1 | 2 | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Whiting .. | .. | .. | 3 | 5 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Pout .. .. | .. | 22 | 124 | 6 | .. | .. | .. | .. | .. | .. | .. | 152 | .. | 152 | .. |
| | | | | Poor Cod .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Grey Gurnard | .. | 15 | 52 | .. | .. | .. | .. | .. | .. | .. | .. | 67 | .. | 67 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Horse Mackerel. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Red Gurnard | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. |
| LXIV 8 | Eastern Deep Water | 24 f.g.s. | Sept. 21st | Plaice .. | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| B 382 | 52° 17½′ N., 2° 46¾′ E. | 25 f.g.s. | 1.30 p.m. | Sole .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | 4 hrs. | Turbot .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Grey Gurnard | .. | 4 | 23 | .. | .. | .. | .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| | | | | Latchet .. | .. | .. | 1 | 3 | .. | 1 | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Red Gurnard | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Horse Mackerel | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Thornback .. | .. | .. | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Homelyn .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXIV 10 | Between Middle Ground and Winterton Shoal. | 25 f.g.s. | Sept. 21st | Sole .. .. | .. | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| B 383 | 52° 28′ N., 2° 50⅝′ E. | 22 f.g.s. | 6 p.m. | Cod .. .. | .. | .. | 1 | 4 | 1 | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | Ground rope parted, net badly torn. | | 5 hrs. | Pout .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Grey Gurnard | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| LXIV 12 | South part of Winterton Shoal. | 21 f.g.s. | Sept. 22nd | Plaice .. | .. | 3 | 22 | 10 | 1 | .. | .. | .. | .. | .. | .. | 36 | .. | 36 | .. |
| B 384 | 52° 41¾′ N., 2° 58¾′ E. | 19 f.g.s. | 8 a.m. | Dab .. .. | .. | 18 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | 5 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Poor Cod .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 39 | 18 | .. | .. | .. | .. | .. | .. | .. | .. | 57 | .. | 57 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ½ Basket | |
| | | | | Thornback .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXIV 14 | Eastern Deep Water | 22½ f.g.s. | Sept. 26th | Plaice .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B 385 | 52° 13¼′ N., 2° 35¾′ E. | 23½ f.g.s | 1 p.m. | Sole .. .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | Belly slightly torn. | | 5 hrs. | Turbot .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Whiting .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Poor Cod .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Pout .. .. | .. | .. | 20 | 1 | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | | Grey Gurnard | .. | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Red Gurnard | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Tope .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Lesser Spotted Dog. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXIV 16 | South of Winterton Shoal. | 23½ f.g.s. | Sept. 28th | Plaice .. | .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| B 386 | 52° 31⅝′ N., 2° 44½′ E. | 24 f.g.s. | 6.30 p.m. | Dab .. .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | Aft wing torn. | | 5 hrs. | Lemon Dab.. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Sole .. .. | .. | .. | 8 | 10 | .. | .. | .. | .. | .. | .. | .. | 18 | .. | 18 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 1 | 4 | .. | 2 | 1 | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Whiting .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Pout .. .. | .. | 1 | 9 | 2 | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Poor Cod .. | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | | Grey Gurnard | .. | 9 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Latchet .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Red Gurnard | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Thornback .. | .. | .. | 8 | 6 | 1 | 2 | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| LXIV 18 | Between Middle Ground and Knoll Deep. | 24 g.s. | Sept. 27th | Plaice .. | .. | 1 | 96 | 14 | .. | .. | .. | .. | .. | .. | .. | 111 | 23 | 111 | 23 |
| B 387 | 52° 32¼′ N., 2° 44⅞′ E. | 24 f.g.s. & blk. clay. | 12.30 a.m. | Dab .. .. | .. | 10 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | 5 hrs. | Sole .. .. | .. | .. | 8 | 4 | 1 | .. | .. | .. | .. | .. | .. | 13 | .. | 13 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 3 | 5 | 2 | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Whiting .. | .. | 1 | 43 | 7 | .. | .. | .. | .. | .. | .. | .. | 51 | .. | 51 | .. |
| | | | | Poor Cod .. | .. | 17 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Pout .. .. | .. | 2 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Grey Gurnard | .. | 63 | 29 | .. | .. | .. | .. | .. | .. | .. | .. | 92 | .. | 92 | .. |
| | | | | Latchet .. | .. | .. | .. | 7 | 4 | 1 | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| | | | | Red Gurnard | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | 20 | .. |
| | | | | Thornback .. | .. | 4 | 10 | 5 | 6 | 1 | 1 | .. | .. | .. | .. | 27 | .. | 27 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 5 | .. |
| LXIV 20 | N.E. part of Knoll Deep. | 24 f.g.s. & blk. clay. | Sept. 27th | Plaice .. | .. | .. | 36 | 33 | 1 | .. | .. | .. | .. | .. | .. | 70 | 24 | 70 | 24 |
| B 388 | 52° 42½′ N., 2° 35⅞′ E. | 22½ f.g.s. | 6 a.m. | Dab .. .. | .. | 8 | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | 17 | .. | 17 | .. |
| | | | 5 hrs. | Turbot .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | 3 | 68 | 18 | .. | .. | .. | .. | .. | .. | .. | 89 | .. | 89 | .. |
| | | | | Grey Gurnard | .. | 73 | 54 | 1 | .. | .. | .. | .. | .. | .. | .. | 128 | .. | 128 | .. |
| | | | | Latchet .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. |
| | | | | Horse Mackerel. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Lesser Spotted Dog. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXIV 22 | Leman Ground .. | 17 f.g.s. | Sept. 27th | Plaice .. | .. | 2 | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| B 389 | 53° 16¾′ N., 2° 30¼′ E. | 17 f.g.s. | 4 p.m. | Dab .. .. | .. | 55 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 55 | .. | 55 | .. |
| | | | 2 hrs. | Cod .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Whiting .. | .. | 226 | 125 | 7 | .. | .. | .. | .. | .. | .. | .. | 358 | .. | 358 | .. |
| | | | | Grey Gurnard | .. | 6 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Allis Shad .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Mackerel .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXIV 23 | Leman Ground .. | 17 f.g.s. | Sept. 27th | Plaice .. | 1 | 5 | 23 | 46 | 3 | 1 | .. | .. | .. | .. | .. | 79 | 27 | 79 | 27 |
| B 390 | 53° 14½′ N., 2° 53′ E. | 15 f.g.s. | 6.30 p.m. | Dab .. .. | 2 | 345 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 349 | 7 | [1346] | 27 |
| | | | 5½ hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Whiting .. | .. | 269 | 141 | 4 | .. | .. | .. | .. | .. | .. | .. | 414 | 25 | [513] | 31 |
| | | | | Grey Gurnard | .. | 25 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 28 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXIV 24 | Eastern Edge of Leman Ground. | 15 f.g.s. | Sept. 28th | Plaice .. | .. | 2 | 53 | 35 | 4 | .. | .. | .. | .. | .. | .. | 94 | .. | 94 | .. |
| B 391 | 53° 19½′ N., 3° 1¼′ E. | 17 f.g.s. | Midnight | Dab .. .. | 13 | 220 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 236 | 4 | [2537] | 43 |
| | | | 5 hrs. | Sole .. .. | .. | .. | 6 | 10 | .. | .. | .. | .. | .. | .. | .. | 16 | .. | 16 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Whiting .. | .. | 122 | 94 | 4 | .. | .. | .. | .. | .. | .. | .. | 220 | 15 | [765] | 46 |
| | | | | Grey Gurnard | 2 | 23 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| | | | | Thornback .. | .. | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Black Skate | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. | 69 | .. |
| LXIV 26 | Between Leman and Ower Banks. | 18 s. ross. | Sept. 28th | Plaice .. | .. | .. | 36 | 46 | 8 | .. | .. | .. | .. | .. | .. | 90 | .. | 90 | .. |
| B 392 | 53° 11¾′ N., 1° 52½′ E. | 15½ s. ross. | 12.10 p.m. | Dab .. .. | 1 | 42 | 14 | 2 | .. | .. | .. | .. | .. | .. | .. | 59 | 2 | 59 | 2 |
| | | | 2 hrs. | Leman Dab.. | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Brill .. .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 7 | 17 | 4 | 3 | 3 | .. | .. | .. | .. | 34 | .. | 34 | .. |
| | | | | Haddock .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Whiting .. | .. | .. | 7 | 3 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Pout .. .. | .. | .. | 22 | 5 | .. | .. | .. | .. | .. | .. | .. | 27 | 9 | 27 | 9 |
| | | | | Grey Gurnard | .. | 32 | 53 | 1 | .. | .. | .. | .. | .. | .. | .. | 86 | 8 | 86 | 8 |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. | 2 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |
| | | | | Thornback .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Homelyn.. .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXIV 29 | Off Smith's Knoll Light-vessel. | 23 c.s. | Sept. 29th | Plaice .. | .. | .. | 3 | 9 | 7 | 2 | .. | .. | .. | .. | .. | 21 | 13 | 21 | 13 |
| B 394 | 52° 49⅓′ N., 2° 19¾′ E. | 25½ s. & ross | 8 a.m. | Dab .. .. | .. | 19 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 21 | .. | 21 | .. |
| | | | 5 hrs. | Sole .. .. | .. | 1 | 2 | 12 | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | 1 | 6 | 4 | 1 | 2 | 1 | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Whiting .. | .. | 147 | 265 | 12 | .. | .. | .. | .. | .. | .. | .. | 424 | 36 | [695] | 59 |
| | | | | Poor Cod .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Pout .. .. | .. | 10 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Grey Gurnard | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. |

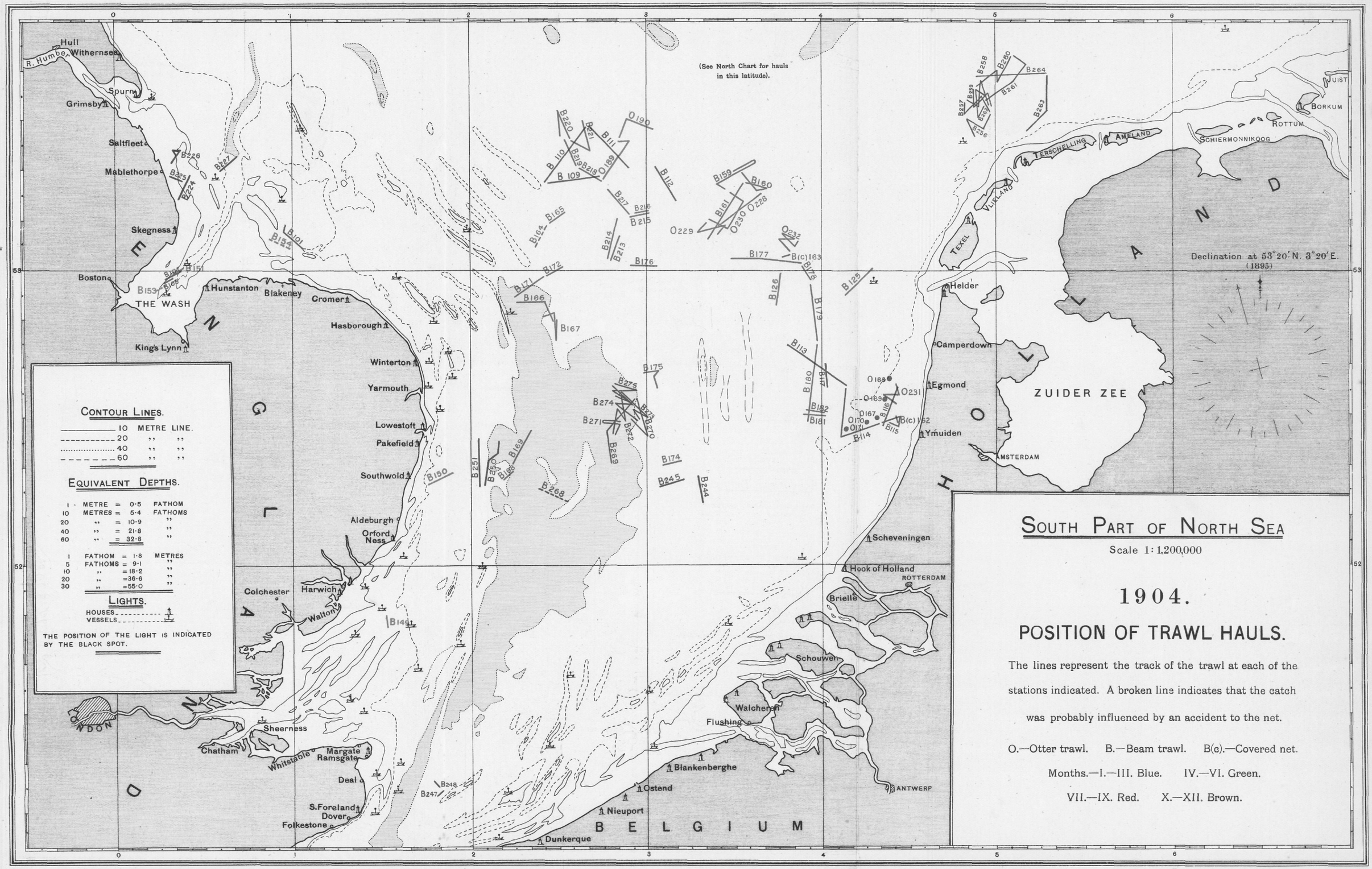
| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXIV 29 | Off Smith's Knoll Light-vessel—*cont.* | 23 \| c.s. | Sept. 29th | Ling .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. |
| B 394 | 52° 49⅝′ N., 2° 19¾′ E. | 25½ \| s. & ross. | 8 a.m. | Thornback .. | .. | 20 | 9 | 2 | 3 | 5 | 1 | .. | .. | .. | .. | 40 | 34 | 40 | 34 |
| | | | 5 hrs. | Black Skate .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 29 | .. |
| LXIV 30 | Off Smith's Knoll Light-vessel. | 25½ \| s. & ross | Sept. 29th | Plaice .. | .. | .. | .. | 5 | 6 | .. | .. | .. | .. | .. | .. | 11 | 5 | 11 | 5 |
| B 395 | 52° 50¾′ N., 2° 19⅝′ E. | 19½ \| s. & ross | 1.30 p.m. | Dab .. .. | .. | 16 | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | 25 | .. | 25 | .. |
| | | | 5 hrs. | Sole .. .. | .. | 2 | 4 | 14 | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Cod .. .. | .. | .. | 9 | 18 | 5 | 5 | 3 | 2 | 1 | .. | .. | 43 | 41 | 43 | 41 |
| | | | | Whiting .. | .. | 94 | 162 | 13 | .. | .. | .. | .. | .. | .. | .. | 269 | 21 | [359] | 28 |
| | | | | Pout .. .. | .. | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Poor Cod .. | .. | 49 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 62 | .. | 62 | .. |
| | | | | Thornback .. | .. | 13 | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. | 19 | .. | 19 | .. |
| | | | | Black Skate .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXIV 31 | Off Smith's Knoll Light-vessel. | 22 \| s. & ross | Sept. 29th | Plaice .. | .. | .. | 3 | 14 | 3 | .. | .. | .. | .. | .. | .. | 20 | 8 | 20 | 8 |
| B 396 | 52° 50′ N., 2° 21⅛′ E. | 27 \| s. & ross | 7 p.m. | Dab .. .. | .. | 9 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | | | 4½ hrs. | Sole .. .. | .. | 1 | 7 | 2 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 22 | 21 | 2 | 2 | .. | .. | 2 | .. | .. | 49 | 25 | 49 | 25 |
| | | | | Whiting .. | .. | 68 | 144 | 6 | .. | .. | .. | .. | .. | .. | .. | 218 | 24 | 218 | 24 |
| | | | | Pout .. .. | .. | 17 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 20 | .. | 20 | .. |
| | | | | Poor Cod .. | .. | 91 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 107 | .. | 107 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | 10 | 8 | 3 | .. | 1 | .. | .. | .. | .. | .. | 22 | .. | 22 | .. |
| | | | | Black Skate .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXV 1 | East of Farn Island .. | 41 \| m. | Oct. 9th | Dab .. .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| O 353 | 55° 37½ N., 1° 10¼′ W. | 48 \| m. | 3 a.m. | Lemon Dab .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | Ground rope parted, belly torn. | | 4 hrs. | Long Rough Dab. | .. | 45 | 13 | .. | .. | .. | .. | .. | .. | .. | .. | 58 | .. | 58 | .. |
| | | | | Norway Pout | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | 2 | 8 | 3 | .. | 1 | .. | ¼ | 1 | .. | .. | 19 | 25 | 19 | 25 |
| | | | | Haddock .. | .. | 15 | 169 | 14 | 2 | .. | .. | .. | .. | .. | .. | 200 | 33 | 645 | 94½ |
| | | | | Whiting .. | .. | 1 | 88 | 24 | .. | .. | .. | .. | .. | .. | .. | 113 | 21 | 113 | 21 |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Poor Cod .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Coal Fish .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 9½ | 1 | 9½ |
| | | | | Grey Gurnard .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cat Fish .. | .. | .. | .. | 1 | 2 | 1 | 2 | 3 | .. | .. | .. | 9 | 23 | 9 | 23 |
| | | | | Angler .. | .. | .. | 2 | .. | .. | 2 | 1 | 3 | .. | .. | .. | 8 | 30 | 8 | 30 |
| | | | | Lamprey .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray .. | 1 | 11 | 35 | 3 | .. | .. | .. | .. | .. | .. | .. | 50 | 24 | 50 | 24 |
| LXV 3 | East of Farn Island | 50 \| m. | Oct. 9th | Plaice .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | 3 | .. | 3 | .. |
| O 354 | 55° 31⅔′ N., 0° 43′ W. | 40½ \| m. | 10 a.m. | Dab .. .. | .. | 35 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 35 | .. | 35 | .. |
| | | | 4 hrs. | Lemon Dab .. | .. | .. | 4 | 10 | 4 | .. | .. | .. | .. | .. | .. | 18 | 12 | 18 | 12 |
| | | | | Long Rough Dab. | .. | 64 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 70 | 15 | 320 | .. |
| | | | | Whitch .. | .. | .. | 9 | 7 | 3 | .. | .. | .. | .. | .. | .. | 19 | 7 | 19 | 7 |
| | | | | Cod .. .. | .. | .. | 28 | 17 | 3 | 7 | 2 | 1 | .. | .. | .. | 58 | .. | 58 | .. |
| | | | | Haddock .. | .. | 5 | 182 | 14 | .. | .. | .. | .. | .. | .. | .. | 201 | 31 | [1563] | 241 |
| | | | | Whiting .. | .. | .. | 61 | 35 | 1 | .. | .. | .. | .. | .. | .. | 97 | 19 | 97 | 19 |
| | | | | Pout .. .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | 9 | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | 22 | .. | 210 | 23 |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Mackerel .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Fuller's Ray | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray .. | 1 | 21 | 30 | 3 | .. | .. | .. | .. | .. | .. | .. | 55 | 22 | 55 | 22 |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins.. / Cm.. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXV 4 | Brucey's Garden .. | 34 s.m. | Oct. 10th | Haddock .. | .. | 23 | 112 | 2 | .. | .. | .. | .. | .. | .. | .. | 137 | 16 | 137 | 16 |
| O 355 | 54° 57¼′ N., 0° 58½′ E. | 29 s.m. | 2 a.m. | Whiting .. | .. | 8 | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 23 | .. | 23 | .. |
| | Belly very badly torn. | | 5 hrs. | Poor Cod .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXV 5 | Dogger Bank, East of N.W. Rough. | 13 f.g.s. | Oct. 10th | Plaice .. | .. | .. | 1 | 2 | 3 | .. | .. | .. | .. | .. | .. | 6 | 6 | 6 | 6 |
| O 356 | 54° 59′ N., 1° 43¼′ E. | 17½ gvl. | 10.45 a.m. | Dab .. .. | .. | 204 | 46 | .. | .. | .. | .. | .. | .. | .. | .. | 250 | 17½ | [1857] | 130 |
| | | | 5 hrs. | Lemon Dab.. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 49 | 204 | 29 | 3 | 1 | 1 | .. | .. | .. | 287 | .. | 287 | .. |
| | | | | Haddock .. | .. | .. | 184 | 13 | 9 | 6 | .. | .. | .. | .. | .. | 212 | 62 | 212 | 62 |
| | | | | Whiting .. | .. | .. | 188 | 41 | .. | .. | .. | .. | .. | .. | .. | 229 | 51 | 229 | 51 |
| | | | | Coal Fish .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 310 | 32 |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | 4 | .. | 4 | .. |
| LXV 6 | Dogger Bank, East of N.W. Rough. | 17½ gvl. | Oct. 10th | Plaice .. | .. | .. | .. | 1 | 4 | 4 | .. | .. | .. | .. | .. | 9 | 17 | 9 | 17 |
| O 357 | 55° 8′ N., 1° 52¼ E. | 18 c.s. | 4.20 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 101 |
| | | | 4 hrs. | Lemon Dab.. | .. | 1 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Cod .. .. | .. | 1 | 48 | 73 | 7 | 2 | .. | .. | .. | 1 | .. | 132 | 65 | 132 | 65 |
| | | | | Haddock .. | .. | 2 | 188 | 6 | .. | 1 | .. | .. | .. | .. | .. | 197 | 35 | [1857] | 330 |
| | | | | Whiting .. | .. | .. | 97 | 23 | .. | .. | .. | .. | .. | .. | .. | 120 | 25 | [418] | 87 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 32 |
| | | | | Mackerel .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Herring .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXV 7 | Dogger Bank, N.W. of Eastern Shoal. | 14 f.g.s. | Oct. 11th | Plaice .. | .. | .. | 8 | 11 | 8 | .. | .. | .. | .. | .. | .. | 27 | 18½ | 27 | 18½ |
| O 358 | 54° 39′ N., 2° 17¾′ E. | 10½ | 4 a.m. | Dab .. .. | .. | 41 | 172 | 12 | .. | .. | .. | .. | .. | .. | .. | 225 | 36 | [1181] | 189 |
| | | 13 f.g.s. | 5 hrs. | Cod .. .. | .. | .. | 12 | 43 | 12 | 6 | 1 | 1 | .. | .. | .. | 75 | 49 | 75 | 49 |
| | | | | Haddock .. | .. | .. | 376 | 10 | 14 | .. | .. | .. | .. | .. | .. | 400 | 88½ | 400 | 88½ |
| | | | | Whiting .. | .. | 2 | 210 | 27 | .. | .. | .. | .. | .. | .. | .. | 239 | 45 | 239 | 45 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 82 | 11 |
| LXV 8 | Dogger Bank, Eastern Shoal. | 13 f.g.s. | Oct. 11th | Plaice .. | .. | .. | 2 | 7 | 4 | .. | .. | .. | .. | .. | .. | 13 | 9 | 13 | 9 |
| O 359 | 54° 41⅛′ N., 2° 30¼ E. | 13 f.g.s. & sh. | 10.10 a.m. | Dab .. .. | .. | 104 | 33 | 1 | .. | .. | .. | .. | .. | .. | .. | 138 | 11 | [1455] | 116 |
| | | 11½ f.g.s. | 4 hrs. | Cod .. .. | .. | .. | 12 | 106 | 13 | 3 | .. | .. | .. | .. | .. | 134 | .. | 134 | .. |
| | | | | Haddock .. | .. | .. | 57 | 4 | 17 | 4 | .. | .. | .. | .. | .. | 82 | 37 | [246] | 111 |
| | | | | Whiting .. | .. | .. | 108 | 20 | .. | .. | .. | .. | .. | .. | .. | 128 | 26 | 128 | 26 |
| | | | | Grey Gurnard | .. | 66 | 68 | 2 | .. | .. | .. | .. | .. | .. | .. | 136 | 14 | 136 | 14 |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXV 9 | East part of Clay Deep. | 24 s. & oz. | Oct. 12th | Plaice .. | .. | .. | 6 | 41 | 3 | 2 | .. | .. | .. | .. | .. | 52 | 27 | 52 | 27 |
| O 360 | 55° 13¼′ N., 4° 16⅓′ E. | 24 | 4 a.m. | Dab .. .. | .. | 195 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 200 | 10½ | [1505] | 79 |
| | | 24 s. & oz. | 5 hrs. | Turbot .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cod .. .. | .. | .. | 15 | 21 | 3 | 4 | .. | 2 | .. | .. | .. | 45 | 30 | 45 | 30 |
| | | | | Haddock .. | .. | 1 | 298 | 14 | 19 | 1 | .. | .. | .. | .. | .. | 333 | 75 | [1536] | 346 |
| | | | | Whiting .. | .. | .. | 94 | 56 | 4 | .. | .. | .. | .. | .. | .. | 154 | 40 | 154 | 40 |
| | | | | Mackerel .. | .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Cat Fish .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Starry Ray.. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| LXV 10 | Clay Deep, Edge of Dogger. | 24 f.g.s. | Oct. 12th | Plaice .. | .. | .. | 23 | 47 | 4 | 2 | .. | .. | .. | .. | .. | 76 | 35½ | 76 | 35½ |
| O 361 | 55° 13¾′ N., 4° 7¼′ E. | 20 f.g.s. & sh. | 9.40 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 68 |
| | | 23 f.g.blk.s. | 5 hrs. | Lemon Dab .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | 5 | 14 | 5 | 14 |
| | | | | Cod .. .. | .. | .. | 11 | 12 | 3 | 2 | .. | .. | .. | .. | .. | 28 | 16 | 28 | 16 |
| | | | | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 262 |
| | | | | Whiting .. | .. | 3 | 46 | 20 | 1 | .. | .. | .. | .. | .. | .. | 70 | 16 | 70 | 16 |
| | | | | Coal Fish .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 254 | 17 |
| | | | | Hake.. .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Mackerel .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Starry Ray.. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ 0+ | 4+ 10+ | 8+ 20+ | 12+ 30+ | 15¾+ 40 + | 19¾+ 50 + | 23⅝+ 60 + | 27½+ 70 + | 31½+ 80 + | 35½+ 90 + | 39½+ 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXVI 1 | Flamborough Off .. | 28 f.d.g.s. | Oct. 19th | Plaice .. | .. | 2 | 5 | 10 | 7 | 2 | .. | .. | .. | .. | .. | 26 | 20 | 26 | 20 |
| B 397 | 54° 3½′ N., 0° 34⅜′ E. | 26 f.d.g.s. | 7 a.m. | Dab .. .. | 2 | 242 | 31 | 4 | .. | .. | .. | .. | .. | .. | .. | 279 | 18 | 279 | 18 |
| | | | 4 hrs. | Lemon Dab.. | .. | .. | 15 | 13 | 1 | .. | .. | .. | .. | .. | .. | 29 | 13 | 29 | 13 |
| | | | | Sole .. .. | .. | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | .. | .. | 3 | 10 | 3 | 10 |
| | | | | Brill .. .. | .. | .. | .. | ... | 1 | 2 | .. | .. | .. | .. | .. | 3 | 9 | 3 | 9 |
| | | | | Long Rough Dab .. | .. | 9 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Cod .. .. | .. | 2 | 55 | 17 | 9 | 4 | .. | .. | .. | .. | .. | 87 | 34 | 87 | 34 |
| | | | | Haddock .. | .. | 1 | 267 | 1 | .. | .. | .. | .. | .. | .. | .. | 269 | 39 | 269 | 39 |
| | | | | Whiting .. | .. | 31 | 158 | 16 | .. | .. | .. | .. | .. | .. | .. | 205 | 25 | 205 | 25 |
| | | | | Grey Gurnard | .. | 55 | 39 | 6 | .. | .. | .. | .. | .. | .. | .. | 100 | .. | 208 | 27 |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Cuckoo Ray | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | 4 | 1 | 1 | .. | .. | .. | .. | 6 | .. | 6 | .. |
| LXVI 2 | Flamborough Off .. | 26 f.d.g.s. | Oct. 19th | Plaice .. | .. | .. | 9 | 22 | 5 | 1 | .. | .. | .. | .. | .. | 37 | .. | 37 | .. |
| O 362 | 54° 8¾′ N., 0° 41⅞′ E. | 30 f.d.g.s. | Noon. | Dab .. .. | .. | 99 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | 111 | .. | 111 | .. |
| | | | 4 hrs. | Lemon Dab.. | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |
| | | | | Sole .. .. | .. | .. | 2 | 8 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Long Rough Dab. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 29 | 21 | 1 | 1 | .. | .. | 1 | 2 | .. | 55 | .. | 55 | .. |
| | | | | Haddock .. | .. | .. | 180 | 1 | .. | .. | .. | .. | .. | .. | .. | 181 | .. | 790 | .. |
| | | | | Whiting .. | .. | .. | 42 | 12 | .. | .. | .. | .. | .. | .. | .. | 54 | .. | 54 | .. |
| | | | | Pout .. .. | .. | 1 | 52 | 14 | .. | .. | .. | .. | .. | .. | .. | 67 | .. | 67 | .. |
| | | | | Poor Cod .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 201 | .. |
| | | | | Greater Weever | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Angler .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Mackerel .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 2 | .. | 2 | .. |
| LXVI 3 | Flamborough Off .. | 30 f.d.g.s. | Oct. 19th | Plaice .. | .. | .. | 1 | 7 | 2 | 2 | .. | .. | .. | .. | .. | 12 | .. | 12 | .. |
| O 363 | 54° 11¼′ N., 0° 38½′ E. | 30 f.d.g.s. | 4.40 p.m. 5⅓ hrs. | Only Plaice recorded. | | | | | | | | | | | | | | | |
| LXVI 4 | Flamborough Off .. | 30 f.d.g.s. | Oct. 19th & 20th | Plaice .. | .. | .. | 3 | 22 | 3 | 2 | .. | .. | .. | .. | .. | 30 | .. | 30 | .. |
| O 364 | 54° 6⅞′ N., 0° 38¼′ E. | 26 f.g.s. | 10.30 p.m. (19th) 5½ hrs. | Only Plaice recorded. | | | | | | | | | | | | | | | |
| LXVI 5 | Western Edge of Flamborough Off. | 26 f.g.s. | Oct. 20th | Plaice .. | .. | .. | 12 | 29 | 9 | .. | .. | .. | .. | .. | .. | 50 | .. | 50 | .. |
| O 365 | 54° 0½′ N., 0° 37⅝′ E. | 26 f.g.s. | 4.30 a.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 294 | .. |
| | | | 5 hrs. | Lemon Dab.. | .. | .. | 7 | 7 | .. | .. | .. | .. | .. | .. | .. | 14 | .. | 14 | .. |
| | | | | Sole .. .. | .. | .. | 17 | 9 | .. | .. | .. | .. | .. | .. | .. | 26 | .. | 26 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Brill .. .. | .. | .. | .. | 2 | 5 | .. | .. | .. | .. | .. | .. | 7 | .. | 7 | .. |
| | | | | Cod .. .. | .. | .. | 39 | 43 | 7 | 2 | .. | .. | 1 | .. | .. | 92 | .. | 92 | .. |
| | | | | Haddock .. | .. | .. | 31 | .. | .. | .. | .. | .. | .. | .. | .. | 31 | .. | 781 | .. |
| | | | | Whiting .. | .. | 1 | 103 | 50 | .. | .. | .. | .. | .. | .. | .. | 154 | .. | 218 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 309 | .. |
| | | | | Herring .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Ling .. .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXVI 6 | Flamborough Off .. | 26 f.g.s. | Oct. 20th | Plaice .. | .. | 2 | 6 | 28 | 13 | 1 | .. | .. | .. | .. | .. | 50 | .. | 50 | .. |
| O 366 | 54° 1⅛′ N., 0° 45⅜′ E | 25 f.d.g.s. | 10 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 360 | .. |
| | | | 4¾ hrs. | Lemon Dab | .. | .. | 4 | 11 | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Sole .. .. | .. | .. | 3 | 7 | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Brill .. .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |

| Voyage, Station, and No. of Haul. | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour, Shot and Duration. | Ins.. / Cm.. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15¾+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXVI 6 | Flamborough Off—*cont.* | 26 f.g.s. | Oct. 20th | Cod .. .. | .. | .. | 35 | 24 | 3 | 2 | .. | .. | .. | .. | .. | 64 | .. | 64 | .. |
| O 366 | 54° 1⅛′ N., 0° 45⅜′ E. | 25 f.d.g.s. | 10 p.m. | Haddock .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 951 | .. |
| | | | 4¾ hrs. | Whiting .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 159 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 332 | .. |
| | | | | Latchet .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Mackerel .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | .. |
| | | | | Starry Ray .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| LXVI 7 | Markham's Hole .. | 20 spk.s. | Oct. 24th | Dab .. .. | .. | 144 | 23 | .. | .. | .. | .. | .. | .. | .. | .. | 167 | .. | 167 | .. |
| O 367 | 53° 45½′ N., 2° 40⅞′ E. | 23 | 6.30 a.m. | Long Rough Dab. | .. | 6 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | Belly torn; stone through cod end. | 23 | 5 hrs. | Cod .. .. | .. | .. | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | 33 s.m. | | Haddock .. | .. | .. | 28 | .. | .. | .. | .. | .. | .. | .. | .. | 28 | .. | 28 | .. |
| | | | | Whiting .. | .. | 1 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 8 | .. | 8 | .. |
| | | | | Grey Gurnard | .. | 7 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| | | | | Herring .. | .. | .. | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Horse Mackerel. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| LXVI 8 | Leman Ground .. | 17 gvl. | Oct. 24th | Plaice .. | .. | 12 | 101 | 100 | 12 | 1 | .. | .. | .. | .. | .. | 226 | 80 | 226 | 80 |
| O 368 | 52° 28′ N., 2° 29¼′ E. | 15 f.s. | 2.30 p.m. | Dab .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 750 | 56 |
| | | 12 f.s. | 4 hrs. | Lemon Dab | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | 5 | .. | 5 | .. |
| | | | | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 3 | .. | 3 | .. |
| | | | | Cod .. .. | .. | .. | 29 | 67 | 9 | 2 | 2 | 1 | .. | .. | .. | 110 | 57 | 110 | 57 |
| | | | | Haddock .. | .. | .. | 35 | .. | .. | .. | .. | .. | .. | .. | .. | 35 | .. | 314 | 62 |
| | | | | Whiting .. | .. | 6 | 50 | 7 | 1 | .. | .. | .. | .. | .. | .. | 64 | .. | 284 | 46 |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 126 | .. |
| | | | | Mackerel .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Greater Weever. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | Horse Mackerel. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| | | | | Tope .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| LXVI 9 | Leman Ground .. | 10 f.g.s. | Oct. 25th | Plaice .. | .. | 28 | 223 | 61 | 5 | 1 | .. | .. | .. | .. | .. | 318 | 77 | 318 | 77 |
| O 369 | 53° 24′ N., 2° 25⅞′ E. | 14 | 5 a.m. | Dab .. .. | .. | 453 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | 462 | 21 | [1125] | 56 |
| | | 12 f.g.s. | 5 hrs. | Sole .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Turbot .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Brill .. .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 17 | 24 | 4 | .. | .. | .. | .. | .. | .. | 45 | 20 | 45 | 20 |
| | | | | Haddock .. | .. | 1 | 171 | .. | .. | .. | .. | .. | .. | .. | .. | 172 | 33 | 172 | 33 |
| | | | | Whiting .. | .. | 5 | 150 | 40 | .. | .. | .. | .. | .. | .. | .. | 195 | .. | 195 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 152 | 12 |
| | | | | Latchet .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Horse Mackerel. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. |
| | | | | Greater Weever .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| LXVI 10 | Leman Ground .. | 12 f.g.s. | Oct. 25th | Plaice .. | .. | 5 | 122 | 62 | 13 | 3 | 1 | .. | .. | .. | .. | 206 | 72 | 206 | 72 |
| O 370 | 53° 19⅛′ N., 2° 31¼′ E. | 14 | 10.30 a.m. | Dab .. .. | 1 | 136 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 140 | 26 | 575 | .. |
| | | 15 f.g.s. | 6 hrs. | Sole .. .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | 18 f.g.s. | | Turbot .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | | | Cod .. .. | .. | .. | 23 | 32 | 1 | .. | .. | .. | .. | .. | .. | 56 | 21 | 56 | 21 |
| | | | | Haddock .. | .. | .. | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Whiting .. | .. | .. | 113 | 41 | .. | .. | .. | .. | .. | .. | .. | 154 | .. | 154 | .. |
| | | | | Grey Gurnard | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 50 | .. |
| | | | | John Dory .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Herring .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Thornback .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| | | | | Tope .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. |

| Voyage, Station, and No. of Haul | Fishing Ground and Central Position. | Depth (Fms.) and Soil. | Date, Hour Shot, and Duration. | Ins. .. / Cm. .. | 0+ / 0+ | 4+ / 10+ | 8+ / 20+ | 12+ / 30+ | 15½+ / 40 + | 19¾+ / 50 + | 23⅝+ / 60 + | 27½+ / 70 + | 31½+ / 80 + | 35½+ / 90 + | 39½+ / 100 + | Measured. No. | Measured. Kg. | Total Catch. No. | Total Catch. Kg. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LXVII 4 | Margate Roads .. | 7 s.m.gvl. | Oct. 31st | Plaice .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| B (c) 398 | 51° 24⅜′ N., 1° 25½′ E. | 8 | 8.40 p.m. | Dab .. .. | 2 | 81 | 56 | 1 | .. | .. | .. | .. | .. | .. | .. | 140 | 16 | 140 | 16 |
| | Covered net, experiment (No, 19). | 8 s.m. | 1½ hrs. | Sole .. .. | .. | 6 | 30 | 4 | 1 | .. | .. | .. | .. | .. | .. | 41 | 10 | 41 | 10 |
| | | | | Cod .. .. | .. | .. | 4 | 5 | 3 | .. | 1 | 1 | .. | .. | .. | 14 | 17 | 14 | 17 |
| | | | | Whiting .. | 1 | 14 | 72 | 11 | .. | .. | .. | .. | .. | .. | .. | 98 | 19 | 98 | 19 |
| | | | | Pout .. .. | .. | 7 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 9 | .. | 9 | .. |
| | | | | Latchet .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Angler .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | (small) |
| | | | | Thornback .. | 2 | 4 | 4 | 1 | .. | 1 | .. | .. | .. | .. | . | 12 | .. | 12 | .. |
| | | | | Conger .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. |
| | | | | Spur Dog .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | .. | .. | 6 | .. |
| LXVII 5 | Margate Roads .. | 8 s.m. | Oct. 31st | Dab .. .. | .. | 8 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| B 399 | 51° 24⅞′ N., 1° 25¾′ E. | 8 | 2 p.m. | Sole .. .. | .. | 3 | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | 11 | .. | 11 | .. |
| | Belly and wings very badly torn. | 9 | 1¾ hrs. | Cod .. .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. |
| | | 9½ s.m. | | Whiting .. | .. | 12 | 65 | 6 | .. | .. | .. | .. | .. | .. | | 83 | .. | 83 | .. |
| | | | | Pout .. .. | .. | 19 | 4 | .. | .. | .. | .. | .. | .. | .. | | 23 | .. | 23 | .. |
| | | | | Thornback .. | 4 | 5 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | 15 | .. | 15 | .. |
| | | | | Spur Dog .. | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | 6 | .. | 6 | .. |




# SOUTH PART OF NORTH SEA

Scale 1: 1.200,000

## 1904.

## POSITION OF TRAWL HAULS.

The lines represent the track of the trawl at each of the stations indicated. A broken line indicates that the catch was probably influenced by an accident to the net.

O.—Otter trawl. B.—Beam trawl. B(c).—Covered net.

Months.—I.—III. Blue. IV.—VI. Green.

VII.—IX. Red. X.—XII. Brown.

*Trawling Investigations, 1904-5.*

HELIOZINCOGRAPHED AT THE ORDNANCE SURVEY OFFICE, SOUTHAMPTON 1909.

# MIDDLE PART OF NORTH SEA

Scale 1:1,200,000

## 1904.

## POSITION OF TRAWL HAULS.

The lines represent the track of the trawl at each of the stations indicated. A broken line indicates that the catch was probably influenced by an accident to the net.

O.—Otter trawl. B.—Beam trawl. B(c).—Covered net.

Months.—I.—III. Blue. IV.—VI. Green.

VII.—IX. Red. X.—XII. Brown.

(See South Chart for other hauls in this latitude).

ENGLAND

DENMARK

GERMANY

HOLLAND

ZUIDER ZEE

St. Abbs, Berwick, Goswick, Skate Roads, Alnmouth, Druridge Bay, Blyth, Shields, Sunderland, Seaham, Hartlepool, Middlesborough, Whitby, Scarborough, Flamborough Hd., Bridlington, Hornsea, Hull, Withernsea, Humber, Gt. Grimsby, Spurn, Saltfleet, Mablethorpe, Skegness, Boston, Blakeney, Hunstanton, Declination at 55° 30′ N. 6° E. (1895), Esbjerg, Fanö, Blaavands Pt., Sylt, Föhr, Amrum, Tönning, Heligoland, Elbe, Cuxhaven, Norderney, Juist, Borkum, Langeroog, Wangeroog, Wilhelmshaven, Geestemünde, Schiermonnikoog, Ameland, Terschelling, Vlieland, Texel, Harlingen, Helder.

### CONTOUR LINES.

| | |
|---|---|
| 10 METRE LINE | |
| 20 ,, ,, | |
| 40 ,, ,, | |
| 60 ,, ,, | |
| 80 ,, ,, | |

### EQUIVALENT DEPTHS.

| | | |
|---|---|---|
| 1 METRE = 0·5 | | FATHOM |
| 10 METRES = 5·4 | | FATHOMS |
| 20 ,, = 10·9 | | ,, |
| 40 ,, = 21·8 | | ,, |
| 60 ,, = 32·8 | | ,, |

### LIGHTS.

HOUSES ⌂ VESSELS ⚓

THE POSITION OF THE LIGHT IS INDICATED BY THE BLACK SPOT.

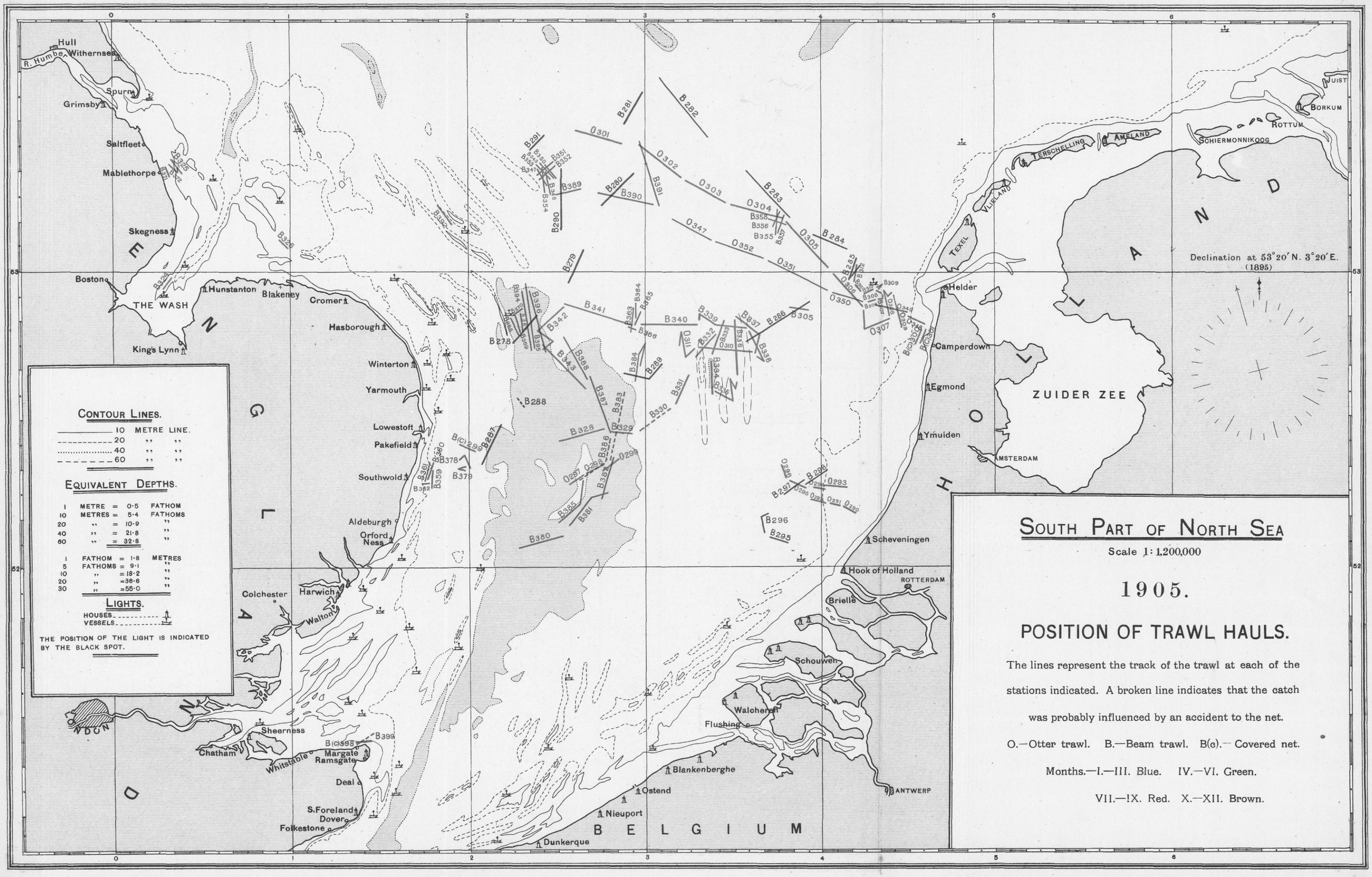
| | | |
|---|---|---|
| 1 FATHOM = 1·8 | | METRES |
| 5 FATHOMS = 9·1 | | ,, |
| 10 ,, = 18·2 | | ,, |
| 20 ,, = 36·6 | | ,, |
| 30 ,, = 55 | | ,, |

(a) B (c) 156, 0193, 0200, 0201, 0202, 0204, 0205, 0206, 0207, 0214, 0215.
(b) 0194, 0195, 0196, 0197.
(c) B (c) 155, 0192, 0199, 0208, 0211. 0213.

● = Otter Trawl
■ = Beam ,,
} Central Positions.



HELIOZINCOGRAPHED AT THE ORDNANCE SURVEY OFFICE, SOUTHAMPTON. 1909.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R. Humber
Withernsea
Spurn
Grimsby
Saltfleet
Mablethorpe
Skegness
Boston
THE WASH
Hunstanton
Blakeney
Cromer
Hasborough
King's Lynn
Winterton
Yarmouth
Lowestoft
Pakefield
Southwold
Aldeburgh
Orford Ness
Colchester
Harwich
Walton
Sheerness
Chatham
Whitstable
Margate
Ramsgate
Deal
S.Foreland
Dover
Folkestone
Dunkerque
Nieuport
Ostend
Blankenberghe
Flushing
Walcheren
Schouwen
ANTWERP
Brielle
ROTTERDAM
Hook of Holland
Scheveningen
Ymuiden
AMSTERDAM
Egmond
Camperdown
Helder
TEXEL
VLIELAND
TERSCHELLING
AMELAND
SCHIERMONNIKOOG
ROTTUM
BORKUM
JUIST
ZUIDER ZEE
ENGLAND
HOLLAND
BELGIUM
Declination at 53°20′ N. 3°20′ E. (1895)
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## MIDDLE PART OF NORTH SEA

Scale 1:1,200,000

# 1905.

## POSITION OF TRAWL HAULS.

The lines represent the track of the trawl at each of the stations indicated. A broken line indicates that the catch was probably influenced by an accident to the net.

O.—Otter trawl. B.—Beam trawl. B(c).—Covered net.

Months.—I.—III. Blue. IV.—VI. Green.

VII.—IX. Red. X.—XII. Brown.

Declination at 55°30′ N. 6° E. (1895)

ENGLAND

St. Abbs Head, Berwick, Goswick, Skate Roads, Alnmouth, Druridge Bay, Blyth, Shields, Sunderland, Seaham, Hartlepool, Middlesborough, Tees, Whitby, Scarborough, Flamborough Hd., Bridlington, Hornsea, Hull, Withernsea, Humber, Spurn, Gt. Grimsby, Saltfleet, Mablethorpe, Skegness, Boston, Hunstanton, Blakeney

HOLLAND

Texel, Vlieland, Terschelling, Ameland, Harlingen, Schiermonnikoog, ZUIDER ZEE, Helder

GERMANY

Heligoland, Elbe, Cuxhaven, Juist, Norderney, Borkum, Langeroog, Wangeroog, Wilhelmshaven, Geestemünde

DENMARK

Blaavands Pt., Horn Reef, Esbjerg, Fanö, Skallingen, Föhr, Amrum, Tönning

### CONTOUR LINES.

| | |
|---|---|
| 10 | METRE LINE |
| 20 | " " |
| 40 | " " |
| 60 | " " |
| 80 | " " |

### EQUIVALENT DEPTHS.

| | | | |
|---|---|---|---|
| 1 | METRE | = 0·5 | FATHOM |
| 10 | METRES | = 5·4 | FATHOMS |
| 20 | " | = 10·9 | " |
| 40 | " | = 21·8 | " |
| 60 | " | = 32·8 | " |

### LIGHTS.

HOUSES ⚓ VESSELS ⚓

THE POSITION OF THE LIGHT IS INDICATED BY THE BLACK SPOT.

| | | | |
|---|---|---|---|
| 1 | FATHOM | = 1·8 | METRES |
| 5 | FATHOMS | = 9·1 | " |
| 10 | " | = 18·2 | " |
| 20 | " | = 36·6 | " |
| 30 | " | = 55 | " |



HELIOZINCOGRAPHED AT THE ORDNANCE SURVEY OFFICE, SOUTHAMPTON, 1909.

# REPORT ON THE

# PHYSICAL CONDITIONS

IN THE

# ENGLISH CHANNEL AND ADJACENT WATERS, 1904 AND 1905,

BY

**DONALD J. MATTHEWS.**

With Figures 1–3 and Plates 1–8.

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# REPORT

ON

# THE PHYSICAL CONDITIONS IN THE ENGLISH CHANNEL AND ADJACENT WATERS, 1904 AND 1905.

BY

**DONALD J. MATTHEWS.**

During the years 1904 and 1905 the quarterly cruises in the English Channel in February, May, August, and November, were made by the steamers *Huxley* and *Oithona*, the programme being nearly the same as that of the latter half of 1903. The course followed was slightly lengthened in order to increase the number of surface observations, and measurements with the Ekman current metre were made occasionally on Station 2. These latter investigations have been repeated from time to time when the weather was suitable, and will be discussed in a later report together with the records of a number of surface-drift bottles which have been thrown overboard on nearly all cruises.

As in 1903, a line of observation was made at the time of the quarterly cruises off the southwest coast of Ireland by the steamer *Helga* of the Fisheries Branch of the Department of Agriculture and Technical instruction for Ireland. Some of the results obtained I have received directly from Mr. Holt, the Scientific Adviser to the Department, while others have been taken from the Quarterly Bulletin of the International Council.

The following additional observations were also made on passenger steamers and lightships :—

A few sets of surface samples were collected between Lands End and Cork by steamers of the City of Cork Steam Packet Company.

The fortnightly sets of surface observations on steamers of the London, Brighton and South Coast Railway Company between Newhaven and Caen, which were commenced in the autumn of 1903, were continued.

Samples have also been collected every fortnight on steamers running from Southampton to Havre and St. Malo ; and from Plymouth to the Channel Islands and St. Brieuc. The observations on these lines were commenced during the spring and early summer of 1904, the first complete set from the four lines being obtained in June. I wish here to acknowledge the valuable assistance received from Captain Morris of the London, Brighton and South Coast Railway Company, from Captain Williams of the London and South-Western Railway Company, and from Captain Enwoldsen of the *Devonia*, in arranging for the collection of these samples, and also to the captains and officers responsible for the observations, whose names will be found at the end of this report in Table V.

In January, 1904, by the courtesy of the Trinity House, observations were also commenced on the following lightships—East Goodwin, Varne, Royal Sovereign, Owers, Shambles, Seven Stones, Cardigan Bay, and Bahama Bank. The collection of samples from the Royal Sovereign, Owers, and Shambles was discontinued after one year, as owing to their positions the results were not of great value. The names of the observers, to whom I wish to tender my thanks, will be found in Table V.

Use has also been made of a few observations made on liners ; most of these have already been published in the present writer's report on "The Surface Waters of the North Atlantic, September, 1904, to December, 1905." * Those made before September, 1904, are printed in Table III.

* The Surface Waters of the North Atlantic Ocean ; Matthews. Internat. Invest. Mar. Biol. Assoc. Report II. Pt. I.

The total number of observations of salinity used for the present report and falling within the limits of the larger charts was 3,611 ; they were distributed as follows :—

| — | 1904. | | 1905. | |
|---|---|---|---|---|
| On hydrographic cruises : surface ... ... ... | 285 | 827 | 385 | 975 |
| below surface ... ... | 542 | | 590 | |
| Cross channel steamers, &c. : surface ... ... | 578 | | 639 | |
| Lightships : surface ... ... ... ... ... | 361 | | 231 | |
| Total for the year ... ... ... ... | 1,766 | | 1,845 | |

Use has also been made of the observations in adjacent waters published in the Quarterly Bulletin.

## Apparatus, &c.

The apparatus used at sea was the same as in 1903,* with the exception of the bottles for storing water samples. The 35 oz. stoppered bottles were found to unnecessarily large, and 6 oz. sterilized milk bottles were substituted.

## Analysis of Water Samples.

The samples were analysed by the present writer by Möhr's method, and calculated by means of Knudsen's Hydrographic Tables. Full details will be found in the paper on the North Atlantic Ocean. The standard used was the " normal water " of the Central Laboratory at Christiania.

## Tables.

The tables, which are published at the end, give the observations on which the report is founded. They require little explanation and do not differ much in arrangement from those of previous reports. Depths are given in metres and fathoms, and temperatures according to both the Centigrade and the Fahrenheit scale. The salinity $S°/_{oo}$ $\sigma_o$, ($\sigma_o = (S_o - 1)\ 1000$ where $S_o$ is the specific gravity at 0° C. compared with distilled water at 4° C.), and $\sigma_t$ ($\sigma_t = (S_t - 1)\ 1000$, where $S_t$ is the specific gravity corrected to the temperature in situ) are calculated from the chlorine content by Knudsen's Tables.

## Positions of Observations.

The quarterly cruises, in order to be of much value, must be made as far as possible at the same time by the vessels of all the countries taking part in the work. It thus often happens that extreme accuracy in fixing positions has been sacrificed in favour of speed, especially in the winter, when advantage must be taken of every interval of fine weather. On some cruises it has not been possible to make a single astronomical fix, and the whole of the work has been done by dead reckoning. Under such conditions the soundings made on a station have not always agreed with the depths found on previous occasions or with those shown on the Admiralty Charts ; and often from the nature of the bottom it would not have been possible to find the true position with any certainty, and certainly not without much loss of time. In such a case the dead reckoning has been assumed to be correct, in spite of the sounding ; and the actual depths found have been given in Table I.

## Charts and Curves.

Charts showing surface salinities and temperatures, and the positions at which observations were made, are given for all the quarterly cruises, and also for some short period, as a rule not longer than three or four days, in each month from July, 1904, onwards ; these latter are confined to the area between the meridians of Beachy Head and Start Point, and are founded on observations made on passenger steamers.

For each quarterly cruise there are also given three sections :—The longitudinal section is drawn through Stations 5, 2, 19, 11, 13, 21, and 22, and therefore differs slightly from that given in the quarterly bulletins of the International Council, which includes

*Report on the Physical Conditions in the English Channel 1903. Internat. Invest. Mar. Biol. Report I., 1902–1903.

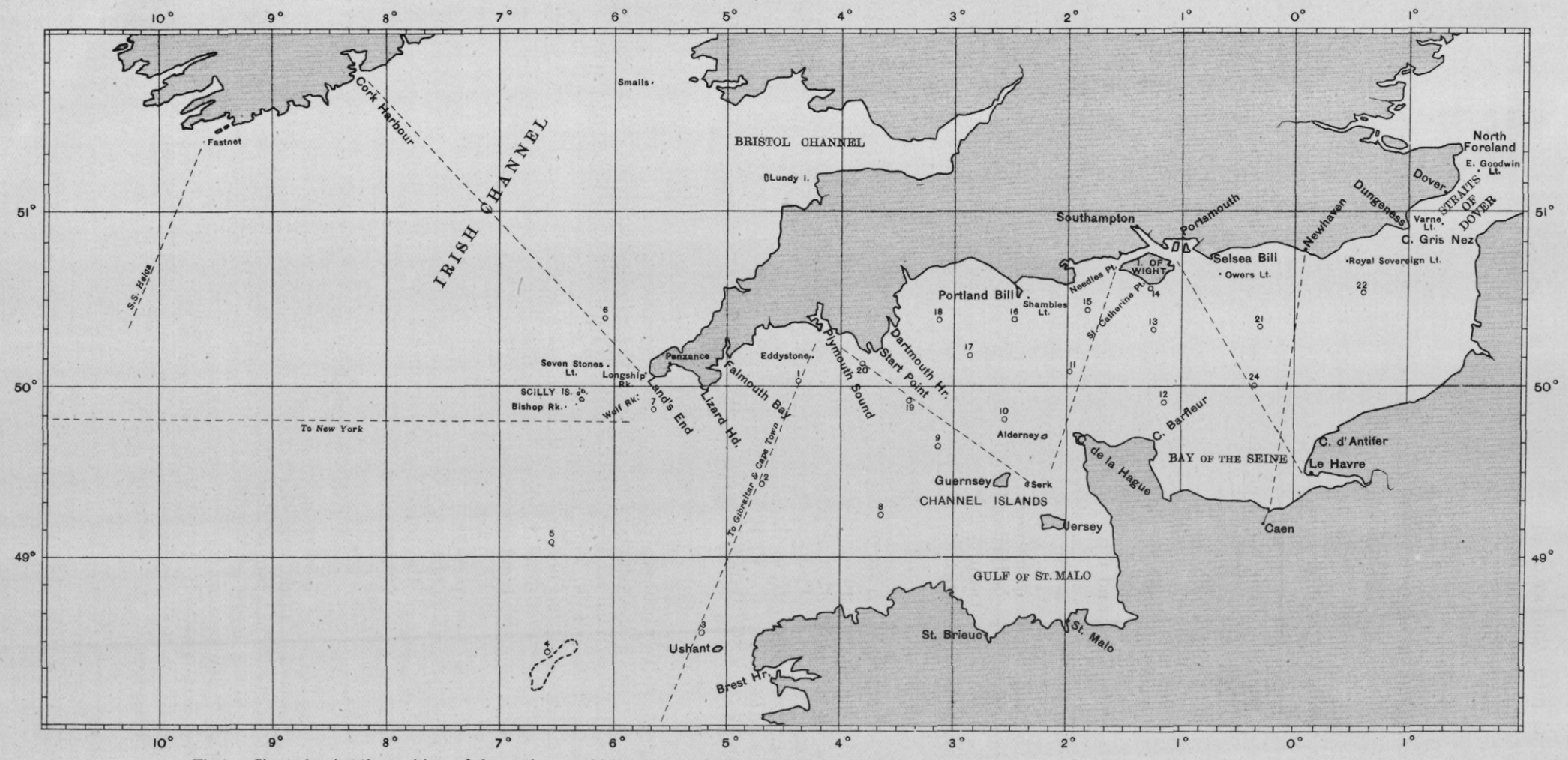
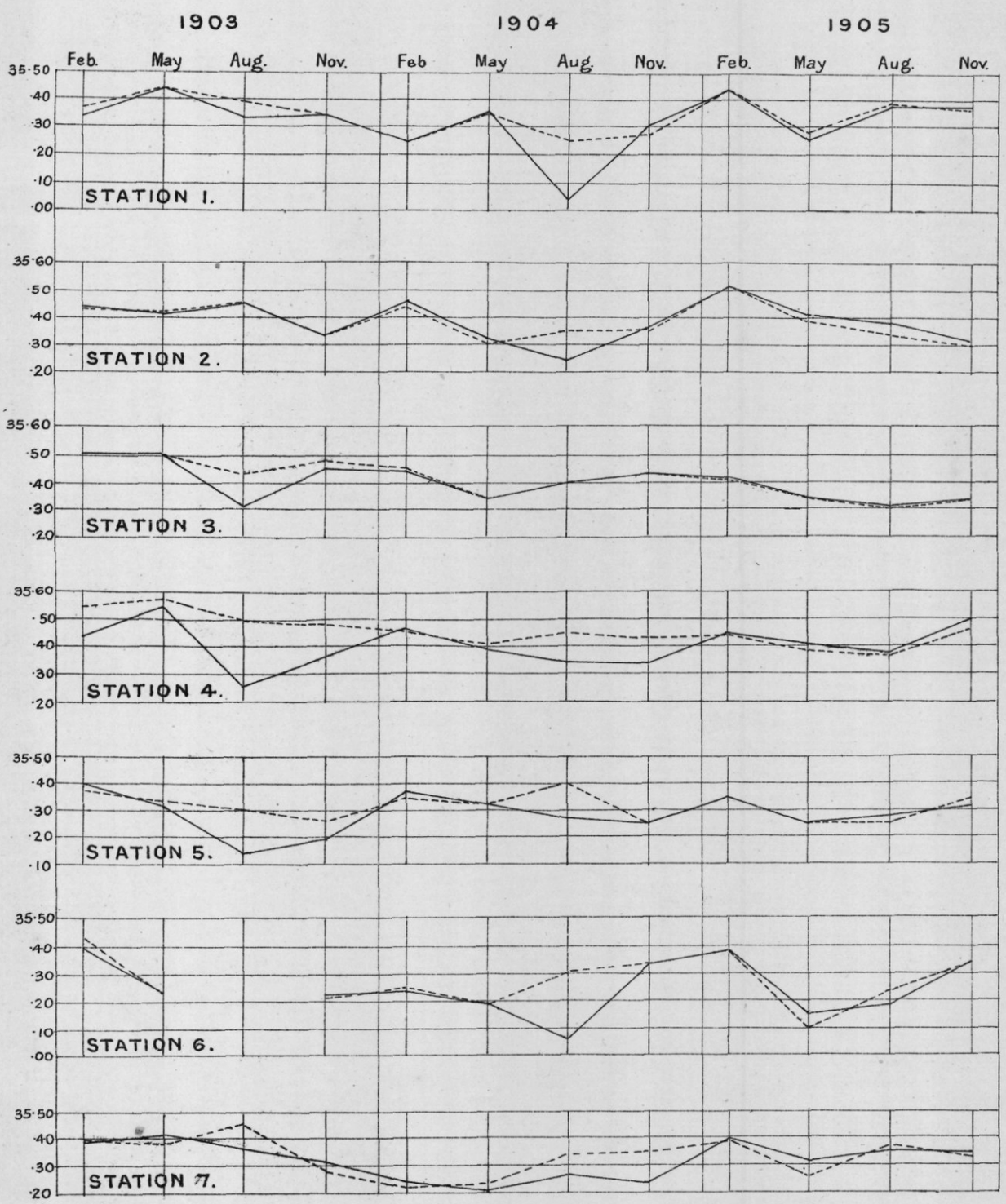



Fig 1. Chart showing the positions of the stations worked on the quarterly cruises, lines on which surface samples are taken between the cruises, and Lightships.

*Ordnance Survey Office, Southampton, 1909*

## FIG. 2. CURVE OF SALINITIES AT THE WESTERN STATIONS.

*The unbroken lines represent the mean of the Salinities at the surface and 5 or 10 metres.*
*Broken lines represent the Salinities on the bottom.*
*Where the continuous line only is drawn Salinities are the same at surface and bottom.*

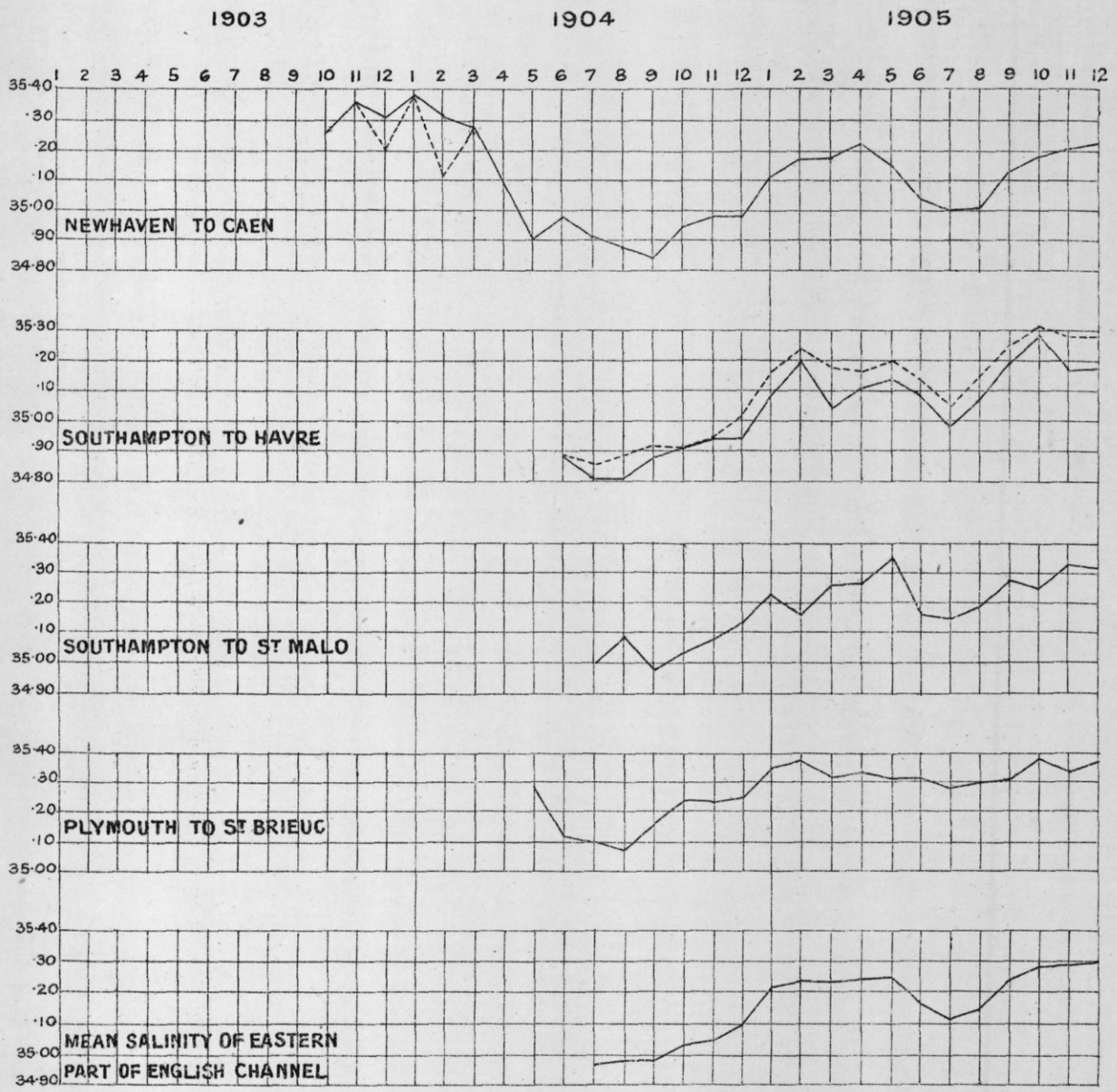



*Matthews. English Channel.*
*To face p. 282.*

Weller & Graham, Ltd Litho. London.

## FIG 3. CURVES OF SURFACE SALINITIES ON FOUR CROSS-CHANNEL LINES, CALCULATED FROM OBSERVATIONS MADE ON FORTNIGHTLY VOYAGES.

*On the Southampton Havre line the continuous curve is calculated from observations between 49°50′ N. Lat. and 50°40′ N. Lat; the broken curve from the three highest observations on each voyage. The latter values have been used in calculating the mean curve of the eastern part of the Channel.*




*Matthews English Channel.*
*To face p. 282.*

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Weller & Graham, Ltd Litho. London.

Station 4 and omits Station 19, substituting the more southerly Stations 9 and 10. The western transverse section, through Stations 4, 5, 7, and 6, is foreshortened somewhat as in the report for 1903, and a new section, through Stations 3, 2, and 1 to Plymouth has been added.

A chart (Fig. 1) has been added, showing the positions of stations and the courses generally followed by the cross-channel steamers on which observations have been made.

The curves of surface and bottom salinities (Fig. 2) include the observations made in 1903. The surface salinities plotted here are really the mean of the actual surface salinity and that at 5 metres, or when this is wanting, at 10 metres, as the surface is often somewhat salter than the layer immediately below it, owing in all probability to local evaporation. Figure 3 gives the curves of the surface salinities for each month on the four cross-channel lines, and also of the Channel as a whole between Start Point and Beachy Head ; the latter curve is the mean of the other four. Each monthly mean on a cross-channel line is founded on two, or sometimes three, fortnightly voyages. In drawing the curves it was found necessary to make a selection of the salinities to be used, as some of the observations were made so near to the coasts as to fall within the area of the littoral waters, where the salinity gradient is very steep, and an error of a mile in position, or an advance or retreat of a low isohaline by the same distance, would give rise to greater apparent variations from one fortnight to the next than are generally found in the course of a year. On the line from Newhaven to Caen, where the samples were always taken in the same positions, as closely as dead reckoning would permit, the four northern observations, between latitude 49° 59′ N. and the English coast, have been used for drawing the curve. On the line from Southampton to Havre the three highest salinities on the run were chosen, and are shown by the dotted line ; the continuous line is calculated on all observations between 49° 50′ N. latitude and 50° 40′ N. latitude ; and on that from Southampton to St. Malo the three highest, excluding those made in the Gulf of St. Malo. On the line from Plymouth to St. Brieuc, the observations omitted were the two made south of the latitude of Guernsey.

## Discussion of the Results.

The present report is not a complete discussion of the hydrographic conditions during the years 1904 and 1905, but rather an account of the English investigations in the Channel during those years. Use has therefore been made of the English and Irish observations only, and the latter have been only plotted on the surface charts in order to give a rough idea of the conditions in the area to the westward of the English Channel, and have not been discussed in any way. Unfortunately, owing to their position, they do not throw much light on the movements of the water in the English area, and additional observations to the west of the outer line of English stations, especially south of the forty-ninth parallel, are much to be desired. To the eastward, the charts might have been made more complete by including the results of the Belgian investigations, but the Straits of Dover do not fall within the English hydrographic area, and the changes there are of importance only in connection with the North Sea. Such English observations as have been made there have been plotted, but by themselves they are of little value.

In writing the present report I have been able, through the kindness of Docent Martin Knudsen, Chief Hydrographic Assistant at the Central Bureau, to make use of the Bulletin Supplémentaire, 1908, unpublished at the time of writing, which gives a valuable series of charts of the *mean* conditions, and has been of very great assistance.

The chart for November, 1903,* showed two large areas of surface water of 35·4 °/₀₀ *S.*,† surrounded on all sides by lower salinities. One of these was situated to the south and west of Beachy Head, and the other between the meridians of the Isle of Wight and of Plymouth. To the west and south-west of the latter area was found water of 35·3 °/₀₀ *S.*, falling to 35·2 °/₀₀ in the centre line of the English Channel south of the Scilly Isles, but rising to 35·4 °/₀₀ *S.* on the line from Ushant to Parsons Bank (Station 4). At the latter position the layer of 35·4 °/₀₀ *S.* was confined to the surface, and between 5 metres and 40 metres the salinity was about 35·33 °/₀₀ while below 40 metres it was 35·48 °/₀₀ at all depths. It will be seen from Fig. 2 of the present report that at those of the western stations which are fairly near land, there was no important difference between the salinities at the surface and the bottom, but at the others there was a distinct division into layers.

* Matthews, English Channel, 1903, loc. cit.

† Throughout this paper, a salinity given to only one place of decimals includes all between that salinity and a salinity 0·10 °/₀₀ higher. Thus 35·4 °/₀₀ *S.* includes all between 35·40 °/₀₀ *S.* and 35·49 °/₀₀ *S.* Salinities given to two places are exact as far as the experimental error allows.

Between November, 1903, and February, 1904, the only observations made were confined to the surface on the line from Newhaven to Caen. They point to a well-marked maximum in January, the low values shown by the dotted line (Fig. 2) in December and February being due in each month to a single sample of very low density which in all probability was not trustworthy.

*February*, 1904.—During the first half of the month it was impossible to carry out the regular programme owing to a series of south-westerly gales, and the chart for this period is founded on surface observations made on liners. It cannot give more than an approximately accurate view of the conditions, but it is of interest in showing the presence of surface water of 35·5°/$_{oo}$ *S.* a few miles from Lizard Head, and further west a large area of 35·6°/$_{oo}$ *S.* extending eastward to the meridian of the Scilly Isles in 49° N. latitude.

The weather moderated about the middle of the month and the quarterly cruise was made between February 15th and March 1st. The central axis of the channel was then filled with water of 35·3°/$_{oo}$ *S.*, falling to between 34·0°/$_{oo}$ *S.* and 34·5°/$_{oo}$ *S.* under the Isle of Wight, and to 33°/$_{oo}$ *S.* off the Bay of the Seine. South of Beachy Head there was an isolated surface area of 35·4°/$_{oo}$ *S.*, overlying water of slightly lower salinity and not connected in any way with the salt water at the entrance to the Channel. Westward of the Scilly Isles the isohaline of 35·40°/$_{oo}$ is somewhat problematical, but it is tolerably certain that its general course was east and west, running from about 50° N. latitude and 11° W. longitude, in a direction slightly south of east to midchannel in about 6° W. longitude, and then in a more northerly direction as far as the meridian of St. Albans Head, when it turned to the south-west towards Ushant. This is in marked contrast to the conditions prevailing in February of the previous year, when the isohaline of 35·40°/$_{oo}$ followed a roughly north and south course across the entrance to the English Channel, showing a strong surface flow of low salinity water from the Irish Channel. This southerly set was however present to a certain extent during the present month, and it will be seen from the longitudinal section that the surface area of the water of 35·40°/$_{oo}$ *S.* and over was far greater than its extension on the bottom, particularly in the region of Station 5, where it formed only a thin layer covering the fresher Irish current.

The centre of the area of 35·4°/$_{oo}$ *S.* was occupied by water of 35·5°/$_{oo}$ *S.* rising to 35·6°/$_{oo}$ *S.* at its eastern extremity. It is interesting to notice that this small patch of 35·6°/$_{oo}$ *S.*, shown by one observation only, was all that remained of the large area of similar water marked on the chart for the first half of the month, and that it had now moved some distance eastward. It has been drawn on the section as a surface layer only, and it was probably of no great thickness, though in the absence of observations here below the surface this cannot be stated definitely. We may suppose that the gales at the beginning of the month had set up a strong surface drift from the Bay of Biscay, giving rise to abnormally high surface salinities, which were obliterated almost immediately by mixing with the lower layers. The point is of importance inasmuch as it shows that in the English Channel gales lasting even some days give rise to only small changes in the hydrographic conditions, and it follows from this that the ordinary observations of a hydrographic cruise, which can be made only in moderate or fine weather, will give, as a rule, a sufficiently accurate account of the mean distribution of the water for a period of perhaps five or six weeks.

At Stations 1, 3, and 7, (and in a less degree at Station 6), which are at no great distance from land, the salinities had fallen both at the surface and on the bottom, as compared with the previous November, and the water tended to be homogeneous at all depths. At the remaining stations, 2, 4, and 5, the surface salinity had risen considerably, while the bottom values had either risen less quickly or had fallen, thus nearly obliterating the division into layers.

Thermal conditions were comparatively simple. The temperature was nearly the same at all depths, and fell from west to east and from the centre line towards the shore. The isotherms followed the same general direction as the isohalines, and can best be followed on the chart.

*March and April*, 1904.—The fall in the surface salinities on the Newhaven–Caen line continued and was decidedly rapid in April (Fig. 3), the low values being found chiefly off the English coast.

*May*, 1904.—During the May cruise salinities were low everywhere in the English Channel, and were nearly the same at all depths at any point. The western area which in February was filled by water of 35·4 °/$_{oo}$ *S.* and 35·5 °/$_{oo}$ *S.* now had a salinity of 35·3 °/$_{oo}$, except at the extreme south-western extremity of the area of investigation,

where two samples were collected giving a salinity of 35·41 °/₀₀. Off Beachy Head the isolated patch of water of 35·4 °/₀₀ *S.* had been replaced by water of about 35·25°/₀₀ *S.*, and the central axis of the Channel had a salinity of 35·2 °/₀₀ instead of 35·3 °/₀₀ as in February. The curves for the stations and for the Newhaven–Caen line show falling salinities except at Station 1, (and perhaps Station 7) where there was a rise. Salinities were also lower between Lands End and Cork, but the southerly flow from the Irish Channel, which was well marked in May, 1903, was now almost wanting.

Temperatures were the same at all depths at any point, and ranged from between 9° and 10° to the north of a line drawn from the Channel Islands to Station 2 and thence to Parsons Bank, to between 10° and 11° to the south of it.

*June and July*, 1904.—In June arrangements were made for obtaining surface samples and temperature records at fortnightly intervals from steamers sailing from Southampton to Havre and St. Malo, and since then sufficient observations have been obtained to make it possible to give a fairly accurate account of the changes occurring throughout the year in an area bounded on the west by a line from Plymouth to the Channel Islands and St. Brieuc, and on the east by a line from Newhaven to Havre. The value of these observations is much increased by the fact that the quarterly cruises have shown that in this region the water is nearly always of the same salinity at all depths, and that such differences as do occur are of comparatively small importance. The chart for June has not been included, but it does not differ much from that for July, and observations during the two months show a fairly steady fall in the salinity. The axis of water of 35·3°/₀₀ *S.*, which in February was continuous throughout the Channel and in May had retreated to the meridian of Cape La Hague was in June no longer found to the eastward of Start Point, and in July water of less than 35·00°/₀₀ *S.* extended from the Isle of Wight to the Bay of the Seine, separating two areas of slightly higher salinity. On the Newhaven–Caen line there was a slight rise in salinity from May to June, followed by a steady fall to a minimum in September.

The rise in the surface temperatures was considerable, and areas which in May did not reach 10° gave readings over 15° in July. The change was confined chiefly to the coastal regions, and an isolated area of water of less than 14°, surrounded on all sides by warmer water, was found south of the Isle of Wight.

*August*, 1904.—The hydrographic cruise during August showed a marked increase in both the salter and the fresher currents. Eastward of a line from Start Point to the Channel Islands salinities were still falling, and values as high as 35·10°/₀₀ were found only west of the Isle of Wight, and though water of 35·0°/₀₀ *S.* was now continuous throughout the Channel it had been reduced to a comparatively narrow band. South of Portland Bill there was an isolated surface patch of water of over 35·20°/₀₀ *S.* which was connected below the surface with the corresponding water westward.

Westward of Start Point the surface salinities were lower than in May. The isohaline of 35·20°/₀₀ had been driven further south from the English coast by fresher water, but the total area of water between 35·20°/₀₀ *S.*, and 35·30°/₀₀ *S.* had, if anything, increased by encroaching on the water of 35·3°/₀₀ *S.*, which it now surrounded on all sides except to the southward. The isohaline of 35·30°/₀₀ took a north and south direction across the Channel for a portion of its length, showing an increase in the fresher current from the Irish Channel, and the somewhat scanty observations between Land's End and the Irish coast point in the same direction. The water of 35·4°/₀₀ *S.*, which in May was found only on Station 4, had increased in volume, and was now found at all depths on Station 3, and at the bottom on Station 5. The total area was therefore much greater than appears on the chart, where it is largely masked by the lower salinity surface water. The changes are well shown by the sections and curves. It will be seen from the latter that at all the western stations, except 1 and 7, which are nearest to the English coast, the bottom salinities reached their minimum in May and then rose decidedly, while in nearly every case the lowest surface salinity did not occur until August. During the period from May to August the curves for the surface and bottom were therefore diverging, a change which gave rise to the division into layers shown on the sections.

Temperatures in the eastern part of the Channel were highest (over 17°) under the shores and decreased towards the central line, the minimum (less than 15°) occurring in a small isolated area south of Portland Bill, which coincided approximately with a similar patch of relatively high salinity water.

To the westward of the Start Point–St. Malo line the surface distribution of temperatures was reversed, the lowest being found under the shores and the highest in the open sea.

Below the surface the isotherms followed a horizontal direction for a large part of their length, and those for from 17° to 11° were closely crowded together a short distance below the surface in the southern and western areas, and radiated northwards and eastwards.

The temperature conditions can be best followed by consulting the charts and sections. The most noteworthy point is, that in the eastern part of the Channel, where the water is shallow and the tidal mixing very thorough, the seasonal rise of temperature had reached the bottom, while in the deeper and more slowly moving water to the westward it had had little influence below 30 or 40 metres. The increase in the bottom temperature from May to August was less than one degree on Station 4, and only just over a degree on Station 5.

*September and October*, 1904.—The salinities in the eastern part of the Channel were still at their minimum in September, and the central axis of water of 35·0°/$_{oo}$ *S.* had disappeared except at one point on the line from Southampton to Havre.

In October the surface salinities began to rise everywhere between Start Point and Beachy Head. The chart for the month shows the reappearance of the water of 35·0°/$_{oo}$ *S.*, but the change is brought out more distinctly by the curves (Fig. 3).

*November*, 1904.—In the area eastward of Start Point, the average surface salinity was hardly higher than during October. The central axis of water of 35·0°/$_{oo}$ *S.* had broadened between the Isle of Wight and Beachy Head, and water of 35·1°/$_{oo}$ *S.* was found eastward of the Southampton-St. Malo line, while the 35·30°/$_{oo}$ isohaline cut the line from Start Point to Guernsey for the first time since May. In spite of this, the curves show that except between Southampton and St. Malo the total change was only slight.

Westward of Start Point, the surface salinities had risen considerably: the isohalines for 35·10°/$_{oo}$ and 35·20°/$_{oo}$, which were found at some distance from the English coast in August, do not appear on the November chart, and water of 35·3°/$_{oo}$ *S.* now reached to within about fifteen miles of the shore and entered the Irish Channel in a broad band, the eastern edge of which approached closely to Lands End. The southerly flow from the Irish Sea was not so strong as in August, but its presence was still shown by a deep indentation of water of 35·2°/$_{oo}$ *S.* into that of 35·3°/$_{oo}$ *S.* on Station 5. The surface water of 35·4°/$_{oo}$ *S.* had advanced to mid-channel and then turned sharply in a direction slightly to the north of west to the longitude of the Scilly Islands. A study of the surface chart would lead one to suppose that there was a westerly current at this time in the northern part of the entrance to the Channel, and it is not impossible that the peculiar distribution was in part due to this. Gehrke,* indeed, has calculated that in the course of a year a certain amount of water must leave the English Channel through the northern part of its western entrance, but it seems more probable that in the present case the explanation is to be found in the fresher water of the Irish Channel having pushed into and overlaid the higher salinity water from the Bay of Biscay.

At the western stations, with the exception of 4 and 7, the division into layers that existed at the time of the previous cruise had been obliterated. In most cases this was due to the bottom salinities having remained nearly unchanged, while the surface salinity had increased. At Station 5, however, the surface salinity had scarcely varied and the bottom salinity had fallen.

Eastward of Plymouth the thermal conditions were of the winter type, but in the western entrance summer conditions still prevailed. Both sides of the Channel, from Lands End to the Isle of Wight, and from Ushant to the Bay of the Seine, were bordered by water of between 13° and 14°, and to the east by water of from 12° to 13°. An irregular area of between 14° and 15° filled the centre of the Channel between Plymouth and the Bay of the Seine, approaching closely to the English coast at its western extremity and to the French coast at its eastern end. In this region, therefore, the temperature increased from the shores to midchannel and was approximately the same at all depths. In the western entrance, on the contrary, an isolated patch of between 12° and 13°, surrounded on the surface on all sides by warmer water, stretched from Station 3 to the Scillies and Lands End; there is only one set of observations below the surface actually falling within this area, but the temperature readings on Stations 4 and 5 make it probable that it was underlaid on its south-western side by colder water, (10° to 11°).

At the extreme western edge of the area of investigation the relatively warm water had a depth of about 30 metres only. Below this the temperature fell rapidly to 10·6° at Station 5 and 11·4° at Station 4. At Station 2 it was the same at all depths, and it

* Johan Gehrke. Mean velocity of the Atlantic currents running north of Scotland and through the English Channel. Cons. Perm. Internat. pour l'Eplor. de la Mer. Pub. de Circ., No. 40.

would appear that the layer of cold water did not extend much to the eastward of the Scilly Islands.

*December*, 1904, and *January*, 1905.—During December the salinity of the eastern area altered only slightly, the chief change being in the advance of the isohaline for 35·10°/$_{oo}$ south of the Isle of Wight. In January the salinities rose suddenly; the isohaline of 35·40°/$_{oo}$ cut the Plymouth–Guernsey line for the first time since the previous February, that for 35·10°/$_{oo}$ was unbroken throughout the length of the Channel, and a small area of 35·2°/$_{oo}$ *S.* was found on the line from Newhaven to Caen.

*February*, 1905.—In February the mean surface salinity of the eastern Channel was only slightly higher than during the previous month. The isohaline of 35·10°/$_{oo}$ was continued to the Straits of Dover, and that of 35·20°/$_{oo}$ nearly reached the meridian of Dungeness. Water of 35·3°/$_{oo}$ *S.* and 35·4°/$_{oo}$ *S.* was also found further eastward than in January, though the easterly extremity of the latter had become slightly narrower. Salinities were nearly the same at all depths, except on Station 22, where the eastern end of the tongue of 35·2°/$_{oo}$ *S.* was thinned out to a surface layer with fresher water on the bottom.

To the westward the salinities had risen considerably since the November cruise. Water of 35·4°/$_{oo}$ *S.* had replaced that of 35·3°/$_{oo}$ *S.* to a large extent, and approached fairly closely to the English coast; the isohaline of 35·40°/$_{oo}$ ran nearly straight from Station 4 to Station 7, while that of 35·30°/$_{oo}$, which in November reached Station 5, probably did not now come south of the Scilly Islands, though the scarcity of observations here makes the distributions somewhat doubtful. In the centre of the water of 35·4°/$_{oo}$ *S.* was found a narrow band of 35·5°/$_{oo}$ *S.* stretching in a north-easterly direction over Station 2, where it was continuous at all depths, and even reaching Station 1, at one depth only, below the surface. At two positions, about 10 and 40 miles southwest of Station 2, were found patches of water of 35·6°/$_{oo}$ *S.*, which in the absence of further observations, have been assumed to reach the bottom since there was nowhere any important division into layers.

The water was generally of the same salinity at all depths, as will be seen from the sections and curves. At Stations 1, 2, 5, and 6, where there had been no division into layers in November, surface and bottom salinities had risen simultaneously, but at Stations 4 and 7, where there had been considerable differences between surface and bottom, the salinity in the depths had remained nearly constant and the surface salinity had risen so as to render the water homosaline.

Temperatures were nearly constant from surface to bottom, and ranged from between 10° and 11° at the western entrance to 7° or 8° under the eastern shore. The isotherms followed courses similar to those of the isohalines and were vertical with the exception of that for 10°, which cut the surface a short distance north of Station 4, ran horizontally at a depth of about 5 metres to Station 5, and then dipped to the bottom between Stations 5 and 7.

*March and April*, 1905.—The mean salinity between Start Point and Newhaven was almost exactly the same as for February and only slightly higher than in January, though some irregular changes occurred; the maximum on the Newhaven line was reached in April, with the appearance here of water of 35·3°/$_{oo}$ *S.*, while on the lines from Southampton to St. Malo and from Plymouth to Guernsey there was a fall.

*May*, 1905.—The spring maximum salinity of the Channel eastward of Start Point was reached in May, but it was only slightly higher than in February, and on the Newhaven–Caen Line a sharp fall had already set in. The water of 35·3°/$_{oo}$ *S.* and 35·4°/$_{oo}$ *S.* had advanced considerably, the former being continuous as far as Beachy Head, and the latter to the line joining the Needles to Cape de la Hague. At the western entrance to the Channel salinities had fallen very decidedly since February; the isohaline of 35·30°/$_{oo}$ across the mouth of the Irish Channel was found about sixty miles further south, and water of between 35·30°/$_{oo}$ *S.* and 35·40°/$_{oo}$ *S.* extended north and west from Ushant, so as to isolate completely an area of 35·4°/$_{oo}$ *S.* which filled the western part of the Channel. On the eastern edge of this area the isohalines were approximately vertical, but to the west it was drawn out to a thin surface layer; the difference between the surface and bottom salinities was, however, unimportant.

The southern isohaline of 35·40°/$_{oo}$ ran from near Ushant to Station 4 somewhat to the south of the line of observations, and then turned to the north-west. That for 35·20°/$_{oo}$ followed approximately the same course, from Start Point to Lands End, as the line of 35·40°/$_{oo}$ in February, and after dipping to the south turned to the north and west on the meridian of the Scilly Isles. The isohaline of 35·30°/$_{oo}$ followed a fairly parallel course, and as has been already pointed out, reached the 49th parallel before turning to the

north-west. An increased flow of low salinity water from the Irish Sea was evidently in progress, and is well shown by the chart.

The curves and sections show that the salinities had fallen on the western stations since February, and that in many cases the bottom salinity was less than on the surface, giving rise to an unimportant division into layers.

The temperatures showed a transition stage between winter and summer conditions, the isotherms tending to run across the Channel, and horizontally. That of 10° ran from the Isle of Wight to the Channel Islands, and the line for 11° from Start Point to the east of Station 19, when it turned to the west, and finally to the south, a short distance westward of Station 2. Another line for 11° started from Lizard Point, made a southerly bend round Station 7, and then turned approximately westward again across the mouth of the Irish Channel. Between the two 11° isotherms were found temperatures of less than 12°. On Station 4 the isotherms of 11° and 10·5° were found at 10 metres; below this the temperatures were nearly constant and 10·4 was found at the bottom. They cut Station 5 at about the same depth, but northwards the line for 11° met the surface near Station 7, while that for 10·5° was continued nearly horizontally to Station 6 and the Bristol Channel. The isotherm for 10° on the longitudinal and cross sections shows a tongue of colder water (between 9° and 10°) entering the Channel in the central line from the west at Station 5.

*June and July*, 1905.—Following on the maximum recorded in May, a remarkably quick fall set in in the salinity of the eastern area of the English Channel and the minimum was reached in July, when no water of a salinity as high as 35·40°/$_{oo}$ was found eastward of Start Point, while the isohaline of 35·30°/$_{oo}$ had retreated from the meridian of Beachy Head to that of Portland Bill.

*August*, 1905.—The observations made during this month, especially when considered in relation to the plankton records, yield some decidedly interesting results.

In the eastern part of the Channel the surface chart alone does not show any important change; the isohaline for 35·30°/$_{oo}$ had commenced to move to the eastward again, and water of 35·0°/$_{oo}$ *S.* had replaced part of the slightly fresher water under the English coast, but on the other hand the isohaline of 35·20°/$_{oo}$ had retreated on the central line of the Channel and advanced at its termination on the English shore. The curves show, however, that the salinities were rising generally, eastward of Start Point, from the July minimum. On Stations 21 and 22 the longitudinal section shows an unimportant division into layers of different salinity.

The larger part of the western entrance to the Channel was filled at all depths with water of from 35·30°/$_{oo}$ *S.* to 35·40°/$_{oo}$ *S.* which skirted the coast from Start Point to the Lizard fairly closely, being separated from the shore by water of 35·2°/$_{oo}$ *S.*, and was continued round Lands End into the Bristol Channel. On the meridian of the Scillies it was bounded, north of the 49th parallel, by a narrow tongue of water of 35·2°/$_{oo}$ *S.* from the Irish Channel, which was also of the same salinity at all depths. Enclosed in it were two isolated patches of surface water of 35·4°/$_{oo}$; one was shown by a single sample on Station 2, while the other took the form of a narrow band stretching from a point south of the Lizard to the north of Station 1 and then bending to the south-east to Station 19. These two patches are chiefly of importance in connection with the abnormal movements recorded earlier in the year, in the North Atlantic, and which have already been described.* To recapitulate briefly—an isolated area of water of over 37·00°/$_{oo}$ *S.* was thrown off from the high salinity water in about 37° N. Latitude, 37° W. Longitude, and travelled across the Atlantic, becoming slightly diluted on the way, to the south-west coast of Ireland, where it formed a large patch of water of over 36·00°/$_{oo}$ in August. At the same time many high salinities were found in the southern part of the Irish Channel, and these have been generalised on the chart for the present month as a fairly regular border of this water running along the 49th parallel from 11° W. Longitude to 8° W. Longitude, and then turning south and east to the Bay of Biscay. The observations do not agree among themselves in such a way as to point to any regular distribution of the water, and it seems probable that it had broken up into a number of quickly moving eddies, some of which travelled into the English Channel along the shore between Lands End and Start Point. This hypothesis is strengthened by the appearance in August in the English Channel, and even in Plymouth Sound, of large swarms of Pteropods, which are distinctly oceanic in habit, and had not been previously recorded with certainty here, at any rate not since the beginning of the detailed plankton work in connection with the International Investigations.

* Matthews; The Surface Waters of the North Atlantic Ocean: September 1904 to December 1905, loc. cit.

The sections and curves show in some places a fall, in others a rise, in the salinities on the western stations, and, compared with the two preceding years there was no important division into layers. It is worth noting that the bottom salinities of the western area, except at Stations 1, 6 and 7, reached their minimum at the same time as the surface salinities, and not at the time of the May cruise as in 1904.

Eastward of the Start Point–Guernsey line the temperatures were the same at all depths, and the isotherms were approximately parallel to the coasts, the values falling from a maximum of over 17° under the shores in the neighbourhood of the Isle of Wight and the Bay of the Somme to between 15° and 16° in mid-channel. To the west of this line the values decreased from over 17° in the Gulf of St. Malo to less than 15° in mid-channel, and then rose to between 15° and 16° off Start Point. The steepest surface temperature gradient was found west of Ushant, when the isotherms for 15°, 16°, and 17° were crowded together. That for 15° passed to the westward of Station 3, where the temperature ranged from 13·7° on the surface to 13·3° on the bottom, to the east and north of Station 2, and then turned north-east to Station 19. The isotherm for 16° ran fairly straight across channel westward of Station 2 to Plymouth, while that for 17° turned sharply westward towards Station 4. The isotherms for from 17° to 11° stretched northwards and eastwards from Station 4 ; to the north, that for 17° came to the surface almost immediately, and the lines for from 16° to 13° were continued fairly horizontally into the Bristol Channel, while those for 12° and 11° dropped to the bottom between Stations 5 and 7. In the direction of the axis of the channel, the lines for 16° and 15° appeared on the surface to the west and east, respectively, of Station 2, and the lower isotherms ended on the bottom, those for 14° and 13° between Stations 2 and 19, the line for 12° between Stations 5 and 2, while that for 11° appears to have terminated only a short distance to the north-east of Station 4.

*September*, 1905.—In this month an extra hydrographic cruise was made over Stations 1 to 5. There was still no important division into layers, but in other respects the conditions were decidedly abnormal. Reference to the chart shows that the northern areas of 35·4 °/$_{oo}$ *S.*, had disappeared, and that the tongue of water of 35·2 °/$_{oo}$ which was moving south across the fairway to the channel had turned to the south-west, cutting through the centre of the water of 35·3 °/$_{oo}$ *S.* to join the fresher water of the French coast. We thus have a decidedly unusual distribution, the salter water bordering the English coast while fresher water is found in mid-channel. To the south-west the isohaline of 35·40 °/$_{oo}$ had advanced slightly in a north-easterly direction.

In the eastern area salinities were higher than during the previous month, and the isohalines for 35·30 °/$_{oo}$ and 35·20 °/$_{oo}$ had moved eastward.

*October*, 1905.—Salinities continued to rise in the eastern area, except on the Southampton–St. Malo line, where there was a fall due to the retreat for the time of the isohaline of 35·30 °/$_{oo}$. The water of 35·40 °/$_{oo}$ *S.* on the line from Start Point to Guernsey was found at one position only and may have been a relic of the isolated patches found in August.

*November*, 1905.—In the eastern part of the Channel the salinities on the whole were rising very slowly. The isohaline for 35·30 °/$_{oo}$ had moved eastwards and opened out so as to include a larger area, but no water of 35·4 °/$_{oo}$ *S.* was found on the line from Start Point to Guernsey. The water was of nearly the same salinity from top to bottom, except perhaps on Station 21, but owing to the loss of the surface sample here this is doubtful.

To the west the prevailing salinity was between 35·30 °/$_{oo}$ and 35·40°/$_{oo}$ and extended round Lands End into the Bristol Channel. The southerly flow from the Irish Sea was marked by the north and south course of the isohaline for 35·30 °/$_{oo}$ across the fairway of the Channel, and appears to have been of about the same strength as in August. The bridge of 35·2 °/$_{oo}$ water which connected the Irish Channel with the waters of the French coast in September had been obliterated.

The quarterly cruise was extended in this month for some distance to the west, which made it possible to give a rather more satisfactory account of the conditions than usual. The isohaline of 35·40°/$_{oo}$ had advanced north-eastward nearly to Station 5 and water of 35·5°/$_{oo}$ *S.* was found on the surface at Station 4, but not at greater depths, showing that the surface layer was moving faster than the bottom water. At the extra station the salinity of the surface was 35·57°/$_{oo}$, at intermediate depths 35·53°/$_{oo}$, and rose to 35·61 at the bottom. On the western stations, the curves for the surface and bottom salinities were approaching one another, and at 4, 5, and 6 there was a rise in the salinities ; 1 and 7 were almost unaltered, and at 2 there was a fall.

The sections show probably simpler conditions than at any other time during the years 1903 to 1905.

Temperatures were the same at all depths except at the extra station, where the surface temperature was 12·37°, falling almost at once to 11° which was continuous to the bottom. The isotherms were generally parallel to the coasts; that for 10° ran from St. Albans Head and the Bay of the Seine to the Straits of Dover, while the line for 11° followed a course from Portland Bill to the longitude of Station 22, and then returned to Cape Barfleur. The 12° isotherm, beginning at Start Point on the English side, ran through Stations 18 and 11 to midway between Stations 12 and 24, where it turned westward, and after dipping deeply into the Gulf of St. Malo bent away from the coast to a point about 25 miles south of Station 2, and ran thence into the Bay of Biscay. Another branch of the 12° isotherm ran approximately parallel to the isohaline of 35·3°/$_{oo}$ at a distance from it of from 10 to 20 miles across the mouth of the Channel.

*December*, 1905.—In this month the mean salinity of the eastern part of the Channel reached its highest value for the year, though the rise since October was very small. The only change of any importance was the appearance of water of 35·40°/$_{oo}$ on the line from Start Point to Plymouth.

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## SUMMARY.

According to Knudsen's Charts of the Mean Annual Salinity at the surface, the isohalines follow the general trend of the shores of the English Channel, and the water is therefore arranged in zones approximately parallel to the coast line, the fresher water being found under the land and the salter water slightly to the north of the central line. The lowest isohaline shown is that for 34·50°/$_{oo}$, which crosses the Bay of the Seine and follows the French coast eastwards to the Bay of the Somme. On the English side the littoral waters are of somewhat higher salinity, and the lowest isohaline, 34·80°/$_{oo}$, encloses only a small area in the immediate neighbourhood of the Isle of Wight. The difference between the mean conditions on the two sides is undoubtedly due to the much greater number and volume of the rivers of the north of France.

The central axis has on the average a salinity just reaching 35·20°/$_{oo}$ in the Straits of Dover, increasing to 35·30°/$_{oo}$ in 2° 50′ W. longitude, slightly westward of the meridian of Portland Bill, and to 35·40°/$_{oo}$ in about 4° 30′ W. longitude, a short distance westward of the meridian of Plymouth.

Eastward of Start Point the water is nearly always homosaline, that is, of the same salinity at all depths, so that the surface charts also represent the conditions on the bottom; in the broad western entrance, however, there is at times a division into layers of varying composition, and it is necessary to consult the sections and the curves of bottom salinity when discussing the changes taking place here. It follows, therefore, that the western area, where bottom salinities can be obtained only from the investigation steamers, that is, as a rule, only at the times of the four quarterly cruises, is by no means as well known as the eastern region where samples are collected on four lines of steamers every fortnight. Knudsen's charts also show that the mean deviation from the mean salinity is far less at the western entrance than eastward of the Isle of Wight, and periodic changes are therefore less well marked, so that it cannot be expected that the salinity curves will show the same regularity as obtains, for instance, on the line from Newhaven to Caen.

On comparing the charts of mean annual salinity with those in the present report it is evident that at no time during the years 1904 and 1905 did the actual conditions bear anything but a distant resemblance to the mean, and indeed this is to be expected, since the waters of the English Channel exhibit a distinct periodic change similar to that which was first pointed out by Professor Otto Pettersson in other areas, and has since been proved to be the rule over nearly the whole of the Northern European region. Knudsen's charts, therefore, provide a datum line from which to measure the yearly periodic change, though it is true that for fishery purposes the deviation from the average periodic change is probably the determining factor, and that charts showing the mean salinity for each month would be of more value; at the time, however, when the charts of mean conditions were drawn up there were not sufficient data available to make it possible to discuss a shorter period than a year, and it is doubtful if one would be justified even now (March, 1909) in attempting the task.

It is somewhat difficult to compare the salinities during 1904 and 1905 with those of 1903, as the observations during that year were confined almost entirely to the four quarterly cruises, and such as were made showed that the abnormal conditions which were recognised by hydrographers working in other areas extended to the English Channel also.

The highest isohaline which is continuous throughout the length of the English Channel on the average is that of 35·20°/$_{oo}$ the eastern extremity of which just reaches the Straits of Dover. During 1903 it exceeded its mean eastward development at the time of the quarterly cruises except possibly during August, and even then can have fallen short of it by only a small amount. In 1904 it passed the Straits of Dover from January to May; from June to December it did not extend much eastward of Start Point. In 1905 it reached its mean development again from January to May, without passing it by any important amount; on the other hand it only fell short of the mean during June, July, and August, and then retreated no further than the Isle of Wight. From September to December it was again found in the Straits of Dover.

To recapitulate, the 35·20°/$_{oo}$ isohaline did not fall short of its mean development at any time during 1903, and generally exceeded it; in 1904 it again passed the mean during the first six months of the year, but fell far short of it during the second six months; in 1905 it just reached the mean during the first half of the year, then fell short of it by a relatively small amount during three months only, and was found again in the Straits of Dover from September to December.

The mean easterly limit of the isohaline of 35·30°/$_{oo}$ lies on the line from Start Point to Cape La Hague in midchannel, slightly westward of the meridian of Portland. During 1903 it was always found eastward of this mean position, retreating slowly from the Isle of Wight in February to nearly the mean position in August, and then advancing quickly again to the eastern end of the Channel, where it was found during February, 1904; in May also it was still beyond the mean. In June, however, it had moved westwards from the mean position, which it did not reach again till November, from which time onwards till the end of 1905 its position was to the eastwards of the meridian of Portland, the excess being greatest in May, after which a slow retreat set in which continued till October, to be followed by another advance in November and December.

The 35·30°/$_{oo}$ isohaline, therefore, followed that of 35·20°/$_{oo}$ fairly closely, in its movements of advance and retreat, but it fell short of its mean position for only five months in 1904, and not at all in 1905.

An inspection of the isohalines alone might lead one to suppose that in the area eastwards of Start Point the Atlantic flow was stronger during 1905 than in 1904, but reference to the curve of salinities on the Newhaven-Caen line (Fig. 3) and to the curves for the other cross-channel lines for the shorter period covered by them, will show that though both years agree in having a maximum salinity in late winter or early spring, the maximum was higher and the minimum lower in 1904 than in 1905, and that the first year may be considered to be the one of greater activity here in respect of the movements not only of the salter but also of the fresher water, and since the water in this area is practically homosaline, the above conditions hold for all depths.

The mean position of the isohaline of 35·40°/$_{oo}$ is slightly westward of 4½° W. longitude, and lies in the region in which a division into layers of unequal salinity frequently occurs. In discussing its movements, it is therefore necessary to refer to the sections and to the curves of salinities on Stations (Fig. 2,) as already pointed out.

During 1903 its eastward extension was above the mean both on the surface and at greater depths in February and May. In August it was found well within the entrance of the Channel, but had been separated from the corresponding water westward by a fresher surface layer, which in November had extended to the bottom. By February, 1904, it was continuous again with the salter water of the Bay of Biscay, but soon afterwards it appears to have retreated considerably, and was still slightly to the south-west of its mean position in August. The November cruise showed that it was advancing again, and from January to May, 1905, the volume of water of over 35·40°/$_{oo}$ in the English Channel was decidedly above the average. During the remaining months of 1905 it appears to have fallen short of the normal, the areas of water of high salinity shown in October and December on the Start Point–Channel Islands line probably being unimportant isolated patches such as appear in the chart for August, 1905.

Water of 35·50°/$_{oo}$ S. is not usually found within the area of investigation, and does not appear on the charts of mean salinity. It was present during the larger part of the abnormal year 1903, and in February of 1904 and 1905, and to a very slight extent in November of the latter year.

The movements of the water of high salinity, that is, of over 35·40°/$_{oo}$, show, therefore, that the Atlantic current reached its maximum strength in the early spring of 1904 and 1905, and the curves for the eastern and western areas agree fairly well in this respect. It will be seen, however, from the curves of salinities on the western stations that in 1904 the salter current fell to a minimum in May, and then began to increase again, while the high surface salinities in February, falling fairly regularly to August, point to a minimum strength for the fresher current in later winter and early spring, and a maximum strength in summer.

In 1905 the conditions were decidedly different ; the water of the western area was nearly homosaline, and the salinity range throughout the year relatively small ; we may conclude, therefore, that both currents were comparatively weak.

The explanation offered above of the changes occurring in the western area requires *two* currents, instead of attributing the falling salinities of summer to a weakening of the Atlantic flow, and the slow diluting influence of coastal water, which would be decidedly small at that season of the year ; and, indeed, when it is seen that in August, 1904, the surface salinity was falling at the outer stations and the bottom salinity was rising at the same time, it is almost impossible to avoid such a conclusion.

In this connection it is interesting to refer to a paper by J. N. Nielsen,* in which he suggests that there may be an anticyclonic circulation round Ireland. Though the data available up to the time of writing are not sufficient to through much light on this point, yet, as was pointed out in the report for 1903, the north and south course across the western entrance to the English Channel followed at times by the isohalines certainly suggests a current from the Irish Channel, and this hypothesis is strengthened by many of the charts of the present paper.

Additional confirmation is afforded by a paper by L. H. Gough on the distribution of *Muggiaea atlantica*.† Gough concluded from the localities at which this was found at different times that it migrated from the neighbourhood of Land's End northwards towards the Smalls Lighthouse, where it crossed over towards the Irish coast, and then moved south and west towards the Fastnet. Hydrographic observations made since then show that there is often a current of relatively high salinity moving northwards close to the northern shores of Cornwall and Devon, between the land and the fresher water of the Irish Channel, which would account for the northerly migration, and it is not difficult to imagine that some unimportant local change could then bring the shoal within reach of such a current as Nielsen suggests. It is hoped that some observations made in 8°W. longitude by the *Huxley* during February, 1909, which will be repeated during future cruises, will assist in deciding the question ; in the meantime, the present writer is of opinion that it is by no means improbable that such an anticyclonic current exists.

## The Possible Presence of Mediterranean Water in the British Area.

It was shown in a previous report‡ by the present writer that the surface salinity of the Bay of Biscay during 1904 and 1905 was subject to irregular variations which appeared chiefly as "islands" of high salinity, and the suggestion was made that this was due to upwelling of Mediterranean water. The presence in the North Atlantic of a stratum of water of high salinity and temperature at intermediate depths was suspected as long ago as the time of the *Porcupine* expedition, and later observations appear to support the hypothesis. Nielsen, in the paper already cited, refers in this connection to the *Thor's* station No. 69, in 47° 47′ N. lat. and 8° 0′ W. long., on June 25th, 1905. The salinities here increased with the depth, and reached 35·60°/$_{oo}$ with a temperature of 10·47°C., at 600 metres. Dr. Brennecke,§ in a review of Nielsen's papers on the Danish investigations in the North Atlantic, quotes the results obtained by the *Planet* on January 26th, 1906, in 46° 52′ N. lat. and 7° 45′ W. long. The *Planet* found the highest salinities between 600 metres and 1,000 metres, the figures being:—Surface, 11·6°, 35·49°/$_{oo}$ S. ; 600 metres 10·4°, 35.52/$_{oo}$ S. ; 800 metres 10·0°, 35·70°/$_{oo}$ ; and 1,000

* Contributions to the hydography of the north-eastern part of the Atlantic Ocean ; Meddelelser fra Kommissionen for Havundersögelser ; Hydrografi, Bind I. No. 9. Copenhagen.

† On the distribution and the migrations of *Muggiaea atlantica* (Cunningham) in the Euglish Channel, &c., in 1904. Conseil Perm. Internat. pour l'Explor. de la Mer. Pub. de Circonstance. No. 29. Copenhagen, 1905.

‡ The Surface Waters of the North Atlantic, &c., 19th September, 1904, to December, 1905. Internat. Invest. Mar. Biol. Report II., Part I., 1904–1905.

§ Die Danischen Hydrographische Untersuchungen im Nordatlantischen Ozean, 1903–1905. Ann. der Hydr. 1907, page 506.

metres, 9·4°, 35·66°/$_{oo}$ S., below which the salinity decreased again. It is interesting to compare with these figures the English station in 47° 46′ N. lat. and 7° 50′ W. long., on November 8th, 1905. The depth here was only 320 metres, as compared with over 1,000 at the *Thor's* station a few miles away, but the results agree fairly well with those of the Danish and German hydrographers, the salinity rising from 35·53 °/$_{oo}$ at 15 metres to 35·61 °/$_{oo}$ at 310 metres. This station was visited again during February, 1909 ; the samples collected have not all been analysed at the time of writing, but it seems probable that the salinities were lower than in November, 1905.

## Recapitulation.

The chief points brought out by the investigations described in this report are :—

The conditions during 1903 were abnormal in the English Channel as also over the larger part of the Northern European area, and cannot be easily compared with those of following years.

Both 1904 and 1905 show a yearly period with a maximum salinity in the early part of the year, and a minimum in the summer ; but they differ in that 1904 was a year of high range of salinity and rapid movement, with a marked division into layers in the deeper western area, while in 1905 the range was much less, and the water was relatively homosaline. It may be mentioned here that later observations have practically proved the existence of a one-year period in the English Channel, and point strongly to a two-year period reproducing the main features of the years 1904 and 1905.

I wish in conclusion to express my thanks to Messrs. D. O Mitchell and C. W. Frost, and to Miss A. Isgrove, who have helped me at various times in the preparation of this paper ; and, also, to those gentlemen who have assisted in the observations at sea, whose names will be found in Table II.

# TABLE I.

## Observations on Stations on Hydrographic Cruises.

### Station E. 22.

50° 33′ N. Latitude. 0° 36′ E. Longitude.

**1st March, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 45·59 | 7·55 | 19·62 | 35·44 | 28·48 | 27·70 |
| 5 | 2·7 | 45·91 | 7·73 | — | — | — | — |
| 10 | 5·5 | 45·91 | 7·73 | 19·58 | 35·37 | 28·43 | 27·63 |
| 20 | 10·9 | 45·91 | 7·73 | — | — | — | — |
| 36 | 19·7 | 45·91 | 7·73 | 19·58 | 35·37 | 28·43 | 27·63 |

Depth 38 M. = 20·8 F.

**5th May, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·28 | 9·60 | 19·52 | 35·27 | 28·35 | 27·26 |
| 5 | 2·7 | 49·14 | 9·52 | 19·52 | 35·26 | 28·34 | 27·26 |
| 10 | 5·5 | 48·92 | 9·40 | 19·52 | 35·26 | 28·34 | 27·28 |
| 20 | 10·9 | 48·74 | 9·30 | 19·52 | 35·26 | 28·34 | 27·29 |
| 37 | 20·2 | 48·60 | 9·22 | 19·52 | 35·26 | 28·34 | 27·31 |

Depth 39 M. = 21·3 F. Gravel.

**9th August, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 62·55 | 16·97 | 19·40 | 35·05 | 28·16 | 25·57 |
| 5 | 2·7 | 61·23 | 16·24 | 19·41 | 35·07 | 28·18 | 25·76 |
| 10 | 5·5 | 60·85 | 16·03 | 19·42 | 35·08 | 28·19 | 25·81 |
| 20 | 10·9 | 60·75 | 15·97 | 19·42 | 35·08 | 28·19 | 25·82 |
| 30 | 16·4 | 60·73 | 15·96 | 19·42 | 35·08 | 28·19 | 25·82 |
| 48 | 26·2 | 60·73 | 15·96 | 19·42 | 35·08 | 28·19 | 25·82 |

Depth 48 M. = 26·2 F. Gravel.

**13th November, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 55·98 | 13·32 | 19·40 | 35·06 | 28·16 | 26·39 |
| 5 | 2·7 | 56·12 | 13·40 | 19·39 | 35·03 | 28·15 | 26·35 |
| 10 | 5·5 | 56·14 | 13·41 | 19·38 | 35·01 | 28·14 | 26·34 |
| 20 | 10·9 | 56·17 | 13·43 | 19·39 | 35·03 | 28·15 | 26·35 |
| 30 | 16·4 | 56·19 | 13·44 | 19·38 | 35·02 | 28·14 | 26·33 |
| 40 | 21·9 | 56·21 | 13·45 | 19·39 | 35·03 | 28·15 | 26·34 |
| 50 | 27·3 | 56·21 | 13·45 | 19·40 | 35·05 | 28·16 | 26·35 |

Depth 50 M. = 27·3 F. Sand and shell.

**10th February, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 46·92 | 8·29 | 19·51 | 35·25 | 28·32 | 27·44 |
| 5 | 2·7 | 47·19 | 8·44 | 19·51 | 35·25 | 28·32 | 27·41 |
| 10 | 5·5 | 47·19 | 8·44 | 19·50 | 35·23 | 28·31 | 27·40 |
| 20 | 10·9 | 47·19 | 8·44 | 19·52 | 35·26 | 28·34 | 27·43 |
| 30 | 16·4 | 47·21 | 8·45 | 19·49 | 35·21 | 28·30 | 27·39 |
| 42 | 23·0 | 47·23 | 8·46 | 19·48 | 35·19 | 28·28 | 27·37 |

Depth 44 M. = 24·1 F.

**4th May, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·70 | 9·28 | 19·52 | 35·26 | 28·34 | 27·30 |
| 5 | 2·7 | 48·79 | 9·33 | 19·49 | 35·21 | 28·30 | 27·25 |
| 10 | 5·5 | 48·81 | 9·34 | 19·49 | 35·21 | 28·30 | 27·25 |
| 20 | 10·9 | 48·81 | 9·34 | 19·49 | 35·21 | 28·30 | 27·25 |
| 30 | 16·4 | 48·81 | 9·34 | 19·49 | 35·21 | 28·30 | 27·25 |
| 49 | 26·8 | 48·81 | 9·34 | 19·49 | 35·21 | 28·30 | 27·25 |

Depth 51 M. = 27·9 F. Fine gravel.

**6th August, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·55 | 15·86 | 19·44 | 35·12 | 28·22 | 25·89 |
| 5 | 2·7 | 60·66 | 15·92 | 19·42 | 35·08 | 28·19 | 25·84 |
| 10 | 5·5 | 60·62 | 15·90 | 19·46* | 35·16 | 28·25 | 25·91 |
| 20 | 10·9 | 60·30 | 15·72 | 19·43 | 35·10 | 28·21 | 25·91 |
| 30 | 16·4 | 60·26 | 15·70 | 19·43 | 35·10 | 28·21 | 25·91 |
| 45 | 24·6 | 60·26 | 15·70 | 19·43 | 35·10 | 28·21 | 25·91 |

Depth 46 M. = 25·1 F. Fine sand with shell.

**22nd November, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 51·60 | 10·89 | 19·53 | 35·28 | 28·35 | 27·03 |
| 5 | 2·7 | 51·94 | 11·08 | 19·51 | 35·25 | 28·33 | 26·97 |
| 10 | 5·5 | 51·98 | 11·10 | 19·51 | 35·25 | 28·33 | 26·96 |
| 20 | 10·9 | 51·98 | 11·10 | 19·52 | 35·26 | 28·34 | 26·98 |
| 30 | 16·4 | 51·98 | 11·10 | 19·51 | 35·25 | 28·32 | 26·96 |
| 47 | 25·7 | 51·98 | 11·10 | 19·51 | 35·25 | 28·32 | 26·96 |

Depth 48 M. = 26·2 F. Sand.

### Station E. 21.

50° 21′ N. Latitude. 0° 19′ W. Longitude.

**29th February, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 45·84 | 7·69 | 19·54 | 35·30 | 28·37 | 27·58 |
| 5 | 2·7 | 45·95 | 7·75 | 19·53 | 35·27 | 28·35 | 27·55 |
| 10 | 5·5 | 45·97 | 7·76 | — | — | — | — |
| 20 | 10·9 | 45·99 | 7·77 | 19·53 | 35·28 | 28·35 | 27·55 |
| 30 | 16·4 | 45·99 | 7·77 | — | — | — | — |
| 45 | 24·6 | 45·97 | 7·76 | 19·53 | 35·28 | 28·35 | 27·55 |

Depth 47 M.=25·7 F. Sand.

**5th May, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·05 | 9·47 | 19·52 | 35·26 | 28·34 | 27·27 |
| 5 | 2·7 | 48·65 | 9·25 | 19·51 | 35·25 | 28·32 | 27·28 |
| 10 | 5·5 | 48·60 | 9·22 | 19·51 | 35·25 | 28·32 | 27·29 |
| 20 | 10·9 | 48·56 | 9·20 | 19·50 | 35·23 | 28·31 | 27·28 |
| 30 | 16·4 | 48·58 | 9·21 | 19·50 | 35·23 | 28·31 | 27·28 |
| 44 | 24·0 | 48·54 | 9·19 | 19·50 | 35·23 | 28·31 | 27·29 |

Depth 46 M.=25·1 F. Rock.

* Bottle badly stoppered: probably too high owing to evaporation.

TABLE I.—*continued.*

| Depth. | | Temperature. | | *Cl.*‰ | *S.*‰ | $\sigma_o$ | $\sigma_t$ | Depth. | | Temperature. | | *Cl.*‰ | *S.*‰ | $\sigma_o$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 21—*continued.*

50° 21′ N. Latitude. 0° 19′ W. Longitude—*continued.*

| 8th August, 1904. | | | | | | | | 13th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 61·50 | 16·39 | 19·40 | 35·05 | 28·16 | 25·71 | 0 | 0 | 56·71 | 13·73 | 19·37 | 34·99 | 28·12 | 26·26 |
| 5 | 2·7 | 60·51 | 15·84 | 19·40 | 35·05 | 28·16 | 25·83 | 5 | 2·7 | 56·89 | 13·83 | 19·37 | 34·99 | 28·12 | 26·24 |
| 10 | 5·5 | 60·48 | 15·82 | 19·40 | 35·05 | 28·16 | 25·84 | 10 | 5·5 | 56·89 | 13·83 | 19·37 | 34·99 | 28·12 | 26·24 |
| 20 | 10·9 | 60·44 | 15·80 | 19·39 | 35·03 | 28·15 | 25·83 | 20 | 10·9 | 56·89 | 13·83 | 19·37 | 34·99 | 28·12 | 26·24 |
| 30 | 16·4 | 60·44 | 15·80 | 19·40 | 35·05 | 28·16 | 25·84 | 30 | 16·4 | 56·91 | 13·84 | 19·37 | 34·99 | 28·12 | 26·23 |
| 48 | 26·2 | 60·44 | 15·80 | 19·39 | 35·03 | 28·15 | 25·83 | 40 | 21·9 | 56·91 | 13·84 | 19·37 | 34·99 | 28·12 | 26·23 |
| | | | | | | | | 48 | 26·2 | 56·91 | 13·84 | 19·37 | 34·99 | 28·12 | 26·23 |
| Depth 50 M.=27·3 F. Shell and gravel. | | | | | | | | Depth 50 M.=27·3 F. Sand. | | | | | | | |

| 9th February, 1905. | | | | | | | | 7th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 47·32 | 8·51 | 19·51 | 35·25 | 28·32 | 27·40 | 0 | 0 | 49·78 | 9·88 | 19.53 | 35·28 | 28·35 | 27·21 |
| 5 | 2·7 | 47·71 | 8·73 | 19·50 | 35·23 | 28·31 | 27·36 | 5 | 2·7 | 49·39 | 9·66 | 19·51 | 35·25 | 28·32 | 27·22 |
| 10 | 5·5 | 47·71 | 8·73 | 19·49 | 35·21 | 28·30 | 27·35 | 10 | 5·5 | 49·35 | 9·64 | 19·51 | 35·25 | 28·32 | 27·22 |
| 20 | 10·9 | 47·71 | 8·73 | 19·50 | 35·23 | 28·31 | 27·36 | 20 | 10·9 | 49·32 | 9·62 | 19·51 | 35·25 | 28·32 | 27·22 |
| 30 | 16·4 | 47·71 | 8·73 | 19·50 | 35·23 | 28·31 | 27·36 | 30 | 16·4 | 49·32 | 9·62 | 19·50 | 35·23 | 28·31 | 27·21 |
| 48 | 26·2 | 47·71 | 8·73 | 19·50 | 35·23 | 28·31 | 27·36 | 40 | 21·9 | 49·32 | 9·62 | 19·52 | 35·26 | 28·34 | 27·24 |
| | | | | | | | | 56 | 30·6 | 49·30 | 9·61 | 19·50 | 35·23 | 28·31 | 27·22 |
| Depth 49 M.=26·8 F. Rock. | | | | | | | | Depth 58 M.=31·7 F. Gravel. | | | | | | | |

| 7th August, 1905. | | | | | | | | 21st November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·24 | 15·69 | 19·43 | 35·10 | 28·21 | 25·91 | 0 | 0 | 52·97 | 11·65 | — | — | — | — |
| 5 | 2·7 | 59·90 | 15·50 | 19·42 | 35·08 | 28·19 | 25·94 | 5 | 2·7 | 53·13 | 11·74 | 19·50 | 35·23 | 28·31 | 26·83 |
| 10 | 5·5 | 59·86 | 15·48 | 19·42 | 35·09 | 28·20 | 25·95 | 10 | 5·5 | 53·15 | 11·75 | 19·50 | 35·23 | 28·31 | 26·83 |
| 20 | 10·9 | 59·85 | 15·47 | 19·41 | 35·07 | 28·18 | 25·94 | 20 | 10·9 | 53·15 | 11·75 | 19·50 | 35·24 | 28·31 | 26·83 |
| 30 | 16·4 | 59·85 | 15·47 | 19·41 | 35·07 | 28·18 | 25·94 | 30 | 16·4 | 53·15 | 11·75 | 19·52 | 35·27 | 28·34 | 26·86 |
| 40 | 21·9 | 59·83 | 15·46 | 19·41 | 35·07 | 28·18 | 25·94 | 48 | 26·2 | 53·15 | 11·75 | 19·52 | 35·26 | 28·34 | 26·86 |
| 50 | 27·3 | 59·83 | 15·46 | 19·41 | 35·07 | 28·18 | 25·94 | | | | | | | | |
| Depth 50 M.=27·3 F. Stones. | | | | | | | | Depth 48 M.=26·2 F. Gravel. | | | | | | | |

## STATION E. 24.

50° 00′ N. Latitude. 0° 21′ W. Longitude.

| 29th February, 1904. | | | | | | | | 5th May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 46·40 | 8·00 | 19·57 | 35·35 | 28·41 | 27·57 | 0 | 0 | 48·69 | 9·27 | 19·38 | 35·01 | 28·14 | 27·11 |
| 5 | 2·7 | 46·76 | 8·20 | 19·55 | 35·32 | 28·38 | 27·51 | 5 | 2·7 | 48·42 | 9·12 | 19·37 | 34·99 | 28·12 | 27·11 |
| 10 | 5·5 | 46·76 | 8·20 | — | — | — | — | 10 | 5·5 | 48·31 | 9·06 | 19·37 | 34·99 | 28·12 | 27·11 |
| 20 | 10·9 | 46·78 | 8·21 | 19·55 | 35·32 | 28·38 | 27·51 | 20 | 10·9 | 48·27 | 9·04 | 19·37 | 34·99 | 28·12 | 27·12 |
| 30 | 16·4 | 46·80 | 8·22 | — | — | — | — | 30 | 16·4 | 48·25 | 9·03 | 19·37 | 34·99 | 28·12 | 27·13 |
| 48 | 26·2 | 46·81 | 8·23 | 19·56 | 35·34 | 28·40 | 27·53 | 49 | 26·8 | 48·25 | 9·03 | 19·37 | 34·99 | 28·12 | 27·13 |
| Depth, 50 M.=27·3 F. | | | | | | | | Depth, 51 M.=27·9 F. Sand and coarse gravel. | | | | | | | |

| 8th August, 1904. | | | | | | | | 13th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·66 | 15·92 | 19·19 | 34·68 | 27·86 | 25·57 | 0 | 0 | 57·31 | 14·06 | 19·34 | 34·95 | 28·08 | 26·15 |
| 5 | 2·7 | 60·75 | 15·97 | 19·17 | 34·64 | 27·83 | 25·50 | 5 | 2·7 | 57·33 | 14·07 | 19·34 | 34·94 | 28·08 | 26·15 |
| 10 | 5·5 | 60·71 | 15·95 | 19·17 | 34·64 | 27·83 | 25·51 | 10 | 5·5 | 57·33 | 14·07 | 19·34 | 34·94 | 28·08 | 26·15 |
| 20 | 10·9 | 60·55 | 15·86 | 19·17 | 34·63 | 27·83 | 25·52 | 20 | 10·9 | 57·34 | 14·08 | 19·34 | 34·94 | 28·08 | 26·14 |
| 30 | 16·4 | 60·53 | 15·85 | 19·17 | 34·63 | 27·83 | 25·52 | 30 | 16·4 | 57·34 | 14·08 | 19·34 | 34·94 | 28·08 | 26·14 |
| 48 | 26 2 | 60·51 | 15·84 | 19·17 | 34·63 | 27·83 | 25·53 | 40 | 21·9 | 57·34 | 14·08 | 19·34 | 34·94 | 28·08 | 26·14 |
| | | | | | | | | 50 | 27·3 | 57·34 | 14·08 | 19·34 | 34·94 | 28·08 | 26·14 |
| Depth, 48 M.=26·2 F. Stones and shell. | | | | | | | | Depth, 50 M.=27·3 F. Shell. | | | | | | | |

## STATION E. 24—*continued.*

### 50° 00′ N. Latitude. 0° 21′ W. Longitude—*continued.*

**10th February, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·20 | 9·00 | 19·48 | 35·19 | 28·28 | 27·29 |
| 5 | 2·7 | 48·61 | 9·23 | 19·47 | 35·17 | 28·27 | 27·24 |
| 10 | 5·5 | 48·61 | 9·23 | 19·47 | 35·18 | 28·27 | 27·24 |
| 20 | 10·9 | 48·61 | 9·23 | 19·47 | 35·17 | 28·27 | 27·24 |
| 30 | 16·4 | 48·61 | 9·23 | 19·45 | 35·14 | 28·24 | 27·21 |
| 40 | 21·9 | 48·63 | 9·24 | 19·47 | 35·18 | 28·27 | 27·24 |
| 55 | 30·1 | 48·63 | 9·24 | 19·47 | 35·18 | 28·27 | 27·24 |

Depth, 57 M. = 31·2 F. Mud.

**4th May, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·21 | 9·56 | 19·48 | 35·19 | 28·28 | 27·19 |
| 5 | 2·7 | 49·10 | 9·50 | 19·47 | 35·17 | 28·27 | 27·19 |
| 10 | 5·5 | 49·10 | 9·50 | 19·47 | 35·17 | 28·27 | 27·19 |
| 20 | 10·9 | 49·10 | 9·50 | 19·45 | 35·14 | 28·24 | 27·16 |
| 30 | 16·4 | 49·10 | 9·50 | 19·48 | 35·19 | 28·28 | 27·20 |
| 48 | 26·2 | 49·10 | 9·50 | 19·47 | 35·17 | 28·27 | 27·19 |

Depth, 49 M. = 26·8 F. Gravel.

**7th August, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·93 | 16·07 | 19·22 | 34·72 | 27·90 | 25·54 |
| 10 | 5·5 | 60·78 | 15·99 | 19·21 | 34·70 | 27·89 | 25·54 |
| 20 | 10·9 | 60·76 | 15·98 | 19·21 | 34·70 | 27·89 | 25·54 |
| 30 | 16·4 | 60·76 | 15·98 | 19·21 | 34·70 | 27·89 | 25·54 |
| 44 | 24·1 | 60·78 | 15·99 | 19·21 | 34·71 | 27·89 | 25·54 |

Depth, 44 M. = 24·1 F. Gravel.

**21st November, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 53·29 | 11·83 | 19·45 | 35·14 | 28·24 | 26·75 |
| 5 | 2·7 | 53·56 | 11·98 | 19·44 | 35·12 | 28·22 | 26·70 |
| 10 | 5·5 | 53·56 | 11·98 | 19·44 | 35·12 | 28·22 | 26·70 |
| 20 | 10·9 | 53·60 | 12·00 | 19·44 | 35·12 | 28·22 | 26·70 |
| 30 | 16·4 | 53·60 | 12·00 | 19·44 | 35·12 | 28·22 | 26·70 |
| 40 | 21·9 | 53·60 | 12·00 | 19·44 | 35·12 | 28·22 | 26·70 |
| 54 | 29·5 | 53·60 | 12·00 | 19·44 | 35·12 | 28·22 | 26·70 |

Depth, 54 M. = 29·5 F. Hard ground.

## STATION E. 12.

### 49° 55′ N. Latitude. 1° 09′ W. Longitude.

**28th February, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 45·46 | 7·48 | 19·43 | 35·10 | 28·21 | 27·45 |
| 7·5 | 4·1 | 45·73 | 7·63 | 19·39 | 35·04 | 28·15 | 27·37 |
| 10 | 5·5 | 45·73 | 7·63 | — | — | — | — |
| 20 | 10·9 | 45·77 | 7·65 | — | — | — | — |
| 30 | 16·4 | 45·77 | 7·65 | 19·40 | 35·06 | 28·17 | 27·39 |
| 40 | 21·9 | 45·84 | 7·69 | — | — | — | — |
| 67 | 36·6 | 45·88 | 7·71 | 19·41 | 35·07 | 28·18 | 27·39 |

Depth 70 M. = 38·3 F. Rock.

**4th May, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·85 | 9·36 | 19·28 | 34·83 | 27·99 | 26·94 |
| 5 | 2·7 | 48·79 | 9·33 | 19·27 | 34·81 | 27·98 | 26·93 |
| 10 | 5·5 | 48·79 | 9·33 | 19·27 | 34·81 | 27·98 | 26·93 |
| 20 | 10·9 | 48·79 | 9·33 | 19·27 | 34·81 | 27·98 | 26·94 |
| 30 | 16·4 | 48·79 | 9·33 | 19·26 | 34·79 | 27·96 | 26·92 |
| 40 | 21·9 | 48·79 | 9·33 | 19·27 | 34·81 | 27·98 | 26·93 |
| 65 | 35·5 | 48·79 | 9·33 | 19·27 | 34·81 | 27·98 | 26·93 |

Depth 68 M. = 37·2 F. Stones.
The depth is uncertain owing to a strong under current.

**8th August, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·67 | 15·93 | 19·24 | 34·77 | 27·94 | 25·61 |
| 5 | 2·7 | 60·73 | 15·96 | 19·23 | 34·74 | 27·92 | 25·57 |
| 10 | 5·5 | 60·73 | 15·96 | 19·23 | 34·74 | 27·92 | 25·57 |
| 20 | 10·9 | 60·73 | 15·96 | 19·23 | 34·74 | 27·92 | 25·58 |
| 30 | 16·4 | 60·73 | 15·96 | 19·23 | 34·74 | 27·92 | 25·57 |
| 40 | 21·9 | 60·73 | 15·96 | 19·23 | 34·74 | 27·92 | 25·58 |
| 57 | 31·2 | 60·73 | 15·96 | 19·23 | 34·75 | 27·92 | 25·59 |

Depth, 57 M. = 31·2 F. Stones.

**13th November, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 57·43 | 14·13 | 19·23 | 34·74 | 27·92 | 25·98 |
| 5 | 2·7 | 57·42 | 14·12 | 19·23 | 34·74 | 27·92 | 25·98 |
| 10 | 5·5 | 57·42 | 14·12 | 19·23 | 34·74 | 27·92 | 25·98 |
| 20 | 10·9 | 57·42 | 14·12 | 19·23 | 34·75 | 27·92 | 25·98 |
| 30 | 16·4 | 57·42 | 14·12 | 19·22 | 34·72 | 27·90 | 25·96 |
| 40 | 21·9 | 57·42 | 14·12 | 19·23 | 34·74 | 27·92 | 25·98 |
| 56 | 30·6 | 57·42 | 14·12 | 19·23 | 34·75 | 27·92 | 25·98 |

Depth, 58 M. = 31·7 F. Rock.

**9th February, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 46·15 | 7·86 | 19·18 | 34·65 | 27·84 | 27·03 |
| 5 | 2·7 | 46·38 | 7·99 | 19·17 | 34·63 | 27·83 | 27·01 |
| 10 | 5·5 | 46·38 | 7·99 | 19·17 | 34·63 | 27·83 | 27·01 |
| 20 | 10·9 | 46·38 | 7·99 | 19·17 | 34·63 | 27·83 | 27·01 |
| 30 | 16·4 | 46·36 | 7·98 | 19·16 | 34·61 | 27·82 | 27·00 |
| 40 | 21·9 | 46·35 | 7·97 | — | — | — | — |
| 57 | 31·2 | 46·36 | 7·98 | 19·17 | 34·63 | 27·83 | 27·01 |

Depth, 58 M. = 31·7 F. Rock.

**7th May, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·69 | 9·83 | 19·50 | 35·23 | 28·31 | 27·18 |
| 5 | 2·7 | 49·57 | 9·76 | 19·48 | 35·19 | 28·28 | 27·16 |
| 10 | 5·5 | 49·57 | 9·76 | 19·48 | 35·19 | 28·28 | 27·16 |
| 20 | 10·9 | 49·60 | 9·78 | 19·49 | 35·21 | 28·30 | 27·18 |
| 30 | 16·4 | 49 60 | 9·78 | 19·49 | 35·21 | 28·30 | 27·18 |
| 40 | 21·9 | 49 60 | 9·78 | 19·49 | 35·21 | 28·30 | 27·18 |
| 57 | 31·2 | 49·60 | 9·78 | 19·49 | 35·21 | 28·30 | 27·18 |

Depth, 60 M. = 32·8 F. Rock.

TABLE I.—*continued.*

| Depth. | | Temperature. | | $Cl.‰$ | $S.‰$ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperatnre. | | $Cl.‰$ | $S.‰$ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 12—*continued.*

### 49° 55′ N. Latitude. 1° 09′ W. Longitude—*continued.*

| 8th August, 1905. | | | | | | | | 18th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | — | — | 19·31 | 34·88 | 28·03 | — | 0 | 0 | 54·14 | 12·30 | 19·53 | 35·28 | 28·35 | 26·76 |
| 5 | 2·7 | 60·73 | 15·96 | 19·30 | 34·87 | 28·02 | 25·67 | 5 | 2·7 | 54·30 | 12·39 | 19·47 | 35·17 | 28·27 | 26·67 |
| 10 | 5·5 | 60·73 | 15·96 | 19·30 | 34·87 | 28·02 | 25·67 | 10 | 5·5 | 54·36 | 12·42 | 19·47 | 35·17 | 28·27 | 26·64 |
| 20 | 10·9 | 60·73 | 15·96 | 19·30 | 34·87 | 28·02 | 25·67 | 20 | 10·9 | 54·36 | 12·42 | 19·48 | 35·19 | 28·28 | 26·67 |
| 30 | 16·4 | 60·73 | 15·96 | 19·30 | 34·87 | 28·02 | 25·67 | 30 | 16·4 | 54·36 | 12·42 | 19·48 | 35·19 | 28·28 | 26·67 |
| 40 | 21·9 | 60·73 | 15·96 | 19·30 | 34·87 | 28·02 | 25·67 | 40 | 21·9 | 54·36 | 12·42 | 19·51 | 35·25 | 28·32 | 26·71 |
| 50 | 27·3 | 60·71 | 15·95 | 19·30 | 34·87 | 28·02 | 25·68 | 58 | 31·7 | 54·36 | 12·42 | 19·48 | 35·19 | 28·28 | 26·67 |
| 68 | 37·2 | 60·69 | 15·94 | 19·31 | 34·88 | 28·03 | 25·69 | | | | | | | | |
| Depth, 70 M. = 38·3 F. Rock. | | | | | | | | Depth, 58 M. = 31·7 F. Rock. | | | | | | | |

## STATION E. 13.

### 50° 20′ N. Latitude. 1° 15′ W. Longitude.

| 28th February, 1904. | | | | | | | | 5th May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 43·77 | 6·54 | 19·38 | 35·01 | 28·14 | 27·52 | 0 | 0 | 47·77 | 8·76 | 19·24 | 34·76 | 27·93 | 26·98 |
| 10 | 5·5 | 44·13 | 6·74 | 19·36 | 34·97 | 28·11 | 27·46 | 5 | 2·7 | 47·86 | 8·81 | 19·24 | 34·76 | 27·93 | 26·97 |
| 20 | 10·9 | 44·13 | 6·74 | — | — | — | — | 10 | 5·5 | 47·89 | 8·83 | 19·24 | 34·76 | 27·93 | 26·97 |
| 30 | 16·4 | 44·13 | 6·74 | 19·36 | 34·97 | 28·11 | 27·46 | 20 | 10·9 | 47·89 | 8·83 | 19·26 | 34·79 | 27·96 | 27·00 |
| 49 | 26·8 | 44·13 | 6·74 | 19·36 | 34·97 | 28·11 | 27·46 | 30 | 16·4 | 47·93 | 8·85 | 19·28 | 34·83 | 27·99 | 27·03 |
| | | | | | | | | 40 | 21·9 | 47·93 | 8·85 | 19·29 | 34·85 | 28·00 | 27·04 |
| | | | | | | | | 52 | 28·4 | 47·93 | 8·85 | 19·30 | 34·87 | 28·02 | 27·06 |
| Depth, 50 M. = 27·3 F. Rock. | | | | | | | | Depth, 52 M. = 28·4 F. Rock. Water very cloudy. | | | | | | | |

| 8th August, 1904. | | | | | | | | 13th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 59·86 | 15·48 | 19·41 | 35·07 | 28·18 | 25·93 | 0 | 0 | 56·79 | 13·77 | 19·46 | 35·16 | 28·25 | 26·37 |
| 5 | 2·7 | 59·81 | 15·45 | 19·41 | 35·07 | 28·18 | 25·93 | 5 | 2·7 | 56·84 | 13·80 | 19·45 | 35·14 | 28·24 | 26·36 |
| 10 | 5·5 | 59·77 | 15·43 | 19·41 | 35·07 | 28·18 | 25·93 | 10 | 5·5 | 56·84 | 13·80 | 19·44 | 35·13 | 28·23 | 26·35 |
| 20 | 10·9 | 59·76 | 15·42 | 19·41 | 35·07 | 28·18 | 25·94 | 20 | 10·9 | 56·88 | 13·82 | 19·44 | 35·12 | 28·22 | 26·33 |
| 30 | 16·4 | 59·76 | 15·42 | 19·41 | 35·07 | 28·18 | 25·95 | 30 | 16·4 | 56·88 | 13·82 | 19·44 | 35·12 | 28·22 | 26·33 |
| 40 | 21·9 | 59·72 | 15·40 | 19·41 | 35·07 | 28·18 | 25·95 | 40 | 21·9 | 56·88 | 13·82 | 19·44 | 35·12 | 28·22 | 26·33 |
| 56 | 30·6 | 59·72 | 15·40 | 19·41 | 35·07 | 28·18 | 25·95 | 55 | 30·1 | 56·89 | 13·83 | 19·43 | 35·10 | 28·21 | 26·32 |
| Depth, 57 M. = 31·2 F. Rock. | | | | | | | | Depth, 60 M. = 32·8 F. Fine sand and shell. | | | | | | | |

| 9th February, 1905. | | | | | | | | 7th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·72 | 9·29 | 19·53 | 35·28 | 28·35 | 27·31 | 0 | 0 | 49·21 | 9·56 | 19·38 | 35·01 | 28·14 | 27·06 |
| 5 | 2·7 | 48·99 | 9·44 | 19·52 | 35·26 | 28·34 | 27·27 | 5 | 2·7 | 49·10 | 9·50 | 19·36 | 34·97 | 28·11 | 27·04 |
| 10 | 5·5 | 48·99 | 9·44 | 19·52 | 35·26 | 28·34 | 27·27 | 10 | 5·5 | 49·10 | 9·50 | 19·36 | 34·97 | 28·11 | 27·04 |
| 20 | 10·9 | 48·99 | 9·44 | 19·52 | 35·26 | 28·34 | 27·27 | 20 | 10·9 | 49·12 | 9·51 | 19·35 | 34·96 | 28·09 | 27·02 |
| 30 | 16·4 | 48·99 | 9·44 | 19·53 | 35·28 | 28·35 | 27·28 | 30 | 16·4 | 49·12 | 9·51 | 19·35 | 34·96 | 28·09 | 27·02 |
| 40 | 21·9 | 49·01 | 9·45 | 19·52 | 35·26 | 28·34 | 27·27 | 47 | 25·7 | 49·12 | 9·51 | 19·36 | 34·97 | 28·11 | 27·04 |
| 60 | 32·8 | 49·01 | 9·45 | 19·52 | 35·26 | 28·34 | 27·27 | | | | | | | | |
| Depth, 62 M. = 33·9 F. Rock. | | | | | | | | Depth, 49 M. = 26·8 F. Rock. | | | | | | | |

| 7th August, 1905. | | | | | | | | 18th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 62·26 | 16·81 | 19·38 | 35·01 | 28·14 | 25·59 | 0 | 0 | 53·01 | 11·67 | 19·55 | 35·33 | 28·39 | 26·92 |
| 5 | 2·7 | 62·38 | 16·88 | 19·36 | 34·97 | 28·11 | 25·55 | 5 | 2·7 | 53·24 | 11·80 | 19·55 | 35·32 | 28·38 | 26·89 |
| 10 | 5·5 | 62·37 | 16·87 | 19·37 | 34·99 | 28·12 | 25·56 | 10 | 5·5 | 53·31 | 11·84 | 19·55 | 35·32 | 28·38 | 26·88 |
| 20 | 10·9 | 62·31 | 16·84 | 19·38 | 35·01 | 28·14 | 25·58 | 20 | 10·9 | 53·33 | 11·85 | 19·54 | 35·30 | 28·37 | 26·87 |
| 30 | 16·4 | 62·28 | 16·82 | 19·38 | 35·01 | 28·14 | 25·59 | 30 | 16·4 | 53·31 | 11·84 | 19·55 | 35·32 | 28·38 | 26·88 |
| 40 | 21·9 | 62·26 | 16·81 | 19·37 | 34·99 | 28·12 | 25·57 | 40 | 21·9 | 53·29 | 11·83 | 19·55 | 35·33 | 28·39 | 26·89 |
| 50 | 27·3 | 62·26 | 16·81 | 19·38 | 35·01 | 28·14 | 25·59 | 53 | 29·0 | 53·29 | 11·83 | 19·55 | 35·33 | 28·39 | 26·89 |
| Depth, 52 M. = 28·4 F. Gravel. | | | | | | | | Depth, 54 M. = 29·5 F. Fine sand and shell. | | | | | | | |

TABLE I.—*continued.*

| Depth. | | Temperature. | | *Cl.*‰ | *S.*‰ | $\sigma_o$ | $\sigma_t$ | Depth. | | Temperature. | | *Cl.*‰ | *S.*‰ | $\sigma_o$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 14.

50° 33′ N. Latitude. 1° 17′ W. Longitude.

| 29th February, 1904. | | | | | | | | 5th May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 43·14 | 6·19 | 19·06 | 34·43 | 27·67 | 27·10 | 0 | 0 | 49·24 | 9·58 | 19·08 | 34·47 | 27·70 | 26·63 |
| 10 | 5·5 | 43·34 | 6·30 | 19·06 | 34·43 | 27·67 | 27·09 | 5 | 2·7 | 49·15 | 9·53 | 19·06 | 34·43 | 27·67 | 26·61 |
| 20 | 10·9 | 43·34 | 6·30 | — | — | — | — | 10 | 5·5 | 49·12 | 9·51 | 19·08 | 34·47 | 27·70 | 26·64 |
| 40 | 21·9 | 43·34 | 6·30 | — | — | — | — | 15 | 8·2 | 49·12 | 9·51 | 19·08 | 34·47 | 27·70 | 26·64 |
| 59 | 32·3 | 43·32 | 6·29 | 19·07 | 34·45 | 27·68 | 27·10 | 24 | 13·1 | 49·12 | 9·51 | 19·08 | 34·47 | 27·70 | 26·64 |
| Depth, 66 M.=36·1 F. Rock. Bottom very uneven. | | | | | | | | Depth, 25 M.=13·7 F. Rock. Bottom very uneven. | | | | | | | |

| 8th August, 1904. | | | | | | | | 13th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 64·26 | 17·92 | 19·22 | 34·72 | 27·90 | 25·10 | 0 | 0 | 54·99 | 12·77 | 19·34 | 34·94 | 28·08 | 26·41 |
| 5 | 2·7 | — | — | 19·22 | 34·72 | 27·90 | — | 5 | 2·7 | 55·09 | 12·83 | 19·32 | 34·90 | 28·05 | 26·37 |
| 10 | 5·4 | — | — | 19·22 | 34·72 | 27·90 | — | 10 | 5·5 | 55·09 | 12·83 | 19·32 | 34·90 | 28·05 | 26·37 |
| 20 | 10·9 | — | — | 19·22 | 34·73 | 27·91 | — | 20 | 10·9 | 55·09 | 12·83 | 19·32 | 34·90 | 28·05 | 26·37 |
| 37 | 20·2 | 64·26 | 17·92 | 19·22 | 34·72 | 27·90 | 25·10 | 30 | 16·4 | 55·09 | 12·83 | 19·32 | 34·90 | 28·05 | 26·37 |
| | | | | | | | | 40 | 21·9 | 55·13 | 12·85 | 19·32 | 34·90 | 28·05 | 26·37 |
| | | | | | | | | 59 | 32·3 | 55·13 | 12·85 | 19·34 | 34·94 | 28·08 | 26·40 |
| Depth, 38 M.=20·8 F. Rock. The temperatures were above the range of the thermometers used with the water bottle, and were taken with the surface thermometer. | | | | | | | | Depth, 62 M.=33·9 F. Rock. | | | | | | | |

| 9th February, 1905. | | | | | | | | 8th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 44·11 | 6·73 | 19·38 | 35·01 | 28·14 | 27·49 | 0 | 0 | 49·96 | 9·98 | 19·27 | 34·81 | 27·98 | 26·83 |
| 5 | 2·7 | 44·40 | 6·89 | 19·38 | 35·01 | 28 14 | 27·47 | 5 | 2·7 | 49·84 | 9·91 | 19·27 | 34·81 | 27·98 | 26·85 |
| 10 | 5·5 | 44·40 | 6·89 | 19·38 | 35·01 | 28·14 | 27·46 | 10 | 5·5 | 49·84 | 9·91 | 19·27 | 34·81 | 27·98 | 26·85 |
| 25 | 13·7 | 44·42 | 6·90 | 19·38 | 35·01 | 28·14 | 27·47 | 25 | 13·7 | 49·86 | 9·92 | 19·27 | 34·81 | 27·98 | 26·85 |
| Depth, 26 M.=14·2 F. Rock. | | | | | | | | Depth, 26 M.=14·2 F. Rock. | | | | | | | |

| 7th August, 1905. | | | | | | | | 18th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 64·26 | 17·92 | 19·35 | 34·96 | 28·09 | 25·28 | 0 | 0 | 49·78 | 9·88 | 19·43 | 35·11 | 28·21 | 27·07 |
| 5 | 2·7 | — | — | 19·34 | 34·94 | 28·08 | — | 30 | 16·4 | 50·04 | 10·02 | 19·42 | 35·09 | 28·20 | 27·04 |
| 10 | 5·5 | — | — | 19·34 | 34·94 | 28·08 | — | | | | | | | | |
| 24 | 13·1 | 64·26 | 17·92 | 19·24* | 34·76 | 27·93 | 25·28 | | | | | | | | |
| Depth, 24 M.=13·1 F. Stones. | | | | | | | | Depth, 34 M.=18·6 F. Rock. | | | | | | | |

## STATION E. 15.

50° 27′ N. Latitude. 1° 50′ W. Longitude.

| 4th May, 1904. | | | | | | | | 12th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·74 | 9·30 | 19·42 | 35·09 | 28·20 | 27·16 | 0 | 0 | 55·96 | 13·31 | 19·45 | 35·14 | 28·24 | 26·46 |
| 5 | 2·7 | 48·61 | 9·23 | 19·42 | 35·08 | 28·19 | 27·16 | 5 | 2·7 | 56·01 | 13·34 | 19·42 | 35·08 | 28·19 | 26·40 |
| 10 | 5·5 | 48·61 | 9·23 | 19·42 | 35·08 | 28·19 | 27·16 | 10 | 5·5 | 56·01 | 13·34 | 19·43 | 35·10 | 28·21 | 26·42 |
| 20 | 10·9 | 48·61 | 9·23 | 19·42 | 35·08 | 28·19 | 27·16 | 20 | 10·9 | 56·05 | 13·36 | 19·42 | 35·09 | 28·20 | 26·41 |
| 34 | 18·6 | 48·61 | 9·23 | 19·42 | 35·08 | 28·19 | 27·16 | 30 | 16·4 | 56·05 | 13·36 | 19·42 | 35·09 | 28·20 | 26·41 |
| | | | | | | | | 40 | 21·9 | 56·05 | 13·36 | 19·43 | 35·10 | 28·21 | 26·42 |
| Depth, 36 M.=19·7 F. Rock. | | | | | | | | Depth 42 M.=23·0 F. Stones. | | | | | | | |

* Analysis repeated.

TABLE I.—*continued.*

| Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 15—*continued.*

50° 27′ N. Latitude. 1° 50′ W. Longitude—*continued.*

| 9th May, 1905. | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 50·05 | 10·03 | 19·48 | 35·19 | 28·28 | 27·11 | — | — | — | — | — | — | — | — |
| 5 | 2·7 | 50·00 | 10·00 | 19·47 | 35·17 | 28·27 | 27·11 | — | — | — | — | — | — | — | — |
| 10 | 5·5 | 50·00 | 10·00 | 19·47 | 35·17 | 28·27 | 27·11 | — | — | — | — | — | — | — | — |
| 20 | 10·9 | 50·00 | 10·00 | 19·47 | 35·17 | 28·27 | 27·11 | — | — | — | — | — | — | — | — |
| 30 | 16·4 | 50·00 | 10·00 | 19·47 | 35·17 | 28·27 | 27·11 | — | — | — | — | — | — | — | — |
| 40 | 21·9 | 50·00 | 10·00 | 19·47 | 35·17 | 28·27 | 27·11 | — | — | — | — | — | — | — | — |
| Depth, 43 M. = 23·5 F. Sand and rock. | | | | | | | | | | | | | | | |

## STATION E. 11.

50° 05′ N. Latitude. 1° 58′ W. Longitude.

| 28th February, 1904. | | | | | | | | 4th May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 47·43 | 8·57 | 19·57 | 35·35 | 28·41 | 27·48 | 0 | 0 | 49·06 | 9·48 | 19·48 | 35·19 | 28·28 | 27·21 |
| 5 | 2·7 | 47·55 | 8·64 | 19·56 | 35·34 | 28·40 | 27·46 | 5 | 2·7 | 49·05 | 9·47 | 19·47 | 35·17 | 28·27 | 27·20 |
| 10 | 5·5 | 47·57 | 8·65 | — | — | — | — | 10 | 5·5 | 49·05 | 9·47 | 19·47 | 35·17 | 28·27 | 27·20 |
| 15 | 8·2 | 47·57 | 8·65 | — | — | — | — | 20 | 10·9 | 49·05 | 9·47 | 19·47 | 35·17 | 28·27 | 27·20 |
| 20 | 10·9 | 47·57 | 8·65 | 19·57 | 35·35 | 28·41 | 27·47 | 30 | 16·4 | 49·06 | 9·48 | 19·47 | 35·17 | 28·27 | 27·20 |
| 30 | 16·4 | 47·57 | 8·65 | — | — | — | — | 40 | 21·9 | 49·05 | 9·47 | 19·47 | 35·17 | 28·27 | 27·20 |
| 40 | 21·9 | 47·57 | 8·65 | — | — | — | — | 58 | 31·7 | 49·06 | 9·48 | 19·45 | 35·14 | 28·24 | 27·17 |
| 57 | 31·2 | 47·57 | 8·65 | 19·55 | 35·32 | 28·38 | 27·44 | | | | | | | | |
| Depth, 60 M. = 32·8 F. Sand and stones. | | | | | | | | Depth, 60 M. = 32·8 F. Stones. | | | | | | | |

| 7th August, 1904. | | | | | | | | 12th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 59·40 | 15·22 | 19·42 | 35·09 | 28·20 | 26·01 | 0 | 0 | 57·22 | 14·01 | 19·47 | 35·17 | 28·27 | 26·34 |
| 5 | 2·7 | 59·38 | 15·21 | 19·40 | 35·05 | 28·16 | 25·98 | 5 | 2·7 | 57·24 | 14·02 | 19·46 | 35·16 | 28·25 | 26·32 |
| 10 | 5·5 | 59·36 | 15·20 | 19·40 | 35·05 | 28·16 | 25·98 | 10 | 5·5 | 57·24 | 14·02 | 19·46 | 35·16 | 28·25 | 26·32 |
| 20 | 10·9 | 59·36 | 15·20 | 19·39 | 35·04 | 28·15 | 25·98 | 20 | 10·9 | 57·24 | 14·02 | 19·46 | 35·16 | 28·25 | 26·32 |
| 30 | 16·4 | 59·34 | 15·19 | 19·39 | 35·04 | 28·15 | 25·98 | 30 | 16·4 | 57·24 | 14·02 | 19·46 | 35·16 | 28·25 | 26·32 |
| 40 | 21·9 | 59·32 | 15·18 | 19·39 | 35·04 | 28·15 | 25·98 | 40 | 21·9 | 57·24 | 14·02 | 19·46 | 35·16 | 28·25 | 26·32 |
| 60 | 32·8 | 59·32 | 15·18 | 19·40 | 35·06 | 28·17 | 25·99 | 58 | 31·7 | 57·24 | 14·02 | 19·46 | 35·16 | 28·25 | 26·32 |
| Depth, 61 M. = 33·4 F. Stones and sand. | | | | | | | | Depth, 59 M. = 32·3 F. Stones. | | | | | | | |

| 9th February, 1905. | | | | | | | | 9th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·99 | 9·44 | 19·55 | 35·32 | 28·38 | 27·31 | 0 | 0 | 50·50 | 10·28 | 19·62 | 35·44 | 28·48 | 27·26 |
| 5 | 2·7 | 49·37 | 9·65 | 19·54 | 35·30 | 28·37 | 27·27 | 5 | 2·7 | 50·22 | 10·12 | 19·61 | 35·43 | 28·47 | 27·28 |
| 10 | 5·5 | 49·37 | 9·65 | 19·53 | 35·28 | 28·35 | 27·25 | 10 | 5·5 | 50·20 | 10·11 | 19·60 | 35·41 | 28·46 | 27·27 |
| 20 | 10·9 | 49·37 | 9·65 | 19·54 | 35·30 | 28·37 | 27·27 | 20 | 10·9 | 50·18 | 10·10 | 19·60 | 35·41 | 28·46 | 27·28 |
| 30 | 16·4 | 49·39 | 9·66 | 19·54 | 35·30 | 28·37 | 27·26 | 30 | 16·4 | 50·18 | 10·10 | 19·61 | 35·43 | 28·47 | 27·29 |
| 40 | 21·9 | 49·39 | 9·66 | 19·53 | 35·28 | 28·35 | 27·24 | 40 | 21·9 | 50·18 | 10·10 | 19·61 | 35·43 | 28·47 | 27·29 |
| 58 | 31·7 | 49·39 | 9·66 | 19·55 | 35·32 | 28·38 | 27·27 | 57 | 31·2 | 50·18 | 10·10 | 19·60 | 35·41 | 28·46 | 27·28 |
| Depth, 61 M. = 33·4 F. Stones. | | | | | | | | Depth, 59 M. = 32·3 F. Rock. | | | | | | | |

| 8th August, 1905. | | | | | | | | 18th November, 1905 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 59·77 | 15·43 | 19·55 | 35·32 | 28·38 | 26·13 | 0 | 0 | 53·65 | 12·03 | 19·55 | 35·33 | 28·39 | 26·85 |
| 5 | 2·7 | 59·54 | 15·30 | 19·54 | 35·30 | 28·37 | 26·16 | 5 | 2·7 | 53·87 | 12·15 | 19·55 | 35·32 | 28·38 | 26·82 |
| 10 | 5·5 | 59·77 | 15·43 | 19·54 | 35·30 | 28·37 | 26·12 | 10 | 5·5 | 53·94 | 12·19 | 19·55 | 35·32 | 28·38 | 26·81 |
| 20 | 10·9 | 59·41 | 15·23 | 19·54 | 35·30 | 28·37 | 26·17 | 20 | 10·9 | 53·94 | 12·19 | 19·55 | 35·33 | 28·39 | 26·82 |
| 30 | 16·4 | 59·40 | 15·22 | 19·54 | 35·30 | 28·37 | 26·17 | 30 | 16·4 | 53·94 | 12·19 | 19·55 | 35·32 | 28·38 | 26·81 |
| 40 | 21·9 | 59·40 | 15·22 | 19·54 | 35·30 | 28·37 | 26·17 | 40 | 21·9 | 53·94 | 12·19 | 19·54 | 35·30 | 28·37 | 26·80 |
| 58 | 31·7 | 59·38 | 15·21 | 19·54 | 35·30 | 28·37 | 26·18 | 55 | 30·1 | 53·94 | 12·19 | 19·55 | 35·33 | 28·39 | 26·82 |
| Depth, 62 M. = 33·9 F. Coarse sand and stone. | | | | | | | | Depth, 56 M. = 30·6 F. Stones. | | | | | | | |

TABLE I.—*continued.*

| Depth. | | Temperature. | | $Cl.^{o}/_{oo}$ | $S.^{o}/_{oo}$ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | $Cl.^{o}/_{oo}$ | $S.^{o}/_{oo}$ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 16.

### 50° 23′ N. Latitude. 2° 28′ W. Longitude.

**27th February, 1904.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 45·43 | 7·46 | 19·33 | 34·93 | 28·07 | 27·32 |
| 5 | 2·7 | 45·70 | 7·61 | 19·32 | 34·90 | 28·05 | 27·28 |
| 10 | 5·5 | 45·73 | 7·63 | 19·31 | 34·89 | 28·04 | 27·26 |
| 20 | 10·9 | 45·77 | 7·65 | 19·33 | 34·92 | 28·06 | 27·28 |
| 30 | 16·4 | 45·77 | 7·65 | 19·33 | 34·92 | 28·06 | 27·28 |
| 40 | 21·9 | 45·77 | 7·65 | 19·33 | 34·92 | 28·06 | 27·28 |
| 49 | 26·8 | 45·75 | 7·64 | 19·33 | 34·92 | 28·06 | 27·28 |

Depth, 53 M. = 29·0 F. Coarse sand. Much mud and sand in suspension

**4th May, 1904.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·28 | 9·60 | 19·38 | 35·01 | 28·14 | 27·05 |
| 5 | 2·7 | 48·87 | 9·37 | 19·37 | 35·00 | 28·13 | 27·08 |
| 10 | 5·5 | 48·78 | 9·32 | 19·37 | 35·00 | 28·13 | 27·09 |
| 20 | 10·9 | 48·78 | 9·32 | 19·37 | 35·00 | 28·13 | 27·09 |
| 30 | 16·4 | 48·72 | 9·29 | 19·37 | 35·00 | 28·13 | 27·09 |
| 40 | 21·9 | 48·70 | 9·28 | 19·38 | 35·01 | 28·14 | 27·10 |
| 52 | 28·4 | 48·70 | 9·28 | 19·37 | 35·00 | 28·13 | 27·09 |

Depth, 54 M. = 29·5 F. Stones.

**4th August, 1904.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 61·47 | 16·37 | 19·39 | 35·04 | 28·15 | 25·71 |
| 5 | 2·7 | 61·47 | 16·37 | 19·39 | 35·03 | 28·15 | 25·70 |
| 10 | 5·5 | 62·20 | 16·78 | 19·39 | 35·04 | 28·15 | 25·70 |
| 20 | 10·9 | 61·47 | 16·37 | 19·39 | 35·04 | 28·15 | 25·71 |
| 30 | 16·4 | 61·45 | 16·36 | 19·39 | 35·04 | 28·15 | 25·71 |
| 40 | 21·9 | 61·45 | 16·36 | 19·39 | 35·04 | 28·15 | 25·71 |
| 50 | 27·3 | 61·45 | 16·36 | 19·39 | 35·04 | 28·15 | 25·71 |

Depth, 52 M. = 28·4 F. Coarse gravel and stones.

——

Not worked in November, 1904.

**8th February, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 46·83 | 8·24 | 19·50 | 35·23 | 28·31 | 27·44 |
| 5 | 2·7 | 47·14 | 8·41 | 19·47 | 35·17 | 28·27 | 27·37 |
| 10 | 5·5 | 47·07 | 8·37 | 19·47 | 35·17 | 28·27 | 27·38 |
| 20 | 10·9 | 47·03 | 8·35 | 19·47 | 35·17 | 28·27 | 27·38 |
| 30 | 16·4 | 47·14 | 8·41 | 19·48 | 35·19 | 28·28 | 27·39 |
| 40 | 21·9 | 47·10 | 8·39 | 19·47 | 35·17 | 28·27 | 27·38 |
| 52 | 28·4 | 47·08 | 8·38 | 19·48 | 35·19 | 28·28 | 27·39 |

Depth, 54 M. = 29·5 F. Gravel and rock.

**10th May, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·98 | 9·99 | 19·50 | 35·23 | 28·31 | 27·15 |
| 5 | 2·7 | 49·95 | 9·97 | 19·49 | 35·21 | 28·30 | 27·14 |
| 10 | 5·5 | 49·96 | 9·98 | 19·48 | 35·19 | 28·28 | 27·13 |
| 20 | 10·9 | 49·96 | 9·98 | 19·49 | 35·21 | 28·30 | 27·14 |
| 30 | 16·4 | 49·96 | 9·98 | 19·49 | 35·21 | 28·30 | 27·14 |
| 40 | 21·9 | 49·96 | 9·98 | 19·48 | 35·19 | 28·28 | 27·12 |
| 52 | 28·4 | 49·98 | 9·99 | 19·48 | 35·19 | 28·28 | 27·12 |

Depth, 56 M. = 30·6 F. Gravel and rock.

**9th August, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 59·90 | 15·50 | 19·52 | 35·26 | 28·34 | 26·08 |
| 5 | 2·7 | 59·97 | 15·54 | 19·49 | 35·22 | 28·30 | 26·04 |
| 10 | 5·5 | 59·97 | 15·54 | 19·50 | 35·23 | 28·31 | 26·05 |
| 20 | 10·9 | 59·97 | 15·54 | 19·50 | 35·23 | 28·31 | 26·05 |
| 30 | 16·4 | 59·99 | 15·55 | 19·50 | 35·23 | 28·31 | 26·05 |
| 40 | 21·9 | 59·99 | 15·55 | 19·50 | 35·23 | 28·31 | 26·05 |
| 52 | 28·4 | 59·97 | 15·54 | 19·50 | 35·23 | 28·31 | 26·05 |

Depth, 54 M. = 29·5 F. Stones.

**17th November, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 52·07 | 11·15 | 19·58 | 35·37 | 28·43 | 27·06 |
| 5 | 2·7 | 52·34 | 11·30 | 19·57 | 35·35 | 28·41 | 27·01 |
| 10 | 5·5 | 52·38 | 11·32 | 19·57 | 35·35 | 28·41 | 27·01 |
| 20 | 10·9 | 52·38 | 11·32 | 19·57 | 35·35 | 28·41 | 27·01 |
| 30 | 16·4 | 52·39 | 11·33 | 19·57 | 35·35 | 28·41 | 27·01 |
| 40 | 21·9 | 52·39 | 11·33 | 19·57 | 35·36 | 28·42 | 27·02 |
| 55 | 30·1 | 52·39 | 11·33 | 19·57 | 35·35 | 28·41 | 27·01 |

Depth, 57 M. = 31·2 F. Stones.

## STATION E. 10.

### 49° 49′ N. Latitude. 2° 33′ W. Longitude.

**28th February, 1904.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 47·08 | 8·38 | 19·55 | 35·32 | 28·38 | 27·48 |
| 5 | 2·7 | 47·17 | 8·43 | 19·53 | 35·29 | 28·36 | 27·45 |
| 10 | 5·5 | 47·17 | 8·43 | — | — | — | — |
| 15 | 8·2 | 47·17 | 8·43 | — | — | — | — |
| 20 | 10·9 | 47·17 | 8·43 | 19·54 | 35·30 | 28·37 | 27·46 |
| 30 | 16·4 | 47·17 | 8·43 | — | — | — | — |
| 40 | 21·9 | 47·17 | 8·43 | — | — | — | — |
| 50 | 27·3 | 47·17 | 8·43 | 19·54 | 35·30 | 28·37 | 27·46 |
| 97 | 53·0 | 47·21 | 8·45 | 19·53 | 35·29 | 28·36 | 27·46 |

Depth, 97 M. = 53·0 F. Rock.
The exact position of the station in the deepest water could not be picked up owing to the strength of the tide.

**4th May, 1904.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·90 | 9·39 | 19·50 | 35·24 | 28·31 | 27·26 |
| 5 | 2·7 | 48·90 | 9·39 | 19·49 | 35·22 | 28·30 | 27·25 |
| 10 | 5·5 | 48·90 | 9·39 | 19·49 | 35·21 | 28·30 | 27·24 |
| 20 | 10·9 | 48·90 | 9·39 | 19·49 | 35·21 | 28·30 | 27·24 |
| 30 | 16·4 | 48·90 | 9·39 | 19·49 | 35·22 | 28·30 | 27·25 |
| 40 | 21·9 | 48·90 | 9·39 | 19·50 | 35·23 | 28·31 | 27·25 |
| 50 | 27·3 | 48·90 | 9·39 | 19·49 | 35·22 | 28·30 | 27·25 |
| 80 | 43·7 | 48·90 | 9·39 | 19·49 | 35·22 | 28·30 | 27·25 |
| 135 | 73·8 | 48·88 | 9·38 | 19·50 | 35·23 | 28·31 | 27·25 |

Depth, 142 M. = 77·6 F. Rock.

TABLE I.—*continued.*

| Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 10—*continued.*

### 49° 49′ N. Latitude. 2° 33′ W. Longitude—*continued.*

| 4th August, 1904. | | | | | | | | 12th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 59·41 | 15·23 | 19·38 | 35·02 | 28·14 | 25·96 | 0 | 0 | 57·78 | 14·32 | 19·52 | 35·26 | 28·34 | 26·34 |
| 5 | 2·7 | 59·34 | 15·19 | 19·38 | 35·01 | 28·14 | 25·96 | 5 | 2·7 | 57·72 | 14·29 | 19·51 | 35·25 | 28·32 | 26·33 |
| 10 | 5·5 | 59·07 | 15·04 | 19·39 | 35·04 | 28·15 | 26·03 | 10 | 5·5 | 57·65 | 14·25 | 19·51 | 35·25 | 28·32 | 26·34 |
| 20 | 10·9 | 58·55 | 14·75 | 19·44 | 35·12 | 28·22 | 26·13 | 20 | 10·9 | 57·63 | 14·24 | 19·52 | 35·26 | 28·34 | 26·36 |
| 30 | 16·4 | 58·44 | 14·69 | 19·45 | 35·14 | 28·24 | 26·16 | 30 | 16·4 | 57·61 | 14·23 | 19·52 | 35·26 | 28·34 | 26·36 |
| 40 | 21·9 | 58·42 | 14·68 | 19·45 | 35·15 | 28·24 | 26·18 | 40 | 21·9 | 57·61 | 14·23 | 19·52 | 35·26 | 28·34 | 26·36 |
| 75 | 41·0 | 58·44 | 14·69 | 19·45 | 35·15 | 28·24 | 26·17 | 50 | 27·3 | 57·56 | 14·20 | 19·52 | 35·26 | 28·34 | 26·37 |
| 100 | 54·7 | 58·44 | 14·69 | 19·45 | 35·15 | 28·24 | 26·17 | 75 | 41·0 | 57·52 | 14·18 | 19·52 | 35·26 | 28·34 | 26·37 |
| 140 | 76·5 | 58·42 | 14·68 | 19·46 | 35·16 | 28·25 | 26·18 | 100 | 54·7 | 57·52 | 14·18 | 19·52 | 35·26 | 28·34 | 26·37 |
| | | | | | | | | 144 | 78·7 | 57·52 | 14·18 | 19·52 | 35·26 | 28·34 | 26·37 |
| Depth, 141 M. = 77·1 F. Stones. | | | | | | | | Depth, 150 M. = 82·0 F. Gravel. | | | | | | | |

| 9th February, 1905. | | | | | | | | 9th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·59 | 9·77 | 19·57 | 35·35 | 28·41 | 27·28 | 0 | | 50·14 | 10·08 | 19·58 | 35·37 | 28·43 | 27·25 |
| 5 | 2·7 | 49·78 | 9·88 | 19·57 | 35·35 | 28·41 | 27·27 | 5 | 2·7 | 50·07 | 10·04 | 19·57 | 35·35 | 28·41 | 27·24 |
| 10 | 5·5 | 49·78 | 9·88 | 19·57 | 35·35 | 28·41 | 27·27 | 15 | 8·2 | 50·07 | 10·04 | 19·57 | 35·35 | 28·41 | 27·24 |
| 20 | 10·9 | 49·80 | 9·89 | 19·57 | 35·35 | 28·41 | 27·26 | 30 | 16·4 | 50·07 | 10·04 | 19·58 | 35·37 | 28·43 | 27·26 |
| 30 | 16·4 | 49·80 | 9·89 | — | — | — | — | 50 | 27·3 | 50·02 | 10·01 | 19·56 | 35·34 | 28·40 | 27·23 |
| 40 | 21·9 | 49·78 | 9·88 | 19·58 | 35·37 | 28·43 | 27·26 | 100 | 54·7 | 50·04 | 10·02 | 19·57 | 35·35 | 28·41 | 27·24 |
| 50 | 27·3 | 49·78 | 9·88 | — | — | — | — | 155 | 84·7 | 50·07 | 10·04 | 19·57 | 35·35 | 28·41 | 27·24 |
| 75 | 41·0 | 49·77 | 9·87 | 19·58 | 35·37 | 28·43 | 27·29 | | | | | | | | |
| 100 | 54·7 | 49·77 | 9·87 | 19·58 | 35·37 | 28·43 | 27·29 | | | | | | | | |
| 155 | 84·7 | 49·77 | 9·87 | 19·58 | 35·37 | 28·43 | 27·29 | | | | | | | | |
| Depth, 160 M. = 87·5 F. Rock. | | | | | | | | Depth, 158 M. = 86·4 F. Rock. | | | | | | | |

| 8th August, 1905. | | | | | | | | 17th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 59·13 | 15·07 | 19·51 | 35·25 | 28·32 | 26·16 | 0 | 0 | 54·73 | 12·63 | 19·57 | 35·35 | 28·41 | 26·76 |
| 5 | 2·7 | 59·07 | 15·04 | 19·53 | 35·28 | 28·35 | 26·19 | 5 | 2·7 | 55·22 | 12·90 | 19·55 | 35·33 | 28·39 | 26·68 |
| 10 | 5·5 | 59·07 | 15·04 | 19·49 | 35·21 | 28·30 | 26·15 | 10 | 5·5 | 55·22 | 12·90 | 19·56 | 35·34 | 28·40 | 26·69 |
| 20 | 10·9 | 59·04 | 15·02 | 19·48 | 35·20 | 28·29 | 26·14 | 20 | 10·9 | 55·22 | 12·90 | 19·55 | 35·33 | 28·39 | 26·68 |
| 30 | 16·4 | 59·02 | 15·01 | 19·48 | 35·20 | 28·29 | 26·15 | 30 | 16·4 | 55·22 | 12·90 | 19·56 | 35·34 | 28·40 | 26·69 |
| 40 | 21·9 | 59·00 | 15·00 | 19·48 | 35·20 | 28·29 | 26·15 | 50 | 27·3 | 55·22 | 12·90 | 19·56 | 35·34 | 28·40 | 26·69 |
| 75 | 41·0 | 58·82 | 14·90 | 19·49 | 35·22 | 28·30 | 26·18 | 80 | 43·7 | 55·22 | 12·90 | 19·56 | 35·34 | 28·40 | 26·69 |
| 100 | 54·7 | 58·75 | 14·86 | 19·49 | 35·22 | 28·30 | 26·19 | 110 | 60·1 | 55·20 | 12·89 | 19·56 | 35·34 | 28·40 | 26·69 |
| 166 | 90·8 | 58·69 | 14·83 | 19·49 | 35·21 | 28·30 | 26·19 | 152 | 83·1 | 55·20 | 12·89 | 19·55 | 35·33 | 28·39 | 26·69 |
| Depth, 170 M. = 93·0 F. Stones. | | | | | | | | Depth, 155 M. = 84·7 F. Rock. | | | | | | | |

## STATION E. 17.

### 50° 11′ N. Latitude. 2° 52′ W. Longitude.

| 26th February, 1904. | | | | | | | | 4th May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 47·59 | 8·66 | 19·55 | 35·32 | 28·38 | 27·44 | 0 | 0 | 49·08 | 9·49 | 19·51 | 35·25 | 28·32 | 27·24 |
| 10 | 5·5 | 47·84 | 8·80 | 19·53 | 35·29 | 28·36 | 27·40 | 5 | 2·7 | 49·05 | 9·47 | 19·51 | 35·25 | 28·32 | 27·25 |
| 20 | 10·9 | 47·84 | 8·80 | — | — | — | — | 10 | 5·5 | 49·05 | 9·47 | 19·51 | 35·25 | 28·32 | 27·25 |
| 30 | 16·4 | 47·84 | 8·80 | 19·54 | 35·30 | 28·37 | 27·41 | 20 | 10·9 | 49·05 | 9·47 | 19·51 | 35·25 | 28·32 | 27·25 |
| 40 | 21·9 | 47·84 | 8·80 | — | — | — | — | 30 | 16·4 | 49·05 | 9·47 | 19·51 | 35·25 | 28·32 | 27·25 |
| 59 | 32·3 | 47·84 | 8·80 | 19·53 | 35·29 | 28·36 | 27·40 | 40 | 21·9 | 49·06 | 9·48 | 19·51 | 35·25 | 28·32 | 27·25 |
| | | | | | | | | 59 | 32·3 | 49·06 | 9·48 | 19·51 | 35·25 | 28·32 | 27·25 |
| Depth, 61 M. = 33·4 F. Sand, gravel and shell. | | | | | | | | Depth, 59 M. = 32·3 F. Sand and gravel. | | | | | | | |

TABLE I.—*continued.*

| Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 17—*continued.*

### 50° 11′ N. Latitude. 2° 52′ W. Longitude—*continued.*

| 4th August, 1904. | | | | | | | | 12th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·93 | 16·07 | 19·45 | 35·14 | 28·24 | 25·86 | 0 | 0 | 56·79 | 13·77 | 19·45 | 35·14 | 28·24 | 26·36 |
| 5 | 2·7 | 59·16 | 15·09 | 19·45 | 35·15 | 28·24 | 26·09 | 5 | 2·7 | 57·00 | 13·89 | 19·44 | 35·12 | 28·22 | 26·32 |
| 10 | 5·5 | 58·95 | 14·97 | 19·45 | 35·14 | 28·24 | 26·11 | 10 | 5·5 | 57·00 | 13·89 | 19·44 | 35·12 | 28·22 | 26·32 |
| 20 | 10·9 | 58·89 | 14·94 | 19·45 | 35·15 | 28·24 | 26·12 | 20 | 10·9 | 57·00 | 13·89 | 19·44 | 35·12 | 28·22 | 26·32 |
| 30 | 16·4 | 58·82 | 14·90 | 19·45 | 35·14 | 28·24 | 26·12 | 30 | 16·4 | 57·00 | 13·89 | 19·44 | 35·12 | 28·22 | 26·32 |
| 40 | 21·9 | 58·82 | 14·90 | 19·45 | 35·14 | 28·24 | 26·12 | 40 | 21·9 | 57·02 | 13·90 | 19·44 | 35·12 | 28·22 | 26·32 |
| 59 | 32·3 | 58·82 | 14·90 | 19·45 | 35·15 | 28·24 | 26·13 | 59 | 32·3 | 57·02 | 13·90 | 19·44 | 35·12 | 28·22 | 26·32 |
| Depth, 60 M. = 32·8 F. Gravel. | | | | | | | | Depth, 61 M. = 33·4 F. Gravel and shell. | | | | | | | |

| 8th February, 1905. | | | | | | | | 10th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·24 | 9·58 | 19·60 | 35·41 | 28·46 | 27·36 | 0 | 0 | 50·16 | 10·09 | 19·53 | 35·28 | 28·35 | 27·17 |
| 5 | 2·7 | 49·50 | 9·72 | 19·60 | 35·41 | 28·46 | 27·34 | 5 | 2·7 | 50·00 | 10·00 | 19·53 | 35·28 | 28·35 | 27·19 |
| 10 | 5·5 | 49·50 | 9·72 | 19·60 | 35·41 | 28·46 | 27·34 | 10 | 5·5 | 50·00 | 10·00 | 19·52 | 35·26 | 28·34 | 27·18 |
| 20 | 10·9 | 49·50 | 9·72 | 19·60 | 35·41 | 28·46 | 27·34 | 20 | 10·9 | 50·00 | 10·00 | 19·52 | 35·26 | 28·34 | 27·18 |
| 30 | 16·4 | 49·50 | 9·72 | 19·60 | 35·41 | 28·46 | 27·34 | 30 | 16·4 | 50·02 | 10·01 | 19·52 | 35·26 | 28·34 | 27·18 |
| 40 | 21·9 | 49·50 | 9·72 | 19·60 | 35·41 | 28·46 | 27·34 | 40 | 21·9 | 50·02 | 10·01 | 19·52 | 35·26 | 28·34 | 27·18 |
| 57 | 31·2 | 49·51 | 9·73 | 19·60 | 35·41 | 28·46 | 27·34 | 60 | 32·8 | 50·04 | 10·02 | 19·52 | 35·26 | 28·34 | 27·17 |
| Depth, 58 M. = 31·7 F. Gravel. | | | | | | | | Depth, 63 M. = 34·4 F. Shell and gravel. | | | | | | | |

| 9th August, 1905. | | | | | | | | 17th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 58·87 | 14·93 | 19·53 | 35·28 | 28·35 | 26·22 | 0 | 0 | 53·94 | 12·19 | 19·58 | 35·37 | 28·43 | 26·86 |
| 5 | 2·7 | 58·82 | 14·90 | 19·53 | 35·29 | 28·36 | 26·23 | 5 | 2·7 | 54·23 | 12·35 | 19·57 | 35·35 | 28·41 | 26·81 |
| 10 | 5·5 | 58·82 | 14·90 | 19·54 | 35·30 | 28·37 | 26·24 | 10 | 5·5 | 54·27 | 12·37 | 19·57 | 35·35 | 28·41 | 26·81 |
| 20 | 10·9 | 58·82 | 14·90 | 19·53 | 35·29 | 25·36 | 26·23 | 20 | 10·9 | 54·28 | 12·38 | 19·57 | 35·35 | 28·41 | 26·81 |
| 30 | 16·4 | 58·82 | 14·90 | 19·55 | 35·32 | 28·38 | 26·25 | 30 | 16·4 | 54·28 | 12·38 | 19·57 | 35·35 | 28·41 | 26·81 |
| 40 | 21·9 | 58·82 | 14·90 | 19·53 | 35·29 | 28·36 | 26·23 | 40 | 21·9 | 54·28 | 12·38 | 19·57 | 35·35 | 28·41 | 26·81 |
| 57 | 31·2 | 58·84 | 14·91 | 19·54 | 35·30 | 28·37 | 26·24 | 57 | 31·2 | 54·30 | 12·39 | 19·57 | 35·35 | 28·41 | 26·80 |
| Depth, 58 M. = 31·7 F. Gravel and shell. | | | | | | | | Depth, 58 M. = 31·7 F. Gravel. | | | | | | | |

## STATION E. 18.

### 50° 23′ N. Latitude. 3° 08′ W. Longitude.

| 26th February, 1904. | | | | | | | | 4th May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 46·40 | 8·00 | 19·43 | 35·11 | 28·21 | 27·38 | 0 | 0 | 48·74 | 9·30 | 19·43 | 35·10 | 28·21 | 27·17 |
| 5 | 2·7 | 46·63 | 8·13 | 19·41 | 35·07 | 28·18 | 27·33 | 5 | 2·7 | 48·56 | 9·20 | 19·43 | 35·10 | 28·21 | 27·19 |
| 10 | 5·5 | 46·65 | 8·14 | — | — | — | — | 10 | 5·5 | 48·33 | 9·07 | 19·42 | 35·08 | 28·19 | 27·19 |
| 15 | 8·2 | 46·65 | 8·14 | — | — | — | — | 20 | 10·9 | 48·29 | 9·05 | 19·42 | 35·09 | 28·20 | 27·20 |
| 20 | 10·9 | 46·65 | 8·14 | 19·41 | 35·07 | 28·18 | 27·33 | 30 | 16·4 | 48·29 | 9·05 | 19·42 | 35·08 | 28·19 | 27·19 |
| 30 | 16·4 | 46·65 | 8·14 | — | — | — | — | 40 | 21·9 | 48·29 | 9·05 | 19·42 | 35·09 | 28·20 | 27·20 |
| 40 | 21·9 | 46·74 | 8·19 | 19·42 | 35·09 | 28·20 | 27·34 | 55 | 30·1 | 48·29 | 9·05 | 19·42 | 35·08 | 28·19 | 27·19 |
| 49 | 26·8 | 46·85 | 8·25 | 19·44 | 35·13 | 28·23 | 27·36 | | | | | | | | |
| Depth, 51 M. = 27·9 F. Fine sand. | | | | | | | | Depth, 56 M. = 30·6 F. Sand and shell. | | | | | | | |

| 4th August, 1904. | | | | | | | | 11th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 63·27 | 17·37 | 19·43 | 35·11 | 28·21 | 25·53 | 0 | 0 | 56·71 | 13·73 | 19·46 | 35·16 | 28·25 | 26·37 |
| 5 | 2·7 | 63·05 | 17·25 | 19·40 | 35·06 | 28·17 | 25·52 | 5 | 2·7 | 56·82 | 13·79 | 19·44 | 35·13 | 28·23 | 26·34 |
| 10 | 5·5 | 59·83 | 15·46 | 19·44 | 35·12 | 28·22 | 25·98 | 10 | 5·5 | 56·82 | 13·79 | 19·44 | 35·13 | 28·23 | 26·34 |
| 20 | 10·9 | 59·14 | 15·08 | 19·44 | 35·12 | 28·22 | 26·06 | 20 | 10·9 | 56·84 | 13·80 | 19·44 | 35·12 | 28·22 | 26·34 |
| 30 | 16 4 | 59·13 | 15·07 | 19·45 | 35·14 | 28·24 | 26·08 | 30 | 16·4 | 56·84 | 13·80 | 19·44 | 35·12 | 28·22 | 26·34 |
| 40 | 21·9 | 59·13 | 15·07 | 19·44 | 35·13 | 28·23 | 26·08 | 40 | 21·9 | 56·84 | 13·80 | 19·44 | 35·13 | 28·23 | 26·35 |
| 52 | 28·4 | 59·13 | 15·07 | 19·45 | 35·14 | 28·24 | 26·08 | 50 | 27·3 | 56·84 | 13·80 | 19·44 | 35·13 | 28·23 | 26·35 |
| Depth, 53 M. = 29·0 F. Fine sand and shell. | | | | | | | | Depth, 53 M. = 29·0 F. Fine sand. | | | | | | | |

TABLE I.—*continued.*

| Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 18—*continued.*

## 50° 23′ N. Latitude. 3° 08′ W. Longitude—*continued.*

| 8th February, 1905. | | | | | | | | 10th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 46·85 | 8·25 | 19·45 | 35·14 | 28·24 | 27·37 | 0 | 0 | 50·97 | 10·54 | 19·51 | 35·25 | 28·32 | 27·06 |
| 5 | 2·7 | 46·99 | 8·33 | 19·46 | 35·16 | 28·25 | 27·36 | 5 | 2·7 | 50·22 | 10·12 | 19·50 | 35·23 | 28·31 | 27·13 |
| 10 | 5·5 | 46·94 | 8·30 | 19·45 | 35·14 | 28·24 | 27·36 | 10 | 5·5 | 50·04 | 10·02 | 19·50 | 35·23 | 28·31 | 27·15 |
| 20 | 10·9 | 46·90 | 8·28 | 19·45 | 35·14 | 28·24 | 27·36 | 20 | 10·9 | 49·98 | 9·99 | 19·51 | 35·25 | 28·32 | 27·16 |
| 30 | 16·4 | 46·92 | 8·29 | — | — | — | — | 30 | 16·4 | 49·95 | 9·97 | 19·50 | 35·23 | 28·31 | 27·15 |
| 40 | 21·9 | 46·92 | 8·29 | 19·45 | 35·14 | 28·24 | 27·36 | 40 | 21·9 | 49·93 | 9·96 | 19·50 | 35·23 | 28·31 | 27·15 |
| 50 | 27·3 | 46·92 | 8·29 | 19·46 | 35·16 | 28·25 | 27·37 | 50 | 27·3 | 49·93 | 9·96 | 19·50 | 35·23 | 28·31 | 27·15 |
| Depth, 53 M. = 29·0 F. Sand, mud, and fine shell. | | | | | | | | Depth, 53 M. = 29·0 F. Mud and sand. | | | | | | | |

| 9th August, 1905. | | | | | | | | 17th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·39 | 15·77 | 19·53 | 35·28 | 28·35 | 26·03 | 0 | 0 | 53·19 | 11·77 | 19·58 | 35·37 | 28·43 | 26·94 |
| 5 | 2·7 | 60·28 | 15·71 | 19·52 | 35·26 | 28·34 | 26·03 | 5 | 2·7 | 53·80 | 12·11 | 19·57 | 35·36 | 28·42 | 26·87 |
| 10 | 5·5 | 60·15 | 15·64 | 19·53 | 35·28 | 28·35 | 26·06 | 10 | 5·5 | 53·80 | 12·11 | 19·57 | 35·35 | 28·41 | 26·86 |
| 20 | 10·9 | 59·63 | 15·35 | 19·52 | 35·27 | 28·34 | 26·11 | 20 | 10·9 | 53·80 | 12·11 | 19·57 | 35·35 | 28·41 | 26·86 |
| 30 | 16·4 | 59·54 | 15·30 | 19·52 | 35·27 | 28·34 | 26·13 | 30 | 16·4 | 53·82 | 12·12 | 19·57 | 35·36 | 28·42 | 26·87 |
| 40 | 21·9 | 59·50 | 15·28 | 19·53 | 35·28 | 28·35 | 26·14 | 40 | 21·9 | 53·82 | 12·12 | 19·57 | 35·35 | 28·41 | 26·86 |
| 49 | 26·8 | 59·49 | 15·27 | 19·53 | 35·28 | 28·35 | 26·14 | 55 | 30·1 | 53·82 | 12·12 | 19·57 | 35·35 | 28·41 | 26·86 |
| Depth, 51 M. = 27·9 F. Sand and mud. | | | | | | | | Depth, 56 M. = 30·6 F. Sand and shell. | | | | | | | |

## STATION E. 9.

## 49° 39′ N. Latitude. 3° 09′ W. Longitude.

| — | | | | | | | | 3rd May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Not worked in February, 1904. | | | | | | | | 0 | 0 | 48·94 | 9·41 | 19·45 | 35·14 | 28·24 | 27·18 |
| | | | | | | | | 5 | 2·7 | 48·76 | 9·31 | 19·45 | 35·14 | 28·24 | 27·20 |
| | | | | | | | | 10 | 5·5 | 48·69 | 9·27 | 19·45 | 35·14 | 28·24 | 27·20 |
| | | | | | | | | 20 | 10·9 | 48·69 | 9·27 | 19·45 | 35·14 | 28·24 | 27·20 |
| | | | | | | | | 30 | 16·4 | 48·69 | 9·27 | 19·44 | 35·13 | 28·23 | 27·19 |
| | | | | | | | | 40 | 21·9 | 48·69 | 9·27 | 19·44 | 35·13 | 28·23 | 27·19 |
| | | | | | | | | 66 | 36·1 | 48·69 | 9·27 | 19·44 | 35·13 | 28·23 | 27·19 |
| | | | | | | | | Depth, 68 M. = 37·2 F. Gravel and stones. | | | | | | | |

| 3rd August, 1904. | | | | | | | | 12th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 62·58 | 16·99 | 19·38 | 35·01 | 28·14 | 25·55 | 0 | 0 | — | — | 19·52 | 35·26 | 28·34 | — |
| 5 | 2·7 | 61·92 | 16·62 | 12·37 | 34·99 | 28·12 | 25·62 | 5 | 2·7 | 57·49 | 14·16 | 19·52 | 35·26 | 28·34 | 26·38 |
| 10 | 5·5 | 57·24 | 14·02 | 19·42 | 35·08 | 28·19 | 26·26 | 10 | 5·5 | 57·51 | 14·17 | 19·52 | 35·26 | 28·34 | 26·37 |
| 20 | 10·9 | 57·24 | 14·02 | 19·42 | 35·08 | 28·19 | 26·26 | 20 | 10·9 | 57·51 | 14·17 | 19·52 | 35·26 | 28·34 | 26·37 |
| 40 | 21·9 | 57·13 | 13·96 | 19·43 | 35·10 | 28·21 | 26·29 | 30 | 16·4 | 57·51 | 14·17 | 19·52 | 35·26 | 28·34 | 26·37 |
| 66 | 36·1 | 57·13 | 13·96 | 19·42 | 35·08 | 28·19 | 26·27 | 40 | 21·9 | 57·51 | 14·17 | 19·52 | 35·26 | 28·34 | 26·37 |
| | | | | | | | | 50 | 27·3 | 57·51 | 14·17 | 19·52 | 35·26 | 28·34 | 26·37 |
| | | | | | | | | 70 | 38·3 | 57·51 | 14·17 | 19·52 | 35·26 | 28·34 | 26·37 |
| Depth, 68 M. = 37·2 F. Shell and gravel. The station was worked about 4 miles N. by W. (mag.) of the correct position. | | | | | | | | Depth, 72 M. = 39·4 F. Sand and gravel. | | | | | | | |

| 8th February, 1905. | | | | | | | | 10th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·59 | 9·77 | 19·56 | 35·34 | 28·40 | 27·27 | 0 | 0 | 51·40 | 10·78 | 19·60 | 35·41 | 28·46 | 27·15 |
| 5 | 2·7 | 50·05 | 10·03 | 19·55 | 35·33 | 28·39 | 27·22 | 5 | 2·7 | 50·65 | 10·36 | 19·58 | 35·37 | 28·43 | 27·20 |
| 10 | 5·5 | 50·05 | 10·03 | 19·55 | 35·33 | 28·39 | 27·22 | 10 | 5·5 | 50·23 | 10·13 | 19·58 | 35·37 | 28·43 | 27·24 |
| 20 | 10·9 | 50·05 | 10·03 | 19·56 | 35·34 | 28·40 | 27·23 | 20 | 10·9 | 50·20 | 10·11 | 19·59 | 35·39 | 28·44 | 27·25 |
| 30 | 16·4 | 50·05 | 10·03 | 19·56 | 35·34 | 28·40 | 27·23 | 30 | 16·4 | 50·18 | 10·10 | — | — | — | — |
| 40 | 21·9 | 50·05 | 10·03 | 19·56 | 35·34 | 28·40 | 27·23 | 40 | 21·9 | 50·18 | 10·10 | 19·59 | 35·39 | 28·44 | 27·26 |
| 66 | 36·1 | 50·07 | 10·04 | 19·55 | 35·32 | 28·38 | 27·21 | 50 | 27·3 | 50·18 | 10·10 | 19·59 | 35·39 | 28·44 | 27·26 |
| | | | | | | | | 72 | 39·4 | 50·18 | 10·10 | 19·58 | 35·37 | 28·43 | 27·25 |
| Depth, 70 M. = 38·3 F. Gravel and shell. | | | | | | | | Depth, 74 M. = 40·5 F. Gravel and shell. | | | | | | | |

TABLE I.—*continued.*

| Depth. | | Temperature. | | $Cl.‰$ | $S.‰$ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | $Cl.‰$ | $S.‰$ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 9—*continued.*

## 49° 39′ N. Latitude. 3° 09′ W. Longitude—*continued.*

| 9th August, 1905. | | | | | | | | 17th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 58·59 | 14·77 | 19·51 | 35·25 | 28·32 | 26·22 | 0 | 0 | 54·99 | 12·77 | 19·56 | 35·34 | 28·40 | 26·72 |
| 5 | 2·7 | 58·75 | 14·86 | 19·50 | 35·24 | 28·31 | 26·20 | 5 | 2·7 | 55·45 | 13·03 | 19·56 | 35·34 | 28·40 | 26·67 |
| 10 | 5·5 | 58·68 | 14·82 | 19·50 | 35·24 | 28·31 | 26·20 | 10 | 5·5 | 55·47 | 13·04 | 19·55 | 35·33 | 28·39 | 26·66 |
| 20 | 10·9 | 58·64 | 14·80 | 19·50 | 35·24 | 28·31 | 26·21 | 20 | 10·9 | 55·49 | 13·05 | 19·55 | 35·33 | 28·39 | 26·65 |
| 30 | 16·4 | 58·60 | 14·78 | 19·50 | 35·24 | 28·31 | 26·21 | 30 | 16·4 | 55·49 | 13·05 | 19·56 | 35·34 | 28·40 | 26·66 |
| 40 | 21·9 | 58·60 | 14·78 | 19·50 | 35·23 | 28·31 | 26·21 | 40 | 21·9 | 55·49 | 13·05 | 19·55 | 35·33 | 28·39 | 26·65 |
| 69 | 37·7 | 58·57 | 14·76 | 19·50 | 35·24 | 28·31 | 26·22 | 69 | 37·7 | 55·49 | 13·05 | 19·55 | 35·32 | 28·38 | 26·64 |
| Depth, 70 M. = 38·3 F. Gravel. | | | | | | | | Depth, 70 M. = 38·3 F. Sand and shell. | | | | | | | |

## STATION E. 19.

## 49° 56′ N. Latitude. 3° 23′ W. Longtitude.

| 25th February, 1904. | | | | | | | | 3rd May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·07 | 8·93 | 19·56 | 35·34 | 28·40 | 27·41 | 0 | 0 | 50·00 | 10·00 | 19·55 | 35·32 | 28·38 | 27·22 |
| 5 | 2·7 | 48·25 | 9·03 | 19·53 | 35·29 | 28·36 | 27·36 | 5 | 2·7 | 49·84 | 9·91 | 19·56 | 35·34 | 28·40 | 27·25 |
| 10 | 5·5 | 48·25 | 9·03 | — | — | — | — | 10 | 5·5 | 49·69 | 9·83 | 19·56 | 35·34 | 28·40 | 27·26 |
| 15 | 8·2 | 48·25 | 9·03 | — | — | — | — | 20 | 10·9 | 49·68 | 9·82 | 19·56 | 35·34 | 28·40 | 27·27 |
| 20 | 10·9 | 48·22 | 9·01 | — | — | — | — | 30 | 16·4 | 49·66 | 9·81 | 19·57 | 35·35 | 28·41 | 27·28 |
| 30 | 16·4 | 48·25 | 9·03 | 19·54 | 35·31 | 28·37 | 27·37 | 40 | 21·9 | 49·62 | 9·79 | 19·57 | 35·35 | 28·41 | 27·28 |
| 40 | 21·9 | 48·29 | 9·05 | — | — | — | — | 69 | 37·7 | 49·66 | 9·81 | 19·57 | 35·35 | 28·41 | 27·28 |
| 67 | 36·6 | 48·31 | 9·06 | 19·53 | 35·29 | 28·36 | 27·36 | | | | | | | | |
| Depth, 68 M. = 37·2 F. Gravel and rock. | | | | | | | | Depth, 72 M. = 39·4 F. Gravel and shell. | | | | | | | |

| 3rd August, 1904. | | | | | | | | 10th August, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 62·74 | 17·08 | 19·42 | 35·08 | 28·19 | 25·57 | 0 | 0 | 61·57 | 16·43 | 19·40 | 35·05 | 28·16 | 25·70 |
| 5 | 2·7 | 61·20 | 16·22 | 19·42 | 35·08 | 28·19 | 25·77 | 5 | 2·7 | 61·70 | 16·50 | 19·38 | 35·02 | 28·14 | 25·65 |
| 10 | 5·5 | 58·55 | 14·75 | 19·45 | 35·14 | 28·24 | 26·15 | 10 | 5·5 | 61·03 | 16·13 | 19·37 | 35·00 | 28·13 | 25·74 |
| 20 | 10·9 | 58·32 | 14·62 | 19·45 | 35·14 | 28·24 | 26·18 | 20 | 10·9 | 57·16 | 13·98 | 19·42 | 35·09 | 28·20 | 26·28 |
| 30 | 16·4 | 58·10 | 14·50 | 19·45 | 35·14 | 28·24 | 26·21 | 30 | 16·4 | 57·02 | 13·90 | 19·44 | 35·12 | 28·22 | 26·31 |
| 40 | 21·9 | 57·92 | 14·40 | 19·44 | 35·12 | 28·22 | 26·21 | 40 | 21·9 | 57·02 | 13·90 | 19·44 | 35·12 | 28·22 | 26·31 |
| 64 | 35·0 | 57·74 | 14·30 | 19·44 | 35·12 | 28·22 | 26·23 | 50 | 27·3 | 57·02 | 13·90 | 19·44 | 35·12 | 28·22 | 26·31 |
| | | | | | | | | 68 | 37·2 | 57·02 | 13·90 | 19·44 | 35·13 | 28·23 | 26·32 |
| Depth, 65 M. = 35·5 F. Sand and shell. The station was worked about 5 miles N. (true) of the correct position, and was therefore repeated a week later. | | | | | | | | Depth, 69 M. = 37·7 F. Shell and gravel. | | | | | | | |

| 10th November, 1904. | | | | | | | | 8th February, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 57·11 | 13·95 | 19·54 | 35·30 | 28·37 | 26·45 | 0 | 0 | 49·33 | 9·63 | 19·58 | 35·37 | 28·43 | 27·33 |
| 5 | 2·7 | 57·11 | 13·95 | 19·52 | 35·26 | 28·34 | 26·42 | 5 | 2·7 | 49·75 | 9·86 | 19·57 | 35·35 | 28·41 | 27·27 |
| 10 | 5·5 | 57·15 | 13·97 | 19·53 | 35·28 | 28·35 | 26·43 | 10 | 5·5 | 49·75 | 9·86 | — | — | — | — |
| 20 | 10·9 | 57·16 | 13·98 | 19·52 | 35·26 | 28·34 | 26·41 | 20 | 10·9 | 49·77 | 9·87 | 19·57 | 35·35 | 28·41 | 27·27 |
| 30 | 16·4 | 57·16 | 13·98 | 19·52 | 35·26 | 28·34 | 26·41 | 30 | 16·4 | 49·77 | 9·87 | 19·57 | 35·35 | 28·41 | 27·27 |
| 40 | 21·9 | 57·16 | 13·98 | 19·53 | 35·28 | 28·35 | 26·42 | 40 | 21·9 | 49·78 | 9·88 | 19·57 | 35·35 | 28·41 | 27·27 |
| 50 | 27·3 | 57·16 | 13·98 | 19·52 | 35·26 | 28·34 | 26·41 | 69 | 37·7 | 49·78 | 9·88 | 19·57 | 35·35 | 28·41 | 27·27 |
| 70 | 38·3 | 57·16 | 13·98 | 19·54 | 35·30 | 28·37 | 26·44 | | | | | | | | |
| Depth, 71 M. = 38·8 F. Sand and shell. | | | | | | | | Depth, 70 M. = 38·3 F. Coarse sand and shell. | | | | | | | |

| 10th May, 1905. | | | | | | | | 9th August, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 52·39 | 11·33 | 19·61 | 35·43 | 28·47 | 27·06 | 0 | 0 | 59·05 | 15·03 | 19·61 | 35·43* | 28·47 | 26·31 |
| 5 | 2·7 | 51·22 | 10·68 | 19·60 | 35·41 | 28·46 | 27·17 | 5 | 2·7 | 59·07 | 15·04 | 19·55 | 35·33 | 28·39 | 26·23 |
| 10 | 5·5 | 50·72 | 10·40 | 19·60 | 35·41 | 28·46 | 27·22 | 10 | 5·5 | 58·93 | 14·96 | 19·55 | 35·32 | 28·38 | 26·24 |
| 20 | 10·9 | 50·54 | 10·30 | 19·60 | 35·41 | 28·46 | 27·24 | 20 | 10·9 | 58·28 | 14·60 | 19·55 | 35·33 | 28·39 | 26·32 |
| 30 | 16·4 | 50·52 | 10·29 | 19·61 | 35·43 | 28·47 | 27·25 | 30 | 16·4 | 58·23 | 14·57 | 19·56 | 35·34 | 28·40 | 26·34 |
| 40 | 21·9 | 50·50 | 10·28 | 19·61 | 35·43 | 28·47 | 27·25 | 40 | 21·9 | 58·23 | 14·57 | 19·55 | 35·33 | 28·39 | 26·33 |
| 50 | 27·3 | 50·50 | 10·28 | 19·61 | 35·43 | 28·47 | 27·25 | 50 | 27·3 | 58·21 | 14·56 | 19·56 | 35·34 | 28·40 | 26·35 |
| 66 | 36·1 | 50·50 | 10·28 | 19·63 | 35·46 | 28·50 | 27·28 | 67 | 36·6 | 58·21 | 14·56 | 19·56 | 35·34 | 28·40 | 26·35 |
| Depth, 68 M. = 37·2 F. Fine sand and shell. | | | | | | | | Depth, 68 M. = 37·2 F. Gravel. | | | | | | | |

* Analysis is repeated.

TABLE I.—*continued.*

| Depth. | | Temperature. | | $Cl.^{o}/_{oo}$ | $S.^{o}/_{oo}$ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | $Cl.^{o}/_{oo}$ | $S.^{o}/_{oo}$ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 19—*continued.*

### 49° 56′ N. Latitude. 3° 23′ W. Longitude—*continued.*

| 16th November, 1905. | | | | | | | | —— | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 54·25 | 12·36 | 19·58 | 35·37 | 28·43 | 26·83 | — | — | — | — | — | — | — | — |
| 5 | 2·7 | 54·68 | 12·60 | 19·56 | 35·34 | 28·40 | 26·75 | — | — | — | — | — | — | — | — |
| 10 | 5·5 | 54·68 | 12·60 | 19·56 | 35·34 | 28·40 | 26·75 | — | — | — | — | — | — | — | — |
| 20 | 10·9 | 54·70 | 12·61 | 19·57 | 35·35 | 28·41 | 26·76 | — | — | — | — | — | — | — | — |
| 30 | 16·4 | 54·68 | 12·60 | 19·56 | 35·34 | 28·40 | 26·75 | — | — | — | — | — | — | — | — |
| 40 | 21·9 | 54·70 | 12·61 | 19·57 | 35·35 | 28·41 | 26·77 | — | — | — | — | — | — | — | — |
| 50 | 27·3 | 54·70 | 12·61 | 19·57 | 35·35 | 28·41 | 26·76 | — | — | — | — | — | — | — | — |
| 70 | 38·3 | 54·70 | 12·61 | 19·58 | 35·37 | 28·43 | 26·78 | — | — | — | — | — | — | — | — |
| Depth, 71 M.=38·8 F. Gravel and shell. | | | | | | | | | | | | | | | |

## STATION E. 8.

### 49° 16′ N. Latitude. 3° 37′ W. Longitude.

| —— | | | | | | | | 3rd May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Not worked in February, 1904. | | | | | | | | 0 | 0 | 50·29 | 10·16 | 19·42 | 35·08 | 28·19 | 27·00 |
| | | | | | | | | 5 | 2·7 | 50·18 | 10·10 | 19·43 | 35·10 | 28·21 | 27·03 |
| | | | | | | | | 10 | 5·5 | 50·16 | 10·09 | 19·42 | 35·08 | 28·19 | 27·02 |
| | | | | | | | | 20 | 10·9 | 50·02 | 10·01 | 19·43 | 35·10 | 28·21 | 27·05 |
| | | | | | | | | 30 | 16·4 | 49·96 | 9·98 | 19·42 | 35·08 | 28·19 | 27·04 |
| | | | | | | | | 40 | 21·9 | 49·96 | 9·98 | 19·42 | 35·08 | 28·19 | 27·04 |
| | | | | | | | | 50 | 27·3 | 49·96 | 9·98 | 19·43 | 35·10 | 28·21 | 27·06 |
| | | | | | | | | 78 | 42·6 | 49·96 | 9·98 | 19·43 | 35·10 | 28.21 | 27·06 |
| | | | | | | | | Depth, 80 M. = 43·7 F. Stones and shell. | | | | | | | |

| 3rd August, 1904. | | | | | | | | 11th November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 59·18 | 15·10 | 19·55 | 35·32 | 28·38 | 26·21 | 0 | 0 | 56·97 | 13·87 | 19·56 | 35·34 | 28·40 | 26·49 |
| 5 | 2·7 | 59·23 | 15·13 | 19·52 | 35·26 | 28·34 | 26·17 | 10 | 5·5 | 56·95 | 13·86 | 19·55 | 35·32 | 28·38 | 26·48 |
| 10 | 5·5 | 58·64 | 14·80 | 19·53 | 35·28 | 28·35 | 26·25 | 20 | 10·9 | 56·91 | 13·84 | 19·55 | 35·32 | 28·38 | 26·48 |
| 15 | 8·2 | 58·32 | 14·62 | 19·52 | 35·26 | 28·34 | 26·28 | 30 | 16·4 | 56·91 | 13·84 | — | — | — | — |
| 20 | 10·9 | 58·17 | 14·54 | 19·52 | 35·26 | 28·34 | 26·29 | 50 | 27·3 | 56·91 | 13·84 | 19·55 | 35·32 | 28·38 | 26·48 |
| 30 | 16·4 | 58·10 | 14·50 | 19·53 | 35·28 | 28·35 | 26·31 | 77 | 42·1 | 56·88 | 13·82 | 19·54 | 35·30 | 28·37 | 26·48 |
| 40 | 21·9 | 58·08 | 14·49 | 19·52 | 35·26 | 28·34 | 26·30 | | | | | | | | |
| 50 | 27·3 | 58·06 | 14·48 | 19·52 | 35·26 | 28·34 | 26·31 | | | | | | | | |
| 84 | 45·9 | 58·08 | 14·49 | 19·52 | 35·26 | 28·34 | 26·30 | | | | | | | | |
| Depth, 84 M. = 45·9 F. Shell and gravel. About 5miles N.N.W. (true) of correct position. | | | | | | | | Depth, 82 M. = 44·8 F. Sand and shell. | | | | | | | |

| 7th February, 1905. | | | | | | | | 11th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·39 | 9·66 | 19·57 | 35·36 | 28·42 | 27·31 | 0 | 0 | 51·19 | 10·66 | 19·63 | 35·46 | 28·50 | 27·22 |
| 5 | 2·7 | 49·80 | 9·89 | 19·57 | 35·35 | 28·41 | 27·26 | 5 | 2·7 | 51·01 | 10·56 | 19·62 | 35·44 | 28·48 | 27·22 |
| 10 | 5·5 | 49·80 | 9·89 | 19·57 | 35·35 | 28·41 | 27·26 | 10 | 5·5 | 50·83 | 10·46 | 19·60 | 35·41 | 28·46 | 27·21 |
| 20 | 10·9 | 49·80 | 9·89 | 19·58 | 35·37 | 28·43 | 27·28 | 20 | 10·9 | 50·58 | 10·32 | 19·60 | 35·41 | 28·46 | 27·24 |
| 30 | 16·4 | 49·86 | 9·92 | 19·59 | 35·39 | 28·44 | 27·28 | 30 | 16·4 | 50·58 | 10·32 | 19·60 | 35·41 | 21·46 | 27·24 |
| 40 | 21·9 | 49·86 | 9·92 | 19·59 | 35·39 | 28·44 | 27·28 | 40 | 21·9 | 50·56 | 10·31 | 19·59 | 35·39 | 28·44 | 27·22 |
| 50 | 27·3 | 49·86 | 9·92 | 19.59 | 35·39 | 28·44 | 27·28 | 50 | 27·3 | 50·56 | 10·31 | 19.60 | 35·41 | 28·46 | 27·24 |
| 82 | 44·8 | 49·86 | 9·92 | 19·59 | 35·39 | 28·44 | 27·28 | 83 | 45·4 | 50·56 | 10·31 | 19·59 | 35·39 | 28·44 | 27·22 |
| Depth, 83 M. = 45·4 F. Gravel and shell. | | | | | | | | Depth, 85 M. = 46·5 F. Sand and shell. | | | | | | | |

| 9th August, 1905. | | | | | | | | 15th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 58·24 | 14·58 | 19·53 | 35·28 | 28·35 | 26·29 | 0 | 0 | 53·80 | 12·11 | 19·59 | 35·39 | 28·44 | 26·89 |
| 5 | 2·7 | 58·41 | 14·67 | 19·53 | 35·28 | 28·35 | 26·28 | 5 | 2·7 | 54·07 | 12·26 | 19·57 | 35·35 | 28·41 | 26·83 |
| 10 | 5·5 | 58·12 | 14·51 | 19·53 | 35·28 | 28·35 | 26·31 | 10 | 5·5 | 54·09 | 12·27 | 19·57 | 35·35 | 28·41 | 26·83 |
| 20 | 10·9 | 57.94 | 14·41 | 19·53 | 35·28 | 28·35 | 26·33 | 20 | 10·9 | 54·09 | 12·27 | 19·57 | 35·35 | 28·41 | 26·83 |
| 30 | 16·4 | 57·92 | 14·40 | 19·53 | 35·29 | 28·36 | 26·34 | 30 | 16·4 | 54·10 | 12·28 | 19·58 | 35·37 | 23·43 | 26·84 |
| 40 | 21·9 | 57·92 | 14·40 | 19·53 | 35·29 | 28·36 | 26·34 | 40 | 21·9 | 54·10 | 12·28 | — | — | — | — |
| 50 | 27·3 | 57·90 | 14·39 | 19·54 | 35·30 | 28·37 | 26·35 | 50 | 27·3 | 54·10 | 12·28 | 19·58 | 37·37 | 28·43 | 26·84 |
| 78 | 42·6 | 57·88 | 14·38 | 19·54 | 35·30 | 28·37 | 26·35 | 68 | 37·2 | 54·10 | 12·28 | 19·57 | 35·35 | 28·41 | 26·82 |
| Depth, 79 M. = 43·2 F. Broken shell. | | | | | | | | Depth, 70 M. = 38·3 F. Sand and shell. | | | | | | | |

TABLE I.—*continued.*

| Depth. | | Temperature. | | $Cl.‰$ | $S.‰$ | $\sigma_o$ | $\sigma_t$ | Depth. | | Temperature. | | $Cl.‰$ | $S.‰$ | $\sigma_o$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 20.

50° 08′ N. Latitude. 3° 47′ W. Longitude.

| 25th February, 1904. | | | | | | | | 3rd May, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 46·74 | 8·19 | 19·38 | 35·01 | 28·14 | 27·28 | 0 | 0 | 49·30 | 9·61 | 19·51 | 35·25 | 28·32 | 27·22 |
| 5 | 2·7 | 46·83 | 8·24 | 19·37 | 35·00 | 28·13 | 27·26 | 5 | 2·7 | 49·15 | 9·53 | 19·51 | 35·25 | 28·32 | 27·24 |
| 10 | 5·5 | 46·94 | 8·30 | — | — | — | — | 10 | 5·5 | 49·12 | 9·51 | 19·50 | 35·23 | 28·31 | 27·26 |
| 15 | 8·2 | 46·94 | 8·30 | 19·39 | 35·03 | 28·15 | 27·27 | 20 | 10·9 | 49·12 | 9·51 | 19·50 | 35·23 | 28·31 | 27·23 |
| 20 | 10·9 | 46·94 | 8·30 | — | — | — | — | 30 | 16·4 | 49·12 | 9·51 | 19·51 | 35·25 | 28·32 | 27·24 |
| 30 | 16·4 | 46·94 | 8·30 | 19·40 | 35·05 | 28·16 | 27·28 | 40 | 21·9 | 49·12 | 9·51 | 19·52 | 35·26 | 28·34 | 27·26 |
| 40 | 21·9 | 46·94 | 8·30 | 19·40 | 35·05 | 28·16 | 27·28 | 64 | 35·0 | 49·12 | 9·51 | 19·51 | 35·25 | 28·32 | 27·24 |
| 68 | 37·2 | 46·92 | 8·29 | 19·40 | 35·05 | 28·16 | 27·28 | | | | | | | | |
| Depth, 68 M. = 37·2 F. Coarse sand. | | | | | | | | Depth, 69 M. = 37·7 F. Gravel and shell. | | | | | | | |
| 3rd August, 1904. | | | | | | | | 10th November, 1904. | | | | | | | |
| 0 | 0 | 62·28 | 16·82 | 19·42 | 35·08 | 28·19 | 25·63 | 0 | 0 | 56·97 | 13·87 | 19·52 | 35·26 | 28·34 | 26·44 |
| 5 | 2·7 | 59·99 | 15·55 | 19·41 | 35·07 | 28·18 | 25·92 | 5 | 2·7 | 57·00 | 13·89 | 19·51 | 35·25 | 28·32 | 26·42 |
| 10 | 5·5 | 59·18 | 15·10 | 19·42 | 35·09 | 28·20 | 26·04 | 10 | 5·5 | 57·00 | 13·89 | 19·52 | 35·26 | 28·34 | 26·43 |
| 20 | 10·9 | 58·19 | 14·55 | 19·43 | 35·10 | 28·21 | 26·17 | 20 | 10·9 | 57·00 | 13·89 | 19·52 | 35·26 | 28·34 | 26·43 |
| 30 | 16·4 | 57·90 | 14·39 | 19·43 | 35·11 | 28·21 | 26·21 | 30 | 16·4 | 57·00 | 13·89 | 19·52 | 35·26 | 28·34 | 26·43 |
| 40 | 21·9 | 57·79 | 14·33 | 19·44 | 35·12 | 28·22 | 26·22 | 40 | 21·9 | 57·00 | 13·89 | 19·52 | 35·26 | 28·34 | 26·43 |
| 54 | 29·5 | 57·72 | 14·29 | 19·44 | 35·12 | 28·22 | 26·23 | 60 | 32·8 | 57·00 | 13·89 | 19·51 | 35·25 | 28·32 | 26·42 |
| Depth, 59 M. = 32·3 F. Sand, shell, and gravel. | | | | | | | | Depth, 60 M. = 32·8 F. Gravel and shell. | | | | | | | |
| 8th February, 1905. | | | | | | | | 10th May, 1905. | | | | | | | |
| 0 | 0 | 48·51 | 9·17 | 19·50 | 35·23 | 28·31 | 27·29 | 0 | 0 | 52·03 | 11·13 | 19·49 | 35·21 | 28·30 | 26·94 |
| 5 | 2·7 | 48·97 | 9·43 | 19·50 | 35·24 | 28·31 | 27·24 | 5 | 2·7 | 50·49 | 10·27 | 19·46 | 35·16 | 28·25 | 27·04 |
| 10 | 5·5 | 48·97 | 9·43 | 19·54* | 35·30 | 28·37 | 27·30 | 10 | 5·5 | 50·18 | 10·10 | 19·49 | 35·21 | 28·30 | 27·12 |
| 20 | 10·9 | 48·97 | 9·43 | 19·50 | 35·23 | 28·31 | 27·24 | 20 | 10·9 | 50·04 | 10·02 | 19·50 | 35·23 | 28·31 | 27·14 |
| 30 | 16·4 | 48·99 | 9·44 | 19·51 | 35·25 | 28·32 | 27·25 | 30 | 16·4 | 50·04 | 10·02 | 19·51 | 35·25 | 28·32 | 27·15 |
| 40 | 21·9 | 48·99 | 9·44 | 19·50 | 35·24 | 28·31 | 27·24 | 40 | 21·9 | 50·04 | 10·02 | 19·51 | 35·25 | 28·32 | 27·15 |
| 67 | 36·6 | 48·99 | 9·44 | 19·50 | 35·23 | 28·31 | 27·24 | 64 | 35·0 | 50·04 | 10·02 | 19·52 | 35·26 | 28·34 | 27·17 |
| Depth, 69 M. = 37·7 F. Gravel and shell. | | | | | | | | Depth, 66 M. = 36·1 F. Sand and shell. | | | | | | | |
| 9th August, 1905. | | | | | | | | 16th November, 1905. | | | | | | | |
| 0 | 0 | 59·86 | 15·48 | 19·58 | 35·38 | 28·43 | 26·17 | 0 | 0 | 53·80 | 12·11 | 19·59 | 35·39 | 28·44 | 26·89 |
| 5 | 2·7 | 59·31 | 15·17 | 19·58 | 35·37 | 28·43 | 26·24 | 5 | 2·7 | 54·07 | 12·26 | 19·57 | 35·35 | 28·41 | 26·83 |
| 10 | 5·5 | 57·69 | 14·27 | 19·58 | 35·37 | 28·43 | 26·44 | 10 | 5·5 | 54·09 | 12·27 | 19·57 | 35·35 | 28·41 | 26·83 |
| 20 | 10·9 | 57·52 | 14·18 | 19·58 | 35·37 | 28·43 | 26·46 | 20 | 10·9 | 54·09 | 12·27 | 19·57 | 35·35 | 28·41 | 26·83 |
| 30 | 16·4 | 57·49 | 14·16 | 19·57 | 35·36 | 28·42 | 26·45 | 30 | 16·4 | 54·10 | 12·28 | 19·58 | 35·37 | 28·43 | 26·84 |
| 40 | 21·9 | 57·49 | 14·16 | 19·58 | 35·37 | 28·43 | 26·46 | 40 | 21·9 | 54·10 | 12·28 | — | — | — | — |
| 50 | 27·3 | 57·49 | 14·16 | 19·58 | 35·37 | 28·43 | 26·46 | 50 | 27·3 | 54·10 | 12·28 | 19·58 | 35·37 | 28·43 | 26·84 |
| 67 | 36·6 | 57·49 | 14·16 | 19·56 | 35·34 | 28·40 | 26·43 | 68 | 37·2 | 54·10 | 12·28 | 19·57 | 35·35 | 28·41 | 26·82 |
| Depth, 69 M. = 37·7 F. Gravel and shell. | | | | | | | | Depth, 70 M. = 38·3 F. Sand and shell. | | | | | | | |

## STATION E. 1.

50° 02′ N. Latitude. 4° 22′ W. Longitude.

| 4th February, 1904. | | | | | | | | 16th February, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 48·74 | 9·30 | 19·55 | 35·32 | 28·38 | 27·33 | 0 | 0 | 48·07 | 8·93 | 19·51 | 35·25 | 28·32 | 27·34 |
| 5 | 2·7 | 48·76 | 9·31 | — | — | — | — | 15 | 8·2 | 48·20 | 9·00 | 19·51 | 35·25 | 28·32 | 27·33 |
| 10 | 5·5 | 48·76 | 9·31 | 19·54 | 35·30 | 28·37 | 27·32 | 30 | 16·4 | 48·22 | 9·01 | 19·51 | 35·25 | 28·32 | 27·32 |
| 15 | 8·2 | 48·76 | 9·31 | 19·54 | 35·30 | 28·37 | 27·32 | 40 | 21·9 | 48·25 | 9·03 | 19·51 | 35·25 | 28·32 | 27·32 |
| 20 | 10·9 | 48·76 | 9·31 | 19·54 | 35·31 | 28·37 | 27·32 | 70 | 38·3 | 48·27 | 9·04 | 19·51 | 35·25 | 28·32 | 27·32 |
| 30 | 16·4 | 48·76 | 9·31 | 19·54 | 35·30 | 28·37 | 27·32 | | | | | | | | |
| 40 | 21·9 | 48·76 | 9·31 | 19·54 | 35·30 | 28·37 | 27·32 | | | | | | | | |
| 50 | 27·3 | 48·79 | 9·33 | 19·54 | 35·30 | 28·37 | 27·32 | | | | | | | | |
| 71 | 38·8 | 48·79 | 9·33 | 19·54 | 35·30 | 28·37 | 27·32 | | | | | | | | |
| Depth, 74 M. = 40·5 F. Fine sand. | | | | | | | | Depth, 73 M. = 39·9 F. Fine sand. | | | | | | | |

* Analysis repeated.

TABLE I.—*continued.*

| Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 1—*continued.*

### 50° 02′ N. Latitude. 4° 22′ W. Longitude—*continued.*

27th April, 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·96 | 9·98 | 19·58 | 35·37 | 28·43 | 27·27 |
| 5 | 2·7 | 49·80 | 9·89 | 19·57 | 35·35 | 28·41 | 27·26 |
| 10 | 5·5 | 49·12 | 9·51 | 19·57 | 35·35 | 28·41 | 27·33 |
| 15 | 8·2 | 49·03 | 9·46 | 19·57 | 35·35 | 28·41 | 27·34 |
| 20 | 10·9 | 48·97 | 9·43 | 19·57 | 35·35 | 28·41 | 27·34 |
| 30 | 16·4 | 48·97 | 9·43 | 19·57 | 35·35 | 28·41 | 27·34 |
| 50 | 27·3 | 48·94 | 9·41 | 19·57 | 35·35 | 28·41 | 27·34 |
| 71 | 38·8 | 48·94 | 9·41 | 19·57 | 35·35 | 28·41 | 27·34 |

Depth, 74 M. = 40·5 F. Fine sand.

12th August, 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 62·55 | 16·97 | 19·40 | 35·05 | 28·16 | 25·57 |
| 5 | 2·7 | 62·60 | 17·00 | 19·39 | 35·04 | 28·15 | 25·57 |
| 10 | 5·5 | 62·46 | 16·92 | 19·39 | 35·04 | 28·15 | 25·58 |
| 15 | 8·2 | 59·97 | 15·54 | 19·45 | 35·14 | 28·24 | 25·98 |
| 20 | 10·9 | 54·93 | 12·74 | 19·51 | 35·25 | 28·32 | 26·65 |
| 30 | 16·4 | 54·81 | 12·67 | 19·51 | 35·25 | 28·32 | 26·66 |
| 40 | 21·9 | 54·70 | 12·61 | 19·51 | 35·25 | 28·32 | 26·67 |
| 50 | 27·3 | 54·68 | 12·60 | 19·51 | 35·25 | 28·32 | 26·67 |
| 71 | 38·8 | 54·68 | 12·60 | 19·51 | 35·25 | 28·32 | 26·67 |

Depth, 73 M. = 39·9 F. Fine sand.

31st October, 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 57·11 | 13·95 | 19·55 | 35·32 | 28·38 | 26·46 |
| 5 | 2·7 | 57·29 | 14·05 | 19·53 | 35·28 | 28·35 | 26·41 |
| 10 | 5·5 | 57·29 | 14·05 | 19·54 | 35·30 | 28·37 | 26·43 |
| 20 | 10·9 | 57·29 | 14·05 | 19·53 | 35·28 | 28·35 | 26·41 |
| 30 | 16·4 | 57·31 | 14·06 | 19·53 | 35·29 | 28·36 | 26·42 |
| 40 | 21·9 | 57·31 | 14·06 | 19·52 | 35·27 | 28·34 | 26·40 |
| 50 | 27·3 | 57·31 | 14·06 | 19·53 | 35·28 | 28·35 | 26·41 |
| 71 | 38·8 | 57·31 | 14·06 | 19·52 | 35·27 | 28·34 | 26·40 |

Depth, 73 M. = 39·9 F. Fine sand.

3rd February, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 50·27 | 10·15 | 19·62 | 35·44 | 28·48 | 27·29 |
| 5 | 2·7 | 50·18 | 10·10 | 19·61 | 35·43 | 28·47 | 27·29 |
| 10 | 5·5 | 50·16 | 10·09 | 19·67* | 35·53 | 28·56 | 27·37 |
| 20 | 10·9 | 50·16 | 10·09 | 19·61 | 35·43 | 28·47 | 27·29 |
| 30 | 16·4 | 50·16 | 10·09 | 19·61 | 35·43 | 28·47 | 27·29 |
| 40 | 21·9 | 50·18 | 10·10 | 19·62 | 35·44 | 28·48 | 27·30 |
| 50 | 27·3 | 50·18 | 10·10 | 19·61 | 35·43 | 28·47 | 27·29 |
| 70 | 38·3 | 50·18 | 10·10 | 19·61 | 35·43 | 28·47 | 27·29 |

Depth, 72 M. = 39·4 F. Fine sand.

12th May, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 52·34 | 11·30 | 19·52 | 35·26 | 28·34 | 26·95 |
| 5 | 2·7 | 52·34 | 11·30 | 19·52 | 35·26 | 28·34 | 26·95 |
| 10 | 5·5 | 51·96 | 11·09 | 19·52 | 35·26 | 28·34 | 26·98 |
| 20 | 10·9 | 50·25 | 10·14 | 19·54 | 35·30 | 28·37 | 27·18 |
| 30 | 16·4 | 50·16 | 10·09 | 19·54 | 35·30 | 28·37 | 27·19 |
| 40 | 21·9 | 50·16 | 10·09 | 19·54 | 35·30 | 28·37 | 27·19 |
| 50 | 27·3 | 50·14 | 10·08 | 19·54 | 35·30 | 28·37 | 27·19 |
| 70 | 38·3 | 50·14 | 10·08 | 19·53 | 35·28 | 28·35 | 27·19 |

Depth, 74 M. = 40·5 F. Fine sand.

11th August, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 59·72 | 15·40 | 19·59 | 35·39 | 28·44 | 26·20 |
| 5 | 2·7 | 59·76 | 15·42 | 19·58 | 35·37 | 28·43 | 26·19 |
| 10 | 5·5 | 59·72 | 15·40 | 19·59 | 35·39 | 28·44 | 26·20 |
| 20 | 10·9 | 57·74 | 14·30 | 19·58 | 35·38 | 28·43 | 26·44 |
| 30 | 16·4 | 54·50 | 12·50 | 19·59 | 35·39 | 28·44 | 26·81 |
| 40 | 21·9 | 54·45 | 12·47 | 19·59 | 35·39 | 28·44 | 26·82 |
| 50 | 27·3 | 54·45 | 12·47 | 19·59 | 35·39 | 28·44 | 26·82 |
| 71 | 38·8 | 54·46 | 12·48 | 19·59 | 35·39 | 28·44 | 26·82 |

Depth, 72 M. = 39·4 F. Fine sand.

12th September, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 58·41 | 14·67 | 19·57 | 35·35 | 28·41 | 26·33 |
| 10 | 5·5 | 58·33 | 14·63 | 19·57 | 35·35 | 28·41 | 26·34 |
| 20 | 10·9 | 58·12 | 14·51 | 19·56 | 35·34 | 28·40 | 26·36 |
| 30 | 16·4 | 57·79 | 14·33 | 19·57 | 35·35 | 28·41 | 26·41 |
| 40 | 21·9 | 56·30 | 13·50 | 19·57 | 35·35 | 28·41 | 26·58 |
| 50 | 27·3 | 56·23 | 13·46 | 19·57 | 35·35 | 28·41 | 26·59 |
| 74 | 40·5 | 56·23 | 13·46 | 19·55 | 35·32 | 28·38 | 26·56 |

Depth, 75 M. = 41·0 F. Fine sand.

6th November, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 55·17 | 12·87 | 19·60 | 35·41 | 28·46 | 26·76 |
| 5 | 2·7 | 55·40 | 13·00 | 19·57 | 35·36 | 28·42 | 26·69 |
| 10 | 5·5 | 55·44 | 13·02 | 19·58 | 35·37 | 28·43 | 26·70 |
| 20 | 10·9 | 55·44 | 13·02 | 19·58 | 35·37 | 28·43 | 26·70 |
| 30 | 16·4 | 55·44 | 13·02 | 19·58 | 35·37 | 28·43 | 26·70 |
| 40 | 21·9 | 55·44 | 13·02 | 19·58 | 35·37 | 28·43 | 26·70 |
| 50 | 27·3 | 55·45 | 13·03 | 19·58 | 35·37 | 28·43 | 26·70 |
| 74 | 40·5 | 55·47 | 13·04 | 19·58 | 35·37 | 28·43 | 26·70 |

Depth, 74 M. = 40·5 F. Fine sand.

## STATION E. 2.

### 49° 27′ N. Latitude. 4° 42′ W. Longitude.

19th February 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·71 | 9·84 | 19·64 | 35·48 | 28·51 | 27·37 |
| 5 | 2·7 | 49·69 | 9·83 | 19·62 | 35·44 | 28·48 | 27·34 |
| 10 | 5·5 | 49·68 | 9·82 | 19·61 | 35·43 | 28·47 | 27·33 |
| 15 | 8·2 | 49·69 | 9·83 | 19·61 | 35·43 | 28·47 | 27·33 |
| 20 | 10·9 | 49·66 | 9·81 | 19·61 | 35·43 | 28·47 | 27·33 |
| 30 | 16·4 | 49·68 | 9·82 | 19·62 | 35·44 | 28·48 | 27·34 |
| 40 | 21·9 | 49·66 | 9·81 | 19·61 | 35·43 | 28·47 | 27·33 |
| 50 | 27·3 | 49·66 | 9·81 | 19·61 | 35·43 | 28·47 | 27·33 |
| 75 | 41·0 | 49·66 | 9·81 | 19·61 | 35·43 | 28·47 | 27·33 |
| 91 | 49·8 | 49·66 | 9·81 | 19·62 | 35·44 | 28·48 | 27·34 |

Depth, 94 M. = 51·4 F. Sand and gravel.

27th April, 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·82 | 9·90 | 19·56 | 35·34 | 28·40 | 27·25 |
| 5 | 2·7 | 49·84 | 9·91 | 19·54 | 35·30 | 28·37 | 27·22 |
| 10 | 5·5 | 49·82 | 9·90 | 19·54 | 35·30 | 28·37 | 27·22 |
| 15 | 8·2 | 49·84 | 9·91 | 19·53 | 35·28 | 28·35 | 27·20 |
| 20 | 10·9 | 49·84 | 9·91 | — | — | — | — |
| 30 | 16·4 | 49·82 | 9·90 | 19·54 | 35·30 | 28·37 | 27·22 |
| 40 | 21·9 | 49·82 | 9·90 | 19·54 | 35·30 | 28·37 | 27·22 |
| 50 | 27·3 | 49·80 | 9·89 | 19·54 | 35·30 | 28·37 | 27·22 |
| 90 | 49·2 | 49·80 | 9·89 | 19·54 | 35·30 | 28·37 | 27·22 |

Depth, 94 M. = 51·4 F. Sand and shell.

* Analysis repeated: the bottle was not perfectly closed and the high value may be due to evaporation.

TABLE I.—*continued.*

## STATION E. 2—*continued.*

### 49° 27′ N. Latitude. 4° 42′ W. Longitude—*continued.*

**12th August, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 63·70 | 17·61 | 19·52 | 35·26 | 28·34 | 25·59 |
| 5 | 2·7 | 63·72 | 17·62 | 19·50 | 35·23 | 28·31 | 25·55 |
| 10 | 5·5 | 62·89 | 17·16 | 19·50 | 35·23 | 28·31 | 25·67 |
| 15 | 8·2 | 56·12 | 13·40 | 19·56 | 35·34 | 28·40 | 26·59 |
| 20 | 10·9 | 55·60 | 13·11 | 19·57 | 35·35 | 28·41 | 26·66 |
| 30 | 16·4 | 55·54 | 13·08 | 19·56 | 35·34 | 28·40 | 26·66 |
| 40 | 21·9 | 55·49 | 13·05 | 19·57 | 35·35 | 28·41 | 26·67 |
| 50 | 27·3 | 55·47 | 13·04 | 19·57 | 35·35 | 28·41 | 26·68 |
| 75 | 41·0 | 55·45 | 13·03 | 19·57 | 35·35 | 28·41 | 26·68 |
| 94 | 51·4 | 55·45 | 13·03 | 19·57 | 35·35 | 28·41 | 26·68 |

Depth, 96 M. = 52·5 F.

**1st November, 1904.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 56·28 | 13·49 | 19·59 | 35·39 | 28·44 | 26·61 |
| 10 | 5·5 | 56·50 | 13·61 | 19·57 | 35·36 | 28·42 | 26·57 |
| 20 | 10·9 | 56·48 | 13·60 | 19·57 | 35·36 | 28·42 | 26·57 |
| 30 | 16·4 | 56·48 | 13·60 | 19·57 | 35·35 | 28·41 | 26·56 |
| 40 | 21·9 | 56·48 | 13·60 | 19·57 | 35·35 | 28·41 | 26·56 |
| 50 | 27·3 | 56·52 | 13·62 | 19·57 | 35·36 | 28·42 | 26·57 |
| 92 | 50·3 | 56·52 | 13·62 | — | — | — | — |

Depth, 94 M. = 51·4 F. Fine gravel.

**3rd February, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 50·68 | 10·38 | 19·66 | 35·52 | 28·54 | 27·30 |
| 5 | 2·7 | 50·76 | 10·42 | 19·65 | 35·50 | 28·53 | 27·29 |
| 10 | 5·5 | 50·76 | 10·42 | 19·65 | 35·50 | 28·53 | 27·29 |
| 20 | 10·9 | 50·77 | 10·43 | 19·65 | 35·50 | 28·53 | 27·29 |
| 30 | 16·4 | 50·77 | 10·43 | 19·65 | 35·51 | 28·53 | 27·29 |
| 40 | 21·9 | 50·77 | 10·43 | 19·65 | 35·51 | 28·53 | 27·29 |
| 50 | 27·3 | 50·77 | 10·43 | 19·65 | 35·50 | 28·53 | 27·29 |
| 90 | 49·2 | 50·77 | 10·43 | 19·65 | 35·51 | 28·53 | 27·29 |

Depth, 92 M. = 50·3 F. Coarse sand and shell.

**13th May, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 51·26 | 10·70 | 19·60 | 35·41 | 28·46 | 27·17 |
| 5 | 2·7 | 51·30 | 10·72 | 19·60 | 35·41 | 28·46 | 27·17 |
| 10 | 5·5 | 51·26 | 10·70 | 19·58 | 35·37 | 28·43 | 27·14 |
| 20 | 10·9 | 51·01 | 10·56 | 19·58 | 35·37 | 28·43 | 27·16 |
| 30 | 16·4 | 50·52 | 10·29 | 19·58 | 35·37 | 28·43 | 27·21 |
| 40 | 21·9 | 50·49 | 10·27 | 19·59 | 35·39 | 28·44 | 27·23 |
| 60 | 32·8 | 50·49 | 10·27 | 19·58 | 35·37 | 28·43 | 27·22 |
| 90 | 49·2 | 50·49 | 10·27 | 19·59 | 35·39 | 28·44 | 27·23 |

Depth, 94 M. = 51·4 F. Fine sand and shell.

**12th August, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·69 | 15·94 | 19·59 | 35·40 | 28·45 | 26·09 |
| 5 | 2·7 | 60·75 | 15·97 | 19·58 | 35·37 | 28·43 | 26·06 |
| 10 | 5·5 | 60·75 | 15·97 | 19·58 | 35·37 | 28·43 | 26·06 |
| 20 | 10·9 | 60·60 | 15·89 | 19·59 | 35·39 | 28·44 | 26·09 |
| 30 | 16·4 | 55·35 | 12·97 | 19·56 | 35·34 | 28·40 | 26·68 |
| 40 | 21·9 | 55·26 | 12·92 | 19·57 | 35·35 | 28·41 | 26·70 |
| 50 | 27·3 | 55·04 | 12·80 | 19·56 | 35·34 | 28·40 | 26·71 |
| 75 | 41·0 | 54·99 | 12·77 | 19·56 | 35·34 | 28·40 | 26·72 |
| 92 | 50·3 | 54·97 | 12·76 | 19·56 | 35·34 | 28·40 | 26·72 |

Depth, 94 M. = 51·4 F. Sand and shell.

**13th September, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 58·23 | 14·57 | 19·54 | 35·30 | 28·37 | 26·32 |
| 10 | 5·5 | 58·28 | 14·60 | 19·54 | 35·30 | 28·37 | 26·31 |
| 25 | 13·7 | 57·22 | 14·01 | 19·56 | 35·34 | 28·40 | 26·47 |
| 40 | 21·9 | 57·09 | 13·94 | 19·56 | 35·34 | 28·40 | 26·48 |
| 65 | 35·5 | 57·06 | 13·92 | 19·56 | 35·34 | 28·40 | 26·48 |
| 88 | 48·1 | 56·98 | 13·88 | 19·56 | 35·34 | 28·40 | 26·49 |

Depth, 90 M. = 49·2 F. Gravel and shell.

**6th November, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 55·02 | 12·79 | 19·57 | 35·35 | 28·41 | 26·72 |
| 5 | 2·7 | 55·17 | 12·87 | 19·54 | 35·30 | 28·37 | 26·69 |
| 10 | 5·5 | 55·17 | 12·87 | 19·54 | 35·30 | 28·37 | 26·69 |
| 20 | 10·9 | 55·18 | 12·88 | 19·54 | 35·30 | 28·37 | 26·69 |
| 30 | 16·4 | 55·18 | 12·88 | 19·54 | 35·30 | 28·37 | 26·69 |
| 40 | 21·9 | 55·18 | 12·88 | 19·54 | 35·30 | 28·37 | 26·69 |
| 60 | 32·8 | 55·18 | 12·88 | 19·54 | 35·30 | 28·37 | 26·69 |
| 90 | 49·2 | 55·18 | 12·88 | 19·54 | 35·30 | 28·37 | 26·69 |

Depth, 92 M. = 50·3 F. Coarse sand and shell.

## EXTRA STATION.

### 49° 31′ N. Latitude. 5° 11′ W. Longitude.

**15th August, 1905.**

| Depth. M. | Depth. F. | Temperature. Fahr. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 62·01 | 16·67 | 19·59 | 35·39 | 28·44 | 25·81 |
| 30 | 16·4 | 55·40 | 13·00 | 19·56 | 35·34 | 28·40 | 26·67 |
| 94 | 51·4 | 54·19 | 12·33 | 19·56 | 35·34 | 28·40 | 26·79 |

Depth, 97 M. = 53·0 F. Fine sand and shell.

TABLE I.—*continued.*

| Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 3.

48° 34′ N. Latitude. 5° 13′ W. Longitude.

20th February, 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 50·31 | 10·17 | 19·63 | 35·46 | 28·50 | 27·30 |
| 7·5 | 4·1 | 50·29 | 10·16 | 19·61 | 35·43 | 28·47 | 27·27 |
| 10 | 5·5 | 50·29 | 10·16 | 19·62 | 35·44 | 28·48 | 27·28 |
| 15 | 8·2 | 50·29 | 10·16 | 19·62 | 35·44 | 28·48 | 27·28 |
| 20 | 10·9 | 50·32 | 10·18 | 19·62 | 35·44 | 28·48 | 27·28 |
| 30 | 16·4 | 50·34 | 10·19 | 19·62 | 35·44 | 28·48 | 27·28 |
| 40 | 21·9 | 50·34 | 10·19 | 19·62 | 35·45 | 28·49 | 27·30 |
| 50 | 27·3 | 50·32 | 10·18 | 19·63 | 35·46 | 28·50 | 27·30 |
| 75 | 41·0 | 50·32 | 10·18 | 19·63 | 35·46 | 28·50 | 27·30 |
| 110 | 60·1 | 50·32 | 10·18 | 19·63 | 35·46 | 28·50 | 27·30 |

Depth, 111 M. = 60·7 F. Sand and shell.

28th April, 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 50·52 | 10·29 | 19·57 | 35·35 | 28·41 | 27·19 |
| 5 | 2·7 | 50·45 | 10·25 | 19·56 | 35·34 | 28·40 | 27·19 |
| 10 | 5·5 | 50·45 | 10·25 | 19·56 | 35·34 | 28·40 | 27·19 |
| 15 | 8·2 | 50·43 | 10·24 | 19·56 | 35·34 | 28·40 | 27·19 |
| 20 | 10·9 | 50·43 | 10·24 | 19·56 | 35·34 | 28·40 | 27·19 |
| 30 | 16·4 | 50·41 | 10·23 | 19·56 | 35·34 | 28·40 | 27·20 |
| 40 | 21·9 | 50·41 | 10·23 | 19·57 | 35·35 | 28·41 | 27·21 |
| 50 | 27·3 | 50·40 | 10·22 | 19·57 | 35·35 | 28·41 | 27·21 |
| 75 | 41·0 | 50·38 | 10·21 | 19·57 | 35·35 | 28·41 | 27·21 |
| 106 | 58·0 | 50·38 | 10·21 | 19·57 | 35·35 | 28·41 | 27·21 |

Depth, 110. M. = 60·1 F. Coarse sand.

13th August, 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 55·92 | 13·29 | 19·59 | 35·40 | 28·45 | 26·66 |
| 5 | 2·7 | 56·07 | 13·37 | 19·59 | 35·40 | 28·45 | 26·65 |
| 10 | 5·5 | 56·08 | 13·38 | 19·59 | 35·40 | 28·45 | 26·64 |
| 20 | 10·9 | 56·07 | 13·37 | 19·59 | 35·39 | 28·44 | 26·64 |
| 30 | 16·4 | 56·03 | 13·35 | 19·59 | 35·40 | 28·45 | 26·65 |
| 40 | 21·9 | 55·98 | 13·32 | 19·59 | 35·40 | 28·45 | 26·66 |
| 50 | 27·3 | 55·98 | 13·32 | 19·59 | 35·40 | 28·45 | 26·66 |
| 75 | 41·0 | 55·76 | 13·20 | 19·59 | 35·39 | 28·44 | 26·67 |
| 112 | 61·2 | 55·76 | 13·20 | 19·59 | 35·40 | 28·45 | 26·68 |

Depth, 114 M. = 62·3 F. Sand and shell.

2nd November, 1904.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 55·53 | 13·07 | 19·63 | 35·46 | 28·50 | 26·76 |
| 5 | 2·7 | 55·54 | 13·08 | 19·60 | 35·42 | 28·46 | 26·72 |
| 10 | 5·5 | 55·53 | 13·07 | 19·60 | 35·41 | 28·46 | 26·72 |
| 20 | 10·9 | 55·58 | 13·10 | 19·61 | 35·43 | 28·47 | 26·72 |
| 30 | 16·4 | 55·54 | 13·08 | 19·60 | 35·41 | 28·46 | 26·72 |
| 40 | 21·9 | 55·54 | 13·08 | 19·61 | 35·43 | 28·47 | 26·73 |
| 50 | 27·3 | 55·54 | 13·08 | 19·61 | 35·43 | 28·47 | 26·73 |
| 75 | 41·0 | 55·51 | 13·06 | 19·62 | 35·44 | 28·48 | 26·74 |
| 110 | 60·1 | 55·45 | 13·03 | 19·62 | 35·44 | 28·48 | 26·75 |

Depth, 111 M. = 60·7 F. Fine sand and shell.

4th February, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 50·58 | 10·32 | 19·61 | 35·43 | 28·47 | 27·25 |
| 5 | 2·7 | 50·59 | 10·33 | 19·60 | 35·41 | 28·46 | 27·23 |
| 10 | 5·5 | 50·59 | 10·33 | 19·60 | 35·41 | 28·46 | 27·23 |
| 20 | 10·9 | 50·59 | 10·33 | 19·60 | 35·41 | 28·46 | 27·23 |
| 30 | 16·4 | 50·58 | 10·32 | 19·61 | 35·43 | 28·47 | 27·24 |
| 40 | 21·9 | 50·58 | 10·32 | 19·60 | 35·41 | 28·46 | 27·23 |
| 50 | 27·3 | 50·58 | 10·32 | 19·60 | 35·41 | 28·46 | 27·23 |
| 75 | 41·0 | 50·56 | 10·31 | 19·60 | 35·42 | 28·46 | 27·25 |
| 110 | 60·1 | 50·56 | 10·31 | 19·60 | 35·41 | 28·46 | 27·24 |

Depth, 113 M. = 61·8 F. Coarse sand and shell.

14th May, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 52·57 | 11·43 | 19·56 | 35·34 | 28·40 | 26·98 |
| 5 | 2·7 | 51·96 | 11·09 | 19·56 | 35·34 | 28·40 | 27·04 |
| 10 | 5·5 | 51·57 | 10·87 | 19·56 | 35·34 | 28·40 | 27·08 |
| 20 | 10·9 | 51·28 | 10·71 | 19·56 | 35·34 | 28·40 | 27·11 |
| 30 | 16·4 | 51·26 | 10·70 | 19·56 | 35·34 | 28·40 | 27·11 |
| 40 | 21·9 | 51·22 | 10·68 | 19·56 | 35·34 | 28·40 | 27·12 |
| 50 | 27·3 | 51·22 | 10·68 | 19·56 | 35·34 | 28·40 | 27·12 |
| 75 | 41·0 | 51·22 | 10·68 | 19·56 | 35·34 | 28·40 | 27·12 |
| 114 | 62·3 | 51·22 | 10·68 | 19·56 | 35·34 | 28·40 | 27·12 |

Depth, 116 M. = 62·3 F. Fine sand and gravel.

13th August, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 56·73 | 13·74 | 19·54 | 35·31 | 28·37 | 26·49 |
| 5 | 2·7 | 56·95 | 13·86 | 19·54 | 35·31 | 28·37 | 26·47 |
| 10 | 5·5 | 56·77 | 13·76 | 19·54 | 35·30 | 28·37 | 26·49 |
| 20 | 10·9 | 56·30 | 13·50 | 19·54 | 35·30 | 28·37 | 26·54 |
| 30 | 16·4 | 56·34 | 13·52 | 19·53 | 35·29 | 28·36 | 26·53 |
| 40 | 21·9 | 56·08 | 13·38 | 19·54 | 35·31 | 28·37 | 26·57 |
| 50 | 27·3 | 56·05 | 13·36 | 19·54 | 35·30 | 28·37 | 26·57 |
| 75 | 41·0 | 55·96 | 13·31 | 19·55 | 35·32 | 28·38 | 26·59 |
| 110 | 60·1 | 55·90 | 13·28 | 19·54 | 35·30 | 28·37 | 26·59 |

Depth, 114 M. = 62·3 F. Fine sand and shell.

13th September, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 56·35 | 13·53 | 19·52 | 35·27 | 28·34 | 26·51 |
| 10 | 5·5 | 56·26 | 13·48 | 19·52 | 35·27 | 28·34 | 26·52 |
| 20 | 10·9 | 56·03 | 13·35 | 19·52 | 35·26 | 28·34 | 26·54 |
| 30 | 16·4 | 56·03 | 13·35 | 19·52 | 35·26 | 28·34 | 26·54 |
| 40 | 21·9 | 56·08 | 13·38 | 19·52 | 35·27 | 28·34 | 26·54 |
| 50 | 27·3 | 55·94 | 13·30 | 19·53 | 35·28 | 28·35 | 26·56 |
| 75 | 41·0 | 55·94 | 13·30 | 19·52 | 35·27 | 28·34 | 26·55 |
| 107 | 58·5 | 55·90 | 13·28 | 19·53 | 35·28 | 28·35 | 26·57 |

Depth, 110 M. = 60·1 F. Shell and sand.

7th November, 1905.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 53·26 | 11·81 | 19·56 | 35·34 | 28·40 | 26·91 |
| 5 | 2·7 | 53·40 | 11·89 | 19·56 | 35·34 | 28·40 | 26·89 |
| 15 | 8·2 | 53·40 | 11·89 | 19·56 | 35·34 | 28·40 | 26·89 |
| 30 | 16·4 | 53·40 | 11·89 | 19·55 | 35·33 | 28·39 | 26·88 |
| 50 | 27·3 | 53·35 | 11·86 | 19·54 | 35·31 | 28·37 | 26·88 |
| 75 | 41·0 | 53·33 | 11·85 | 19·55 | 35·32 | 28·38 | 26·88 |
| 105 | 57·4 | 53·31 | 11·84 | 19·56 | 35·34 | 28·40 | 26·90 |

Depth, 109 M. = 59·6 F. Sand and shell.

TABLE I.—*continued.*

| Depth. | | Temperature. | | $Cl.^{o}/_{oo}$ | $S.^{o}/_{oo}$ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | $Cl.^{o}/_{oo}$ | $S.^{o}/_{oo}$ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 7.

### 49° 53′ N. Latitude. 5° 38′ W. Longitude.

| 23rd February, 1904. | | | | | | | | 30th April, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 47·91 | 8·84 | 19·53 | 35·29 | 28·36 | 27·39 | 0 | 0 | 49·10 | 9·50 | 19·49 | 35·21 | 28·30 | 27·22 |
| 5 | 2·7 | 47·89 | 8·83 | 19·48 | 35·20 | 28·29 | 27·32 | 5 | 2·7 | 49·05 | 9·47 | 19·49 | 35·21 | 28·30 | 27·23 |
| 10 | 5·5 | 47·89 | 8·38 | 19·49 | 35·21 | 28·30 | 27·33 | 10 | 5·5 | 49·03 | 9·46 | 19·49 | 35·21 | 28·30 | 27·23 |
| 15 | 8·2 | 47·89 | 8·83 | 19·49 | 35·22 | 28·30 | 27·33 | 15 | 8·2 | 48·97 | 9·43 | 19·49 | 35·21 | 28·30 | 27·24 |
| 20 | 10·9 | 47·89 | 8·83 | 19·50 | 35·23 | 28·31 | 27·34 | 20 | 10·9 | 49·01 | 9·45 | 19·50 | 35·23 | 28·31 | 27·24 |
| 30 | 16·4 | 47·89 | 8·83 | 19·49 | 35·21 | 28·30 | 27·33 | 30 | 16·4 | 48·81 | 9·34 | 19·50 | 35·23 | 28·31 | 27·26 |
| 40 | 21·9 | 47·89 | 8·83 | 19·49 | 35·21 | 28·30 | 27·33 | 40 | 21·9 | 48·72 | 9·29 | 19·50 | 35·23 | 28·31 | 27·27 |
| 50 | 27·3 | 47·89 | 8·83 | 19·49 | 35·21 | 28·30 | 27·33 | 50 | 27·3 | 48·70 | 9·28 | 19·50 | 35·23 | 28·31 | 27·27 |
| 78 | 42·6 | 47·89 | 8·83 | 19·49 | 35·21 | 28·30 | 27·33 | 74 | 40·5 | 48·70 | 9·28 | 19·50 | 35·23 | 28·31 | 27·27 |
| Depth, 78 M. = 42·6 F. Coarse sand. | | | | | | | | Depth, 77 M. = 42·1 F. Sand and shell. | | | | | | | |

| 16th August, 1904. | | | | | | | | 3rd November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·93 | 16·07 | 19·51 | 35·25 | 28·32 | 25·93 | 0 | 0 | 56·66 | 13·70 | 19·51 | 35·25 | 28·32 | 26·45 |
| 5 | 2·7 | 60·98 | 16·10 | 19·52 | 35·26 | 28·34 | 25·94 | 5 | 2·7 | 56·70 | 13·72 | 19·49 | 35·21 | 28·30 | 26·43 |
| 10 | 5·5 | 60·57 | 15·87 | 19·52 | 35·26 | 28·34 | 26·00 | 10 | 5·5 | 56·70 | 13·72 | 19·50 | 35·23 | 28·31 | 26·44 |
| 15 | 8·2 | 60·06 | 15·59 | 19·52 | 35·27 | 28·34 | 26·07 | 20 | 10·9 | 56·70 | 13·72 | 19·51 | 35·25 | 28·32 | 26·45 |
| 20 | 10·9 | 54·61 | 12·56 | 19·55 | 35·33 | 28·39 | 26·75 | 30 | 16·4 | 56·64 | 13·69 | 19·53 | 35·28 | 28·35 | 26·48 |
| 30 | 16·4 | 53·65 | 12·03 | 19·56 | 35·34 | 23·40 | 26·86 | 40 | 21·9 | 56·59 | 13·66 | 19·54 | 35·30 | 28·37 | 26·51 |
| 40 | 21·9 | 53·62 | 12·01 | 19·55 | 35·33 | 28·39 | 26·86 | 50 | 27·3 | 56·52 | 13·62 | 19·55 | 35·32 | 28·38 | 26·53 |
| 50 | 27·3 | 53·62 | 12·01 | 19·56 | 35·34 | 28·40 | 26·87 | 78 | 42·6 | 55·83 | 13·24 | 19·57 | 35·35 | 28·41 | 26·63 |
| 75 | 41·0 | 53·60 | 12·00 | 19·56 | 35·34 | 28·40 | 26·87 | | | | | | | | |
| Depth, 78 M. = 42·6 F. Fine sand and shell. | | | | | | | | Depth, 80 M. = 43·7 F. Shell and Gravel. | | | | | | | |

| 6th February, 1905. | | | | | | | | 16th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·42 | 9·68 | 19·60 | 35·41 | 28·46 | 27·35 | 0 | 0 | 51·58 | 10·88 | 19·55 | 35·32 | 28·38 | 27·06 |
| 5 | 2·7 | 49·87 | 9·93 | 19·59 | 35·39 | 28·44 | 27·29 | 5 | 2·7 | 51·51 | 10·84 | 19·55 | 35·32 | 28·38 | 27·07 |
| 10 | 5·5 | 49·87 | 9·93 | 19·59 | 35·39 | 28·44 | 27·29 | 10 | 5·5 | 51·44 | 10·80 | 19·53 | 35·28 | 28·35 | 27·05 |
| 20 | 10·9 | 49·87 | 9·93 | 19·58 | 35·37 | 28·43 | 27·28 | 20 | 10·9 | 50·20 | 10·11 | 19·52 | 35·26 | 28·34 | 27·16 |
| 30 | 16·4 | 49·87 | 9·93 | 19·59 | 35·39 | 28·44 | 27·29 | 30 | 16·4 | 50·18 | 10·10 | 19·52 | 35·26 | 28·34 | 27·16 |
| 40 | 21·9 | 49·87 | 9·93 | 19·59 | 35·39 | 28·44 | 27·29 | 50 | 27·3 | 50·18 | 10·10 | 19·52 | 35·26 | 28·34 | 27·16 |
| 50 | 27·3 | 49·87 | 9·93 | 19·58 | 35·37 | 28·43 | 27·28 | 71 | 38·8 | 50·18 | 10·10 | 19·52 | 35·26 | 28·34 | 27·16 |
| 76 | 41·6 | 49·87 | 9·93 | 19·59 | 35·39 | 28·44 | 27·29 | | | | | | | | |
| Depth, 78 M. = 42·6 F. Coarse sand. | | | | | | | | Depth, 74 M. = 40·5 F. Sand, shell, and Gravel. | | | | | | | |

| 15th August, 1905. | | | | | | | | 9th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 61·11 | 16·17 | 19·58 | 35·37 | 28·43 | 26·01 | 0 | 0 | 53·64 | 12·02 | 19·58 | 35·37 | 28·43 | 26·90 |
| 5 | 2·7 | 60·98 | 16·10 | 19·57 | 55·35 | 28·41 | 26·01 | 5 | 2·7 | 53·74 | 12·08 | 19·56 | 35·34 | 28·40 | 26·84 |
| 10 | 5·5 | 60·73 | 15·96 | 19·56 | 35·34 | 28·40 | 26·04 | 10 | 5·5 | 53·76 | 12·09 | 19·56 | 35·34 | 28·40 | 26·84 |
| 20 | 10·9 | 56·89 | 13·83 | 19·56 | 35·34 | 28·40 | 26·50 | 20 | 10·9 | 53·78 | 12·10 | 19·55 | 35·33 | 28·39 | 26·84 |
| 30 | 16·4 | 54·19 | 12·33 | 19·57 | 35·36 | 28·42 | 26·83 | 30 | 16·4 | 53·78 | 12·10 | 19·55 | 35·33 | 28·39 | 26·84 |
| 40 | 21·9 | 54·09 | 12·27 | 19·58 | 35·37 | 28·43 | 26·85 | 40 | 21·9 | 53·78 | 12·10 | 19·55 | 35·32 | 28·38 | 26·83 |
| 50 | 27·3 | 54·07 | 12·26 | 19·58 | 35·37 | 28·43 | 26·85 | 50 | 27·3 | 53·78 | 12·10 | 19·55 | 35·33 | 28·39 | 26·84 |
| 72 | 39·4 | 54·03 | 12·24 | 19·58 | 35·37 | 28·43 | 26·85 | 75 | 41·0 | 53·78 | 12·10 | 19·55 | 35·33 | 28·39 | 26·84 |
| Depth, 74 M. = 40·5 F. Sand and shell. | | | | | | | | Depth, 78 M. = 42·6 F. Coarse sand and fine shell. | | | | | | | |

## STATION E. 6.

### 50° 24′ N. Latitude. 6$^{c}$ 05′ W. Longitude.

| 23rd February, 1904. | | | | | | | | 29th April, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 47·68 | 8·71 | 19·51 | 35·25 | 28·32 | 27·37 | 0 | 0 | 48·74 | 9·30 | 19·47 | 35·18 | 28·27 | 27·24 |
| 5 | 2·7 | 47·73 | 8·74 | 19·49 | 35·21 | 28·30 | 27·35 | 5 | 2·7 | 48·51 | 9·17 | 19·48 | 35·19 | 28·28 | 27·26 |
| 10 | 5·5 | 47·71 | 8·73 | 19·51 | 35·25 | 28·32 | 27·37 | 10 | 5·5 | 48·47 | 9·15 | 19·48 | 35·19 | 28·28 | 27·26 |
| 15 | 8·2 | 47·71 | 8·73 | 19·51 | 35·25 | 28·32 | 27·37 | 20 | 10·9 | 48·45 | 9·14 | 19·48 | 35·19 | 28·28 | 27·26 |
| 20 | 10·9 | 47·71 | 8·73 | 19·51 | 35·25 | 28·32 | 27·37 | 30 | 16·4 | 48·45 | 9·14 | 19·48 | 35·19 | 28·28 | 27·26 |
| 30 | 16·4 | 47·71 | 8·73 | 19·51 | 35·25 | 28·32 | 27·37 | 40 | 21·9 | 48·43 | 9·13 | 19·48 | 35·19 | 28·28 | 27·26 |
| 40 | 21·9 | 47·71 | 8·73 | 19·51 | 35·25 | 28·32 | 27·37 | 50 | 27·3 | 48·40 | 9·11 | 19·48 | 35·19 | 28·28 | 27·26 |
| 50 | 27·3 | 47·70 | 8·72 | 19·51 | 35·25 | 28·32 | 27·37 | 87 | 47·6 | 48·40 | 9·11 | 19·48 | 35·19 | 28·28 | 27·26 |
| 85 | 46·5 | 47·71 | 8·73 | 19·51 | 35·25 | 28·32 | 27·37 | | | | | | | | |
| Depth, 85 M. = 46·5 F. Coarse sand and shell. | | | | | | | | Depth, 90 M. = 49·2 F. Coarse sand. | | | | | | | |

TABLE I.—*continued.*

| Depth. | | Temperature. | | $Cl.‰$ | $S.‰$ | $\sigma_0$ | $\sigma_t$ | Depth. | | Temperature. | | $Cl.‰$ | $S.‰$ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 6—*continued.*

## 50° 24′ N. Latitude. 6° 05′ W. Longitude—*continued.*

| 16 August, 1904. | | | | | | | | 3rd November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 61·83 | 16·57 | 19·41 | 35·07 | 28·18 | 25·68 | 0 | 0 | 56·16 | 13·42 | 19·56 | 35·34 | 28·40 | 26·59 |
| 5 | 2·7 | 61·88 | 16·60 | 19·41 | 35·07 | 28·18 | 25·68 | 5 | 2·7 | 56·03 | 13·35 | 19·56 | 35·34 | 28·40 | 26·60 |
| 10 | 5·5 | 61·65 | 16·47 | 19·42 | 35·08 | 28·19 | 25·72 | 10 | 5·5 | 55·89 | 13·27 | 19·55 | 35·33 | 28·39 | 26·61 |
| 20 | 10·9 | 61·66 | 16·48 | 19·42 | 35·09 | 28·20 | 25·73 | 20 | 10·9 | 55·83 | 13·24 | 19·55 | 35·33 | 28·39 | 26·62 |
| 30 | 16·4 | 57·60 | 14·22 | 19·50 | 35·23 | 28·31 | 26·33 | 30 | 16·4 | 55·80 | 13·22 | 19·56 | 35·34 | 28·40 | 26·63 |
| 40 | 21·9 | 55·58 | 13·10 | 19·54 | 35·31 | 28·37 | 26·33 | 40 | 21·9 | 55·80 | 13·22 | 19·56 | 35·34 | 28·40 | 26·63 |
| 50 | 27·3 | 55·11 | 12·84 | 19·54 | 35·30 | 28·37 | 26·68 | 50 | 27·3 | 55·80 | 13·22 | 19·56 | 35·34 | 28·40 | 26·63 |
| 82 | 44·8 | 54·50 | 12·50 | 19·54 | 35·31 | 28·37 | 26·75 | 84 | 45·9 | 55·80 | 13·22 | 19·56 | 35·34 | 28·40 | 26·63 |
| Depth, 85 M. = 46·5 F. Gravel and shell. | | | | | | | | Depth, 85 M. = 46·5 F. Gravel and shell. | | | | | | | |

| 5th February, 1905. | | | | | | | | 15th May, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·33 | 9·63 | 19·58 | 35·38 | 28·43 | 27·33 | 0 | 0 | 51·49 | 10·83 | 19·45 | 35·15 | 28·24 | 26·95 |
| 5 | 2·7 | 49·73 | 9·85 | 19·58 | 35·37 | 28·43 | 27·29 | 5 | 2·7 | 51·44 | 10·80 | 19·45 | 35·14 | 28·24 | 26·94 |
| 10 | 5·5 | 49·77 | 9·87 | 19·58 | 35·37 | 28·43 | 27·28 | 10 | 5·5 | 51·28 | 10·71 | 19·44 | 35·12 | 28·22 | 26·94 |
| 20 | 10·9 | 49·77 | 9·87 | 19·58 | 35·37 | 28·43 | 27·28 | 20 | 10·9 | 50·11 | 10·06 | 19·43 | 35·10 | 28·21 | 27·04 |
| 30 | 16·4 | 49·77 | 9·87 | 19·57 | 35·36 | 28·42 | 27·27 | 30 | 16·4 | 50·02 | 10·01 | 19·43 | 35·10 | 28·21 | 27·05 |
| 40 | 21·9 | 49·77 | 9·87 | 19·61* | 35·43 | 28·47 | 27·32 | 40 | 21·9 | 50·00 | 10·00 | 19·43 | 35·10 | 28·21 | 27·05 |
| 50 | 27·3 | 49·73 | 9·85 | 19·58 | 35·37 | 28·43 | 27·29 | 50 | 27·3 | 49·96 | 9·98 | 19·43 | 35·10 | 28·21 | 27·06 |
| 82 | 44·8 | 49·73 | 9·85 | 19·58 | 35·37 | 28·43 | 27·29 | 77 | 42·1 | 49·95 | 9·97 | 19·43 | 35·10 | 28·21 | 27·06 |
| Depth, 82 M. = 44·8 F. Coarse sand. | | | | | | | | Depth, 80 M. = 43·7 F. Gravel and shell. | | | | | | | |

| 14th August, 1905. | | | | | | | | 9th November, 1905. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 63·01 | 17·23 | 19·48 | 35·19 | 28·28 | 25·63 | 0 | 0 | 53·33 | 11·85 | 19·57 | 35·35 | 28·41 | 26·91 |
| 5 | 2·7 | 62·60 | 17·00 | 19·48 | 35·19 | 28·28 | 25·68 | 5 | 2·7 | 53·35 | 11·86 | 19·56 | 35·34 | 28·40 | 26·90 |
| 10 | 5·5 | 62·06 | 16·70 | 19·48 | 35·19 | 28·28 | 25·75 | 10 | 5·5 | 53·33 | 11·85 | 19·56 | 35·34 | 28·40 | 26·90 |
| 20 | 10·9 | 61·18 | 16·21 | 19·48 | 35·19 | 28·28 | 25·87 | 20 | 10·9 | 53·35 | 11·86 | 19·57 | 35·35 | 28·41 | 26·91 |
| 30 | 16·4 | 57·74 | 14·30 | 19·51 | 35·25 | 28·32 | 26·33 | 30 | 16·4 | 53·35 | 11·86 | — | — | — | — |
| 40 | 21·9 | 55·22 | 12·90 | 19·50 | 35·23 | 28·31 | 26·61 | 40 | 21·9 | 53·35 | 11·86 | 19·57 | 35·35 | 28·41 | 26·91 |
| 50 | 27·3 | 53·55 | 11·97 | 19·50 | 35·23 | 28·31 | 26·79 | 50 | 27·3 | 53·35 | 11·86 | 19·56 | 35·34 | 28·40 | 26·90 |
| 87 | 47·6 | 53·06 | 11·70 | 19·50 | 35·23 | 28·31 | 26·84 | 84 | 45·9 | 53·35 | 11·86 | 19·56 | 35·34 | 28·40 | 26·90 |
| Depth, 87 M. = 47·6 F. Gravel and shell. | | | | | | | | Depth, 87 M. = 47·6 F. Sand and shell. | | | | | | | |

## STATION E. 5.

## 49° 06′ N. Latitude. 6° 32′ W. Longitude.

| 21st February, 1904. | | | | | | | | 29th April, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 49·24 | 9·58 | 19·59 | 35·40 | 28·45 | 27·35 | 0 | 0 | 49·33 | 9·63 | 19·55 | 35·32 | 28·38 | 27·28 |
| 7·5 | 4·1 | 49·23 | 9·57 | 19·57 | 35·35 | 28·41 | 27·32 | 5 | 2·7 | 49·28 | 9·60 | 19·55 | 35·32 | 28·38 | 27·28 |
| 15 | 8·2 | 49·23 | 9·57 | 19·56 | 35·34 | 28·40 | 27·31 | 10 | 5·5 | 49·28 | 9·60 | 19·54 | 35·30 | 28·37 | 27·27 |
| 20 | 10·9 | 49·23 | 9·57 | 19·57 | 35·35 | 28·41 | 27·32 | 15 | 8·2 | 49·28 | 9·60 | 19·55 | 35·32 | 28·38 | 27·28 |
| 30 | 16·4 | 49·23 | 9·57 | 19·57 | 35·35 | 28·41 | 27·32 | 20 | 10·9 | 49·23 | 9·57 | 19·55 | 35·32 | 28·38 | 27·29 |
| 40 | 21·9 | 49·23 | 9·57 | — | — | — | — | 30 | 16·4 | 49·15 | 9·53 | 19·55 | 35·32 | 28·38 | 27·29 |
| 50 | 27·3 | 49·23 | 9·57 | 19·58† | 35·37 | 28·43 | 27·34 | 40 | 21·9 | 49·14 | 9·52 | 19·54 | 35·30 | 28·37 | 27·29 |
| 75 | 41·0 | 49·23 | 9·57 | 19·55 | 35·33 | 28·39 | 27·30 | 50 | 27·3 | 49·12 | 9·51 | 19·54 | 35·30 | 28·37 | 27·29 |
| 127 | 69·4 | 49·23 | 9·57 | 19·55 | 35·33 | 28·39 | 27·30 | 75 | 41·0 | 49·10 | 9·50 | 19·55 | 35·32 | 28·38 | 27·30 |
| | | | | | | | | 117 | 64·0 | 49·10 | 9·50 | 19·55 | 35·32 | 28·38 | 27·30 |
| Depth, 130 M. = 71·1 F. Coarse sand and shell. | | | | | | | | Depth, 122 M. = 66·7 F. Coarse sand and shell. | | | | | | | |

| 14th August, 1904. | | | | | | | | 3rd November, 1904. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 63·81 | 17·67 | 19·53 | 35·29 | 28·36 | 25·59 | 0 | 0 | 55·96 | 13·31 | 19·52 | 35·26 | 28·34 | 26·55 |
| 10 | 5·5 | 64·00 | 17·78 | 19·52 | 35·26 | 28·34 | 25·55 | 5 | 2·7 | 56·01 | 13·34 | 19·51 | 35·25 | 28·32 | 26·53 |
| 20 | 10·9 | 61·34 | 16·30 | 19·52 | 35·27 | 28·34 | 25·91 | 10 | 5·5 | 56·01 | 13·34 | 19·51 | 35·25 | 28·32 | 26·53 |
| 30 | 16·4 | 51·26 | 10·70 | 19·58 | 35·37 | 28·43 | 27·14 | 20 | 10·9 | 56·01 | 13·34 | 19·51 | 35·25 | 28·32 | 26·53 |
| 40 | 21·9 | 51·19 | 10·66 | 19·58 | 35·38 | 28·43 | 27·16 | 30 | 16·4 | 55·98 | 13·32 | 19·51 | 35·25 | 28·32 | 26·53 |
| 75 | 41·0 | 51·17 | 10·65 | 19·59 | 35·39 | 28·44 | 27·16 | 40 | 21·9 | 51·19 | 10·66 | 19·53 | 35·28 | 28·35 | 27·07 |
| 120 | 65·6 | 51·12 | 10·62 | 19·59 | 35·40 | 28·45 | 27·18 | 50 | 27·3 | 51·19 | 10·66 | 19·52 | 35·26 | 28·34 | 27·06 |
| | | | | | | | | 80 | 43·7 | 51·19 | 10·66 | 19·52 | 35·26 | 28·34 | 27·06 |
| | | | | | | | | 119 | 65·1 | 51·19 | 10·66 | 19·52 | 35·26 | 28·34 | 27·06 |
| Depth, 126 M. = 68·9 F. Sand. | | | | | | | | Depth, 122 M. = 66·7 F. Fine sand and shell. | | | | | | | |

* Analysis repeated.

† Analysis somewhat uncertain.

TABLE I.—*continued.*

## STATION E. 5—*continued.*

### 49° 06′ N. Latitude. 6° 32′ W. Longitude—*continued.*

| Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | |
| **5 February, 1905.** | | | | | | | |
| 0 | 0 | 49·75 | 9·86 | 19·56 | 35·34 | 28·40 | 27·26 |
| 5 | 2·7 | 50·18 | 10·10 | 19·56 | 35·34 | 28·40 | 27·22 |
| 10 | 5·5 | 50·18 | 10·10 | 19·56 | 35·34 | 28·40 | 27·22 |
| 20 | 10·9 | 50·20 | 10·11 | 19·56 | 35·34 | 28·40 | 27·22 |
| 30 | 16·4 | 50·20 | 10·11 | 19·56 | 35·34 | 28·40 | 27·22 |
| 40 | 21·9 | 50·22 | 10·12 | 19·56 | 35·34 | 28·40 | 27·21 |
| 50 | 27·3 | 50·22 | 10·12 | 19·57 | 35·35 | 28·41 | 27·22 |
| 75 | 41·0 | 50·22 | 10·12 | 19·56 | 35·34 | 28·40 | 27·21 |
| 118 | 64·5 | 50·22 | 10·12 | 19·56 | 35·34 | 28·40 | 27·21 |
| Depth, 120 M. = 65·6 F. Sand and shell. | | | | | | | |
| **15th May, 1905.** | | | | | | | |
| 0 | 0 | 52·50 | 11·39 | 19·52 | 35·26 | 28·34 | 26·93 |
| 5 | 2·7 | 52·34 | 11·30 | 19·52 | 35·26 | 28·34 | 26·94 |
| 10 | 5·5 | 52·25 | 11·25 | 19·52 | 35·26 | 28·34 | 26·95 |
| 20 | 10·9 | 51·96 | 11·09 | 19·52 | 35·26 | 28·34 | 26·98 |
| 30 | 16·4 | 49·89 | 9·94 | 19·51 | 35·25 | 28·32 | 27·17 |
| 40 | 21·9 | 49·80 | 9·89 | 19·51 | 35·25 | 28·32 | 27·18 |
| 50 | 27·3 | 49·80 | 9·89 | 19·51 | 35·25 | 28·32 | 27·18 |
| 75 | 41·0 | 49·80 | 9·89 | 19·51 | 35·25 | 28·32 | 27·18 |
| 122 | 66·7 | 49·80 | 9·89 | 19·52 | 35·26 | 28·34 | 27·20 |
| Depth, 126 M. = 68·9 F. Sand and shell. | | | | | | | |
| **14th August, 1905.** | | | | | | | |
| 0 | 0 | 62·38 | 16·88 | 19·53 | 35·28 | 28·35 | 25·77 |
| 5 | 2·7 | 62·38 | 16·88 | 19·53 | 35·28 | 28·35 | 25·77 |
| 10 | 5·5 | 62·37 | 16·87 | 19·53 | 35·28 | 28·35 | 25·77 |
| 20 | 10·9 | 62·15 | 16·75 | 19·53 | 35·28 | 28·35 | 25·80 |
| 30 | 16·4 | 52·70 | 11·50 | 19·51 | 35·25 | 28·32 | 26·89 |
| 40 | 21·9 | 51·01 | 10·56 | 19·50 | 35·23 | 28·31 | 27·05 |
| 50 | 27·3 | 50·99 | 10·55 | 19·50 | 35·23 | 28·31 | 27·05 |
| 76 | 41·6 | 50·99 | 10·55 | 19·51 | 35·25 | 28·32 | 27·06 |
| 119 | 65·1 | 51·01 | 10·56 | 19·51 | 35·25 | 28·32 | 27·06 |
| Depth, 123 M. = 67·3 F. Fine sand and shell. | | | | | | | |
| **14th September, 1905.** | | | | | | | |
| 0 | 0 | 59·49 | 15·27 | 19·56 | 35·34 | 28·40 | 26·19 |
| 10 | 5·5 | 59·58 | 15·32 | 19·55 | 35·32 | 28·38 | 26·16 |
| 30 | 16·4 | 59·56 | 15·31 | 19·54 | 35·30 | 28·37 | 26·15 |
| 50 | 27·3 | 51·33 | 10·74 | 19·54 | 35·30 | 28·37 | 27·08 |
| 85 | 46·5 | 51·30 | 10·72 | 19·54 | 35·30 | 28·37 | 27·08 |
| 118 | 64·5 | 51·30 | 10·72 | 19·54 | 35·30 | 28·37 | 27·08 |
| Depth, 120 M. = 65·6 F. Sand and shell. | | | | | | | |
| **8th November, 1905.** | | | | | | | |
| 0 | 0 | 52·11 | 11·17 | 19·56 | 35·34 | 28·40 | 27·03 |
| 5 | 2·7 | 52·12 | 11·18 | 19·54 | 35·30 | 28·37 | 27·00 |
| 10 | 5·5 | 52·12 | 11·18 | 19·55 | 35·32 | 28·38 | 27·01 |
| 20 | 10·9 | 52·12 | 11·18 | 19·55 | 35·32 | 28·38 | 27·01 |
| 30 | 16·4 | 52·11 | 11·17 | 19·55 | 35·32 | 28·38 | 27·01 |
| 40 | 21·9 | 52·12 | 11·18 | 19·55 | 35·32 | 28·38 | 27·01 |
| 50 | 27·3 | 52·11 | 11·17 | 19·55 | 35·32 | 28·38 | 27·01 |
| 85 | 46·5 | 52·11 | 11·17 | 19·56 | 35·34 | 28·40 | 27·03 |
| 116 | 63·4 | 52·09 | 11·16 | 19·56 | 35·34 | 28·40 | 27·03 |
| Depth, 120 M. = 65·6 F. Shell. | | | | | | | |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |

## STATION E. 4.

### 48° 27′ N. Latitude. 6° 35′ W. Longitude.

| Depth. | | Temperature. | | Cl.‰ | S.‰ | $\sigma_0$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | |
| **20th February, 1904.** | | | | | | | |
| 0 | 0 | 50·45 | 10·25 | 19·64 | 35·48 | 28·51 | 27·30 |
| 7·5 | 4·1 | 50·45 | 10·25 | 19·63 | 35·46 | 28·50 | 27·29 |
| 15 | 8·2 | 50·45 | 10·25 | 19·63 | 35·46 | 28·50 | 27·29 |
| 30 | 16·4 | 50·45 | 10·25 | 19·63 | 35·46 | 28·50 | 27·29 |
| 50 | 27·3 | 50·45 | 10·25 | 19·63 | 35·46 | 28·50 | 27·29 |
| 100 | 54·7 | 50·45 | 10·25 | 19·63 | 35·46 | 28·50 | 27·29 |
| 150 | 82·0 | 50·45 | 10·25 | 19·63 | 35·46 | 28·50 | 27·29 |
| Depth, 153 M. = 86·4 F. Fine grey sand, with black specks. | | | | | | | |
| **28th April, 1904.** | | | | | | | |
| 0 | 0 | 50·54 | 10·30 | 19·60 | 35·41 | 28·46 | 27·24 |
| 5 | 2·7 | 50·47 | 10·26 | 19·58 | 35·37 | 28·43 | 27·22 |
| 10 | 5·5 | 50·47 | 10·26 | 19·58 | 35·37 | 28·43 | 27·22 |
| 20 | 10·9 | 50·13 | 10·07 | 19·59 | 35·39 | 28·44 | 27·26 |
| 30 | 16·4 | 50·11 | 10·06 | 19·60 | 35·41 | 28·46 | 27·28 |
| 40 | 21·9 | 50·09 | 10·05 | 19·59 | 35·39 | 28·44 | 27·27 |
| 50 | 27·3 | 50·09 | 10·05 | 19·59 | 35·39 | 28·44 | 27·27 |
| 75 | 41·0 | 50·09 | 10·05 | 19·59 | 35·39 | 28·44 | 27·27 |
| 100 | 54·7 | 50·07 | 10·04 | 19·59 | 35·39 | 28·44 | 27·27 |
| 165 | 90·2 | 50·05 | 10·03 | 19·60 | 35·41 | 28·46 | 27·29 |
| Depth, 165 M. = 90·2 F. Sand and shell. | | | | | | | |

TABLE I.—*continued.*

| Depth. | | Temperature. | | $Cl.^{o}/_{oo}$ | $S.^{o}/_{oo}$ | $\sigma_o$ | $\sigma_t$ | Depth. | | Temperature. | | $Cl.^{o}/_{oo}$ | $S.^{o}/_{oo}$ | $\sigma_o$ | $\sigma_t$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | F. | Fahr. | C. | | | | | M. | F. | Fahr. | C. | | | | |

## STATION E. 4—*continued.*

## 48° 27′ N. Latitude. 6° 35′ W. Longitude—*continued.*

**13th August, 1904.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 64·17 | 17·87 | 19·57 | 35·35 | 28·41 | 25·59 |
| 5 | 2·7 | 64·36 | 17·98 | 19·56 | 35·34 | 28·40 | 25·55 |
| 10 | 5·5 | 64·09 | 17·83 | 19·57 | 35·35 | 28·41 | 25·60 |
| 20 | 10·9 | 63·28 | 17·38 | 19·60 | 35·41 | 28·46 | 25·76 |
| 30 | 16·4 | 59·05 | 15·03 | 19·61 | 35·43 | 28·47 | 26·31 |
| 40 | 21·9 | 51·57 | 10·87 | 19·62 | 35·44 | 28·48 | 27·16 |
| 50 | 27·3 | 51·49 | 10·83 | 19·62 | 35·44 | 28·48 | 27·16 |
| 75 | 41·0 | 51·48 | 10·82 | 19·62 | 35·45 | 28·49 | 27·18 |
| 100 | 54·7 | 51·48 | 10·82 | 19·62 | 35·45 | 28·49 | 27·18 |
| 137 | 74·9 | 51·49 | 10·83 | 19·62 | 35·45 | 28·49 | 27·18 |

Depth, 142 M. = 77·6 F. Coarse sand and shell.

**2nd November, 1904.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 56·57 | 13·65 | 19·56 | 35·34 | 28·40 | 26·54 |
| 5 | 2·7 | 56·59 | 13·66 | 19·56 | 35·34 | 28·40 | 26·54 |
| 10 | 5·5 | 56·59 | 13·66 | 19·56 | 35·34 | 28·40 | 26·54 |
| 20 | 10·9 | 56·59 | 13·66 | 19·56 | 35·34 | 28·40 | 26·54 |
| 30 | 16·4 | 56·59 | 13·66 | 19·56 | 35·34 | 28·40 | 26·54 |
| 40 | 21·9 | 54·59 | 12·55 | 19·60 | 35·41 | 28·46 | 26·82 |
| 50 | 27·3 | 52·75 | 11·53 | 19·61 | 35·43 | 28·47 | 27·03 |
| 75 | 41·0 | 52·72 | 11·51 | 19·62 | 35·44 | 28·48 | 27·04 |
| 100 | 54·7 | 52·61 | 11·45 | 19·61 | 35·43 | 28·47 | 27·04 |
| 145 | 79·3 | 52·59 | 11·44 | 19·61 | 35·43 | 28·47 | 27·04 |

Depth, 148 M. = 80·9 F. Fine sand and shell.

**5th February, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 51·13 | 10·63 | 19·62 | 35·45 | 28·49 | 27·38 |
| 5 | 2·7 | 51·53 | 10·85 | 19·62 | 35·44 | 28·48 | 27·34 |
| 10 | 5·5 | 51·55 | 10·86 | 19·62 | 35·44 | 28·48 | 27·34 |
| 20 | 10·9 | 51·57 | 10·87 | 19·63 | 35·46 | 28·50 | 27·35 |
| 30 | 16·4 | 51·57 | 10·87 | 19·62 | 35·44 | 28·48 | 27·33 |
| 40 | 21·9 | 51·58 | 10·88 | 19·61 | 35·43 | 28·47 | 27·32 |
| 50 | 27·3 | 51·58 | 10·88 | 19·62 | 35·44 | 28·48 | 27·33 |
| 75 | 41·0 | 51·58 | 10·88 | 19·63 | 35·46 | 28·50 | 27·35 |
| 100 | 54·7 | 51·58 | 10·88 | 19·62 | 35·44 | 28·48 | 27·33 |
| 145 | 79·3 | 51·58 | 10·88 | 19·62 | 35·44 | 28·48 | 27·33 |

Depth, 147 M. = 80·4 F. Coarse sand and fine shell.

**14th May, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 53·20 | 11·78 | 19·60 | 35·41 | 28·46 | 26·97 |
| 5 | 2·7 | 53·15 | 11·75 | 19·60 | 35·41 | 28·46 | 26·98 |
| 10 | 5·5 | 52·23 | 11·24 | 19·58 | 35·37 | 28·43 | 27·04 |
| 20 | 10·9 | 51·49 | 10·83 | 19·59 | 35·39 | 28·44 | 27·13 |
| 30 | 16·4 | 51·44 | 10·80 | 19·59 | 35·39 | 28·44 | 27·13 |
| 40 | 21·9 | 50·90 | 10·50 | 19·58 | 35·37 | 28·43 | 27·18 |
| 50 | 27·3 | 50·79 | 10·44 | 19·58 | 35·37 | 28·43 | 27·19 |
| 85 | 46·5 | 50·79 | 10·44 | 19·58 | 35·37 | 28·43 | 27·19 |
| 142 | 77·6 | 50·77 | 10·43 | 19·58 | 35·38 | 28·43 | 27·19 |

Depth, 147 M. = 80·4 F. Gravel and sand.

**13th August, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 62·85 | 17·14 | 19·59 | 35·39 | 28·44 | 25·80 |
| 5 | 2·7 | 62·91 | 17·17 | 19·58 | 35·37 | 28·43 | 25·78 |
| 10 | 5·5 | 62·91 | 17·17 | 19·58 | 35·37 | 28·43 | 25·78 |
| 20 | 10·9 | 62·56 | 16·98 | 19·59 | 35·39 | 28·44 | 25·84 |
| 30 | 16·4 | 61·88 | 16·60 | 19·59 | 35·39 | 28·44 | 25·92 |
| 40 | 21·9 | 58·30 | 14·61 | — | — | — | — |
| 50 | 27·3 | 54·50 | 12·50 | 19·58 | 35·37 | 28·43 | 26·80 |
| 75 | 41·0 | 51·80 | 11·00 | 19·58 | 35·37 | 28·43 | 27·09 |
| 100 | 54·7 | 51·78 | 10·99 | 19·58 | 35·37 | 28·43 | 27·09 |
| 142 | 77·6 | 51·80 | 11·00 | 19·58 | 35·37 | 28·43 | 27·09 |

Depth, 146 M. = 79·8 F. Sand and shell.

**13th September, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 60·39 | 15·77 | 19·59 | 35·39 | 28·44 | 26·12 |
| 10 | 5·5 | 60·58 | 15·88 | 19·58 | 35·37 | 28·43 | 26·08 |
| 30 | 16·4 | 57·31 | 14·06 | 19·57 | 35·35 | 28·41 | 26·46 |
| 50 | 27·3 | 52·07 | 11·15 | 19·56 | 35·34 | 28·40 | 27·03 |
| 90 | 49·2 | 51·94 | 11·08 | 19·57 | 35·35 | 28·41 | 27·05 |
| 130 | 71·1 | 51·94 | 11·08 | 19·56 | 35·34 | 28·40 | 27·04 |

Depth, 135 M. = 73·8 F. Shell.

**7th November, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 53·92 | 12·18 | 19·66 | 35·52 | 28·54 | 26·97 |
| 5 | 2·7 | 54·01 | 12·23 | 19·64 | 35·48 | 28·51 | 26·93 |
| 10 | 5·5 | 54·01 | 12·23 | 19·64 | 35·48 | 28·51 | 26·93 |
| 20 | 10·9 | 54·01 | 12·23 | 19·64 | 35·48 | 28·51 | 26·93 |
| 30 | 16·4 | 54·01 | 12·23 | 19·64 | 35·49 | 28·52 | 26·94 |
| 40 | 21·9 | 54·01 | 12·23 | — | — | — | — |
| 50 | 27·3 | 54·01 | 12·23 | 19·64 | 35·48 | 28·51 | 26·93 |
| 90 | 49·2 | 54·01 | 12·23 | 19·64 | 35·48 | 28·51 | 26·93 |
| 124 | 67·8 | 54·01 | 12·23 | 19·63 | 35·46 | 28·50 | 26·92 |

Depth, 129 M. = 70·5 F. Sand and shell.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |

## EXTRA STATION.

## 47° 46′ N. Latitude. 7° 50′ W. Longitude.

**8th November, 1905.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 54·27 | 12·37 | 19·69 | 35·57 | 28·59 | 26·98 |
| 15 | 8·2 | 51·78 | 10·99 | 19·67 | 35·53 | 28·56 | 27·21 |
| 50 | 27·3 | 51·80 | 11·00 | 19·67 | 35·53 | 28·56 | 27·21 |
| 150 | 82·0 | 51·78 | 10·99 | 19·68 | 35·55 | 28·57 | 27·22 |
| 310 | 169·5 | 51·78 | 10·99 | 19·71 | 35·61 | 28·62 | 27·27 |

Depth, 320 M. = 175·0 F. Fine sand.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — |

# TABLE II.

## Surface Observations on Hydrographic Cruises.

### FEBRUARY, 1904—S.S. *Huxley*.

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | Cl. °/₀₀ | S. °/₀₀ | σ₀ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Feb. 3 | 11 a.m. | 50 16 N. | 4 13 W. | 47·3 | 8·5 | 19·53 | 35·28 | 28·35 | S. 70 W. | 4 | 6 | c. 9 | Moderate. | |
| „ 3 | 2 p.m. | Sea rising rapidly; altered course for Plymouth. | | | | | | | | | | | | |
| „ 4 | Noon. | Proceeded to sea; weather rough. | | | | | | | | | | | | |
| „ 4 | 3.15 p.m. | 50 02 N. | 4 22 W. | 48·7 | 9·3 | 19·55 | 35·32 | 28·38 | S. 5 W. | 5 | 8 | o. | Moderate | Station 1. |
| „ 4 | 9 p.m. | 49 55 N. | 4 24 W. | 49·3 | 9·6 | 19·53 | 35·29 | 28·36 | S. 50 W. | 6 | 10·5 | Clear | Rough. | |
| „ 4 | 11 p.m. | 49 49 N. | 4 31 W. | 49·3 | 9·6 | 19·56 | 35·34 | 28·40 | S. 50 W. | 6 | 10·5 | c. 3 | Rough. | |
| „ 5 | 1 a.m. | 49 45 N. | 4 30 W. | 49·5 | 9·7 | 19·58 | 35·37 | 28·43 | S. 30 W. | 6 | 10·5 | c. 3 | Rough. | |
| „ 5 | 3.10 a.m. | 49 40 N. | 4 44 W. | 49·6 | 9·8 | | Lost. | | S. 30 W. | 6 | 10·5 | c. 2 | Rough. | |
| „ 5 | 6 a.m. | 49 34 N. | 4 50 W. | 49·8 | 9·9 | 19·59 | 35·40 | 28·45 | S. 30 W. | 4 | 6 | c. 4 | Moderate. | |
| „ 5 | 9.30 a.m. | Heavy sea; altered course for Plymouth. | | | | | | | | | | | | |
| From Feb. 5th to 16th no work was possible owing to continuous bad weather. | | | | | | | | | | | | | | |
| „ 16 | 7.30 a.m. | Proceeded to sea; heavy south-westerly swell. | | | | | | | | | | | | |
| „ 16 | 10 a.m. | 50 11 N. | 4 14 W. | 46·9 | 8·3 | 19·35 | 34·96 | 28·09 | S. 5 W. | 3 | 4 | o. | Moderate. | |
| „ 16 | 11.30 a.m. | 50 02 N. | 4 22 W. | 48·1 | 8·9 | 19·51 | 35·25 | 28·32 | S. 15 E. | 5 | 8 | o. | Moderate | Station 1. (Second time.) |
| „ 16 | 5.45 p.m. | 49 54 N. | 4 17 W. | 48·9 | 9·4 | 19·56 | 35·34 | 28·40 | S. 50 W. | 4 | 6 | c. 8 | Moderate. | |
| „ 16 | 8.55 p.m. | 49 47 N. | 4 23 W. | 48·9 | 9·4 | 19·58 | 35·38 | 28·43 | S. 60 W. | 5 | 8 | o. | Moderate. | |
| „ 17 | 3.20 a.m. | North-westerly gale and heavy sea; altered course for Falmouth. | | | | | | | | | | | | |
| „ 17 | 6.45 a.m. | 49 41 N. | 4 53 W. | 48·6 | 9·2 | 19·53 | 35·28 | 28·35 | N. 60 W. | 7 | 13 | c. 8 | Rough. | |
| „ 17 | 11.30 a.m. | Anchored in Falmouth Harbour. | | | | | | | | | | | | |
| „ 19 | 7.30 a.m. | Proceeded to sea; fine weather and smooth sea. | | | | | | | | | | | | |
| „ 19 | 9.30 a.m. | 49 56 N. | 4 47 W. | 48·4 | 9·1 | 19·53 | 35·28 | 28·35 | N. 60 W. | 1 | 1 | c. 1 | Smooth. | |
| „ 19 | 11 a.m. | 49 41 N. | 4 55 W. | 48·6 | 9·2 | 19·59 | 35·39 | 28·44 | N. 60 W. | 2 | 2 | c. 4 | Smooth. | |
| „ 19 | 0.30 p.m. | 49 31 N. | 4 46 W. | 49·3 | 9·6 | 19·58 | 35·37 | 28·43 | S. 50 W. | 3 | 4 | c. 5 | Slight. | |
| „ 19 | 1.30 p.m. | 49 27 N. | 4 42 W. | 49·7 | 9·8 | 19·64 | 35·48 | 28·51 | S. 85 W. | 3 | 4 | c. 6 | Slight | Station 2. |
| „ 19 | 6.30 p.m. | 49 17 N. | 4 48 W. | 49·5 | 9·7 | 19·62 | 35·44 | 28·48 | S. 50 W. | 3 | 4 | o. | Slight. | |
| „ 19 | 8.5 p.m. | 49 05 N. | 4 58 W. | 50·2 | 10·1 | 19·70 | 35·60 | 28·61 | S. 50 W. | 3 | 4 | o. | Moderate. | |
| „ 19 | 9.50 p.m. | 48 53 N. | 5 07 W. | 50·2 | 10·1 | 19·69 | 35·57 | 28·59 | S. 50 W. | 4 | 6 | c. 2 | Moderate. | |
| „ 20 | 1.15 a.m. | 48 44 N. | 5 16 W. | 50·4 | 10·2 | 19·68 | 35·55 | 28·57 | S. 50 W. | 3 | 4 | c. 4 | Moderate. | |
| „ 20 | 7.35 a.m. | 48 34 N. | 5 13 W. | 50·3 | 10·1 | 19·63 | 35·46 | 28·50 | S. 70 W. | 4 | 6 | o. | Rough. | Station 3. |
| „ 20 | 1 p.m. | 48 27 N. | 5 31 W | 50·4 | 10·2 | 19·68 | 35·56 | 28·58 | S. 50 W. | 4 | 6 | o. | Rough. | |
| „ 20 | 3.40 p.m. | 48 27 N. | 5 50 W. | 50·0 | 10·0 | 19·64 | 35·48 | 28·51 | S. 70 W. | 3 | 4 | o. p. | Moderate. | |
| „ 20 | 5.15 p.m. | 48 28 N. | 6 04 W. | 50·2 | 10·1 | 19·65 | 35·50 | 28·53 | S. 70 W. | 3 | 4 | c. 4 | Moderate. | |
| „ 20 | 7.15 p.m. | 48 28 N. | 6 19 W. | 50·0 | 10·0 | 19·64 | 35·48 | 28·51 | S. 60 W. | 3 | 4 | c. 8 | Moderate. | |
| „ 20 | 10 p.m. | 48 27 N. | 6 35 W. | 50·4 | 10·2 | 19·64 | 35·48 | 28·51 | S. 70 W. | 5 | 8 | o. | Rough | Station 4. |
| „ 21 | 1.50 a.m. | 48 36 N. | 6 37 W. | 50·0 | 10·0 | 19·69 | 35·57 | 28·59 | S. 60 W. | 3 | 4 | o. | Moderate. | |
| „ 21 | 3.40 a.m. | 48 53 N. | 6 37 W. | 49·6 | 9·8 | 19·60 | 35·41 | 28·46 | S. 60 W. | 4 | 6 | o. | Heavy swell. | |
| „ 21 | 5.20 a.m. | 49 06 N. | 6 32 W. | 49·3 | 9·6 | 19·59 | 35·40 | 28·45 | S. 50 W. | 4 | 6 | o. | Heavy swell. | Station 5. |
| „ 21 | 10.5 a.m. | 49 21 | 6 14 | 49·1 | 9·5 | 19·60 | 35·41 | 28·46 | S. 50 W. | 4 | 6 | o. p. | Moderate. | |
| „ 21 | 0.15 p.m. | 49 32 | 6 03 | 48·7 | 9·3 | 19·55 | 35·32 | 28·38 | S. 30 W. | 5 | 8 | o. r. | Moderate. | |
| „ 21 | 2.0 p.m. | 49 44 N. | 5 53 W. | 48·0 | 8·9 | 19·53 | 35·29 | 28·36 | S. 70 W. | 5 | 8 | o. d. | Rough | Very thick; hove to. |
| „ 22 | 8.45 a.m. | Anchored off Newlyn. | | | | | | | | | | | | |
| „ 22 | 6.0 p.m. | Proceeded to sea. | | | | | | | | | | | | |
| „ 23 | 0.15 a.m. | 50 24 N. | 6 05 W. | 47·7 | 8·7 | 19·51 | 35·25 | 28·32 | S. 30 W. | 1 | 1 | c. 8 p. | Smooth | Station 6. |
| „ 23 | 2.50 a.m. | 50 23 N. | 5 59 W. | 47·7 | 8·7 | 19·55 | 35·32 | 28·38 | S. 5 W. | 3 | 4 | o. | Moderate. | |
| „ 23 | 3.38 a.m. | 50 21 N. | 5 51 W. | 47·7 | 8·7 | 19·52 | 35·26 | 28·34 | S. 5 W. | 3 | 4 | o. | Moderate. | |
| „ 23 | 4.14 a.m. | 50 20 N. | 5 43 W. | 47·5 | 8·6 | 19·53 | 35·28 | 28·35 | — | — | — | — | — | |
| „ 23 | 7.35 a.m. | 50 03 N. | 5 46 W. | 47·5 | 8·6 | 19·53 | 35·28 | 28·35 | S. 40 E. | 3 | 4 | o. | Smooth. | |
| „ 23 | 9.20 a.m. | 49 53 N. | 5 38 W. | 47·9 | 8·8 | 19·53 | 35·29 | 28·36 | S. 30 E. | 4 | 4 | o. d. | Smooth | Station 7. |
| 23 | 0.55 p.m. | 49 55 N. | 5 13 W. | 47·5 | 8·6 | 19·46 | 35·16 | 28·25 | S. 30 E. | 3 | 4 | o. d. | Moderate. | |
| „ 23 | 6.20 p.m. | Anchored in Plymouth Sound. | | | | | | | | | | | | |
| „ 25 | Noon. | Proceeded to sea. | | | | | | | | | | | | |

## TABLE II—*continued.*

### FEBRUARY, 1904—S.S. *Huxley—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | Cl. °/₀₀ | S. °/₀₀ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Feb. 25 | 3.10 p.m. | 50 08 N. | 3 47 W. | 46·7 | 8·2 | 19·38 | 35·01 | 28·14 | S. 60 E. | 1 | 1 | o. | Smooth | Station 20. |
| „ 25 | 6.15 p.m. | 50 01 N. | 3 32 W. | 47·7 | 8·7 | 19·51 | 35·25 | 28·32 | S. 60 E. | 1 | 1 | o. | Smooth. | |
| „ 25 | 7.10 p.m. | 49 56 N. | 3 23 W. | 48·1 | 8·9 | 19·56 | 35·34 | 28·40 | S. 60 E. | 2 | 2 | o. | Smooth | Station 19. |
| „ 25 | 9.52 p.m. | 50 03 N. | 3 22 W. | 47·5 | 8·6 | 19·54 | 35·31 | 28·37 | S. 60 E. | 1 | 1 | o. | Smooth. | |
| „ 25 | 11.7 p m. | 50 11 N. | 3 17 W. | 46·8 | 8·2 | 19·42 | 35·09 | 28·20 | S. 60 E. | 1 | 1 | o. | Smooth. | |
| „ 26 | 0.30 a.m. | 50 23 N. | 3 08 W. | 46·4 | 8·0 | 19·43 | 35·11 | 28·21 | S. 20 W. | 3 | 4 | o. | Smooth | Station 18. |
| „ 26 | Noon. | 50 30 N. | 3 27 W. | 47·7 | 8·7 | — | — | — | — | -- | — | o. d. | Smooth | Trawling. |
| „ 26 | 10 p.m. | 50 11 N. | 2 52 W. | 47·6 | 8·7 | 19·55 | 35·32 | 28·38 | N. 85 E. | 5 | 8 | o. | Rough. | Station 17. |
| „ 27 | 6 a.m. | 50 23 N. | 2 28 W. | 45·4 | 7·5 | 19·33 | 34·93 | 28·07 | N. 85 E. | 3 | 4 | o. | Smooth | Station 16. |
| „ 27 | 10.17 p.m. | 50 19 N. | 2 51 W. | 47·1 | 8·4 | 19·51 | 35·25 | 28·32 | Calm | | | o. m. | Smooth. | |
| „ 27 | 11.40 p.m. | 50 07 N. | 2 49 W. | 47·7 | 8·7 | 19·57 | 35·35 | 28·41 | Calm | | | o. m. | Smooth. | |
| „ 28 | 1.5 am. | 49 56 N. | 2 47 W. | 48·0 | 8·9 | 19·60 | 35·42 | 28·46 | Calm | | | o. | Smooth. | |
| „ 28 | 4 a.m. | 49 49 N. | 2 33 W. | 47·1 | 8·4 | 19·55 | 35·32 | 28·38 | N. 60 E. | 2 | 2 | o. | Smooth | Station 10. |
| „ 28 | 7.30 a.m. | 49 59 N. | 2 09 W. | 47·3 | 8·5 | 19·61 | 35·43 | 28·47 | N. 70 E. | 2 | 2 | o. | Smooth. | |
| „ 28 | 9.50 a.m. | 50 05 N. | 1 58 W. | 47·4 | 8·6 | 19·57 | 35·35 | 28·41 | N. 60 E. | 3 | 4 | o. | Smooth | Station 11. |
| „ 28 | 2.15 p.m. | 49 59 N. | 1 39 W. | 46·0 | 7·8 | 19·53 | 35·28 | 28·35 | N. 70 E. | 5 | 8 | c. 8 | Moderate. | |
| „ 28 | 5 p.m. | 49 55 N. | 1 09 W. | 45·5 | 7·5 | 19·43 | 35·10 | 28·21 | N. 60 E. | 3 | 4 | c. 5 | Slight | Station 12. |
| „ 28 | 7.30 p.m. | 50 00 N. | 1 11 W. | 46·2 | 7·9 | 19·54 | 35·30 | 28·37 | N. 60 E. | 3 | 4 | c. 8 | Moderate. | |
| „ 28 | 8.20 p.m. | 50 06 N. | 1 12 W. | 47·1 | 8·4 | 19·55 | 35·32 | 28·38 | N. 85 E. | 4 | 6 | c. 8 | Moderate | Bottom Salinity 35·00. |
| „ 28 | 9.50 p.m. | 50 12 N. | 1 14 W. | 46·8 | 8·2 | 19·57 | 35·35 | 28·41 | N. 85 E. | 4 | 6 | c. 8 | Rising. | |
| „ 28 | 10.30 p.m. | 50 20 N. | 1 15 W. | 43·8 | 6·5 | 19·38 | 35·01 | 28·14 | N. 70 E. | 4 | 6 | c. 8 | Moderate | Station 13. |
| „ 29 | 7 a.m. | 50 33 N. | 1 17 W. | 43·1 | 6·2 | 19·06 | 34·43 | 27·67 | N. 50 E. | 1 | 1 | — | Slight | Station 14. |
| „ 29 | 10.10 a.m. | 50 31 N. | 0 56 W. | 42·4 | 5·8 | 19·02 | 34·36 | 27·61 | N. 50 E. | 4 | 6 | c. 1 | Slight. | |
| „ 29 | 0.5 p.m. | 50 27 N. | 0 40 W. | 44·2 | 6·8 | 19·41 | 35·07 | 28·18 | S. 70 E. | 2 | 2 | o. snow | Smooth. | |
| „ 29 | 2.30 p.m. | 50 21 N. | 0 19 W. | 45·8 | 7·7 | 19·54 | 35·30 | 28·37 | N. 70 E. | 1 | 1 | c. 9 | Smooth | Station 21. |
| „ 29 | 5.45 p.m. | 50 10 N. | 0 18 W. | 46·4 | 8·0 | 19·57 | 35·36 | 28·42 | N. 30 E. | 1 | 1 | c. 8 | Smooth. | |
| „ 29 | 6.50 p.m. | 50 00 N. | 0 21 W. | 46·4 | 8·0 | 19·57 | 35·35 | 28·41 | N. 70 E. | 1 | 1 | o. | Smooth | Station 24. |
| „ 29 | 9.20 p.m. | 50 07 N. | 0 08 W. | 43·9 | 6·6 | 19·57 | 35·35 | 28·41 | N. 70 E. | 1 | 1 | o. | Smooth. | |
| „ 29 | 10.45 p.m. | 50 12 N. | 0 01 E. | 41·9 | 5·5 | — | — | — | N. 70 E. | 1 | 1 | o. | Smooth. | |

### MARCH, 1904—S.S. *Huxley.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mar. 1 | 0.15 a.m. | 50 18 N. | 0 09 E. | 46·0 | 7·8 | 19·58 | 35·37 | 28·43 | N. 70 E. | 1 | 1 | o. | Smooth. | |
| „ 1 | 1.35 a.m. | 50 24 N. | 0 17 E. | 45·9 | 7·7 | 19·58 | 35·37 | 28·43 | — | — | — | o. | Smooth. | |
| „ 1 | 3.50 a.m | 50 33 N. | 0 36 E. | 45·6 | 7·5 | 19·62 | 35·44 | 28·48 | N. 70 E. | 1 | 1 | m. | Smooth | Station 22. |
| „ 1 | 10.20 a.m. | 50 56 N. | 1 17 E. | 44·2 | 6·8 | 19·57 | 35·35 | 28·41 | Calm. | | | c. 5 | Smooth. | |

Observations on Stations were made by D. J. Matthews; surface observations between the station by D. J. Matthews, G. H. Grosvenor, B.A., and J. Carter.

### APRIL, 1904—S.S. *Huxley.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| April 27 | 1.45 p.m. | 50 10 N. | 4 15 W. | 49·3 | 9·6 | 19·47 | 35·18 | 28·27 | — | — | — | — | Smooth. | |
| „ 27 | 3.15 p.m. | 50 02 N. | 4 22 W. | 49·9 | 9·9 | 19·58 | 35·37 | 28·43 | N. 40 W. | 2 | 2 | c. 5 | Smooth | Station 1. |
| „ 27 | 7.20 p.m. | 49 49 N. | 4 23 W. | 49·6 | 9·8 | 19·59 | 35·39 | 28·44 | S. 85 W. | 2 | 2 | c. 1 | Smooth. | |
| „ 27 | 9.10 p.m. | 49 37 N. | 4 32 W. | 49·8 | 9·9 | 19·58 | 35·37 | 28·43 | S. 85 W. | 4 | 6 | 0 | Slight. | |
| „ 27 | 10.40 p.m. | 49 27 N. | 4 42 W. | 49·8 | 9·9 | 19·56 | 35·34 | 28·40 | N. 60 W. | 1 | 1 | 0 | Smooth | Station 2. |
| „ 28 | 3.5 a.m. | 49 13 N. | 4 50 W. | 50·2 | 10·1 | 19·50 | 35·23 | 28·31 | — | — | — | o. | Slight. | |
| „ 28 | 4.30 a.m. | 49 01 N. | 4 59 W. | 50·2 | 10·1 | 19·50 | 35·23 | 28·31 | N. 60 W. | 2 | 2 | o. | Smooth. | |
| „ 28 | 6 a.m. | 48 48 N. | 5 07 W. | 50·4 | 10·2 | 19·53 | 35·28 | 28·35 | N. 60 W. | 3 | 4 | o. | Slight. | |
| 28 | 7.40 a.m. | 48 34 N. | 5 13 W. | 50·5 | 10·3 | 19·57 | 35·35 | 28·41 | S. 70 W. | 2 | 2 | o. | Smooth | Station 3. |
| „ 28 | 11.47 a.m. | 48 31 N. | 5 35 W. | 49·8 | 9·9 | 19·55 | 35·32 | 28·38 | S. 60 W. | 2 | 2 | c. 9 | Smooth. | |
| „ 28 | 1.30 p.m. | 48 29 N. | 5 58 W. | 49·8 | 9·9 | 19·56 | 35·34 | 28·40 | S. 60 W. | 2 | 2 | c. 8 | Smooth. | |

## TABLE II—*continued.*

### APRIL, 1904—S.S. *Huxley—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.* ‰ | *S.* ‰ | $\sigma_0$ | Wind. Direction (True). | Wind. Force. B. | Wind. Force. m/s. | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| April 28 | 3.20 p.m. | 48 28 N. | 6 20 W. | 50·4 | 10·2 | 19·55 | 35·32 | 28·38 | S. 60 W. | 2 | 2 | o. | Slight. | |
| „ 28 | 4.53 p.m. | 48 27 N. | 6 35 W. | 50·5 | 10·3 | 19·60 | 35·41 | 28·46 | S. 60 W. | 2 | 2 | o. d. | Slight | Station 4. |
| „ 28 | 9.30 p.m. | 48 38 N. | 6 32 W. | 49·6 | 9·8 | 19·54 | 35·30 | 28·37 | — | — | — | — | — | |
| „ 28 | 10.50 p.m. | 48 51 N. | 6 32 W. | 49·6 | 9·8 | 19·55 | 35·32 | 28·38 | — | — | — | — | — | |
| „ 29 | 0.30 a.m. | 49 06 N. | 6 32 W. | 49·3 | 9·6 | 19·55 | 35·32 | 28·38 | S. 30 W. | 4 | 6 | o. | Moderate | Station 5. |
| „ 29 | 4.30 a.m. | 49 22 N. | 6 18 W. | 49·5 | 9·7 | 19·56 | 35·34 | 28·40 | — | — | — | — | — | |
| „ 29 | 6.15 a.m. | 49 35 N. | 6 09 W | 49·5 | 9·7 | 19·53 | 35·23 | 28·35 | — | — | — | o. | — | |
| „ 29 | 7.50 a.m. | 49 46 N. | 6 00 W. | 48·9 | 9·4 | 19·52 | 35·26 | 28·34 | — | — | — | o. | — | |
| „ 29 | 2.30 p.m. | 50 24 N. | 6 05 W. | 48·7 | 9·3 | 19·47 | 35·18 | 28·27 | S. 30 W. | 3 | 4 | o. f. d. | Moderate | Station 6. |
| „ 29 | 10 p.m. | 50 17 N. | 5 53 W. | 49·1 | 9·5 | 19·49 | 35·21 | 28·30 | — | — | — | f. | — | |
| „ 30 | — | 50 03 N. | 5 46 W. | — | — | 19·35 | 34·96 | 28·09 | — | — | — | f. | — | Position doubtful: land not seen. |
| „ 30 | 6 a.m. | 49 53 N. | 5 38 W. | 49·1 | 9·5 | 19·49 | 35·21 | 28·30 | — | — | — | o. | Slight | Station 7. |
| „ 30 | 10.30 a.m. | 49 56 N. | 5 12 W. | 48·9 | 9·4 | 19·42 | 35·08 | 28·19 | — | — | — | — | — | |
| „ 30 | 1.45 p.m. | 50 09 N. | 4 41 W. | 49·5 | 9·7 | 19·39 | 35·03 | 28·15 | N. 75 W. | 1 | 1 | o. | Smooth. | |
| | | | | | | Put into Plymouth. | | | | | | | | |

### MAY, 1904—S.S. *Huxley.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May 3 | 4 a.m. | | | | | Proceeded to sea. | | | | | | | | |
| „ 3 | 7.12 a.m. | 50 08 N. | 3 47 W. | 49·3 | 9·6 | 19·51 | 35·25 | 28·32 | S. 70 W. | 1 | 1 | c. 9 | Smooth | Station 20. |
| „ 3 | 9.21 a.m. | 50 02 N. | 3 35 W. | 49·8 | 9·9 | 19·58 | 35·37 | 28·43 | S. 70 W. | 1 | 1 | c. 5 | Smooth. | |
| „ 3 | 10.24 a.m. | 49 56 N. | 3 23 W. | 50·0 | 10·0 | 19·55 | 35·32 | 28·38 | S. 85 W. | 2 | 2 | c. 8 | Smooth | Station 19. |
| „ 3 | 1.23 p.m. | 49 47 N. | 3 30 W. | 49·3 | 9·6 | 19·49 | 35·21 | 28·30 | — | — | — | — | — | |
| „ 3 | 2.30 p.m. | 49 37 N. | 3 35 W. | 49·3 | 9·6 | 19·57 | 35·35 | 28·41 | — | — | — | — | — | |
| „ 3 | 5 p.m. | 49 16 N. | 3 37 W. | 50·3 | 10·2 | 19·42 | 35·08 | 28·19 | S. 70 W. | 2 | 2 | o. d. | Smooth | Station 8. |
| „ 3 | 7.5 p.m. | 49 24 N. | 3 28 W. | 50·0 | 10·0 | 19·43 | 35·10 | 28·21 | — | — | — | o. d. | Smooth. | |
| „ 3 | 8.3 p.m. | 49 32 N. | 3 19 W. | 48·7 | 9·3 | 19·42 | 35·08 | 28·19 | — | — | — | — | Slight. | |
| „ 3 | 8.55 p.m. | 49 39 N. | 3 09 W. | 48·9 | 9·4 | 19·45 | 35·14 | 28·24 | S. 70 W. | 1 | 1 | o. d. | Slight | Station 9. |
| „ 3 | 11.35 p.m. | 49 45 N. | 2 53 W. | 48·9 | 9·4 | 19·49 | 35·21 | 28·30 | — | — | — | o. | Smooth. | |
| „ 4 | 0.55 a.m. | 49 49 N. | 2 33 W. | 48·9 | 9·4 | 19·50 | 35·24 | 28·31 | N. 40 W. | 1 | 1 | c. 3 | Smooth | Station 10. |
| „ 4 | 4.10 a.m. | 50 00 N. | 2 43 W. | 49·1 | 9·5 | 19·54 | 35·31 | 28·37 | — | — | — | — | — | |
| „ 4 | 5.40 a.m. | 50 11 N. | 2 52 W. | 49·1 | 9·5 | 19·51 | 35·25 | 28·32 | N. 20 W. | 2 | 2 | b | Smooth | Station 17. |
| „ 4 | 8.30 a.m. | 50 17 N. | 3 01 W. | 48·6 | 9·2 | 19·43 | 35·10 | 28·21 | — | — | — | — | — | |
| „ 4 | 8.45 a.m. | 50 23 N. | 3 08 W. | 48·7 | 9·3 | 19·43 | 35·10 | 28·21 | N. 20 W. | 1 | 1 | b. | Smooth | Station 18. |
| „ 4 | 11.10 a.m. | 50 24 N. | 2 47 W. | 50·4 | 10·2 | 19·45 | 35·14 | 28·24 | — | — | — | c. 5 | Smooth | Very distinct solar halo. |
| „ 4 | 0.10 p.m. | 50 23 N. | 2 28 W. | 49·3 | 9·6 | 19·38 | 35·01 | 28·14 | N. 20 W. | 1 | 1 | Light cloud. | Smooth | Station 16. „ |
| „ 4 | 4.30 p.m. | 50 27 N. | 1 50 W. | 48·7 | 9·3 | 19·42 | 35·09 | 28·20 | S. 30 W. | 3 | 4 | Light cloud. | Smooth | Station 15. |
| „ 4 | 6.35 p.m. | 50 17 N. | 1 55 W. | 48·9 | 9·4 | 19·55 | 35·32 | 28·38 | — | — | — | — | Smooth. | |
| „ 4 | 7.50 p.m. | 50 05 N. | 1 58 W. | 49·1 | 9·5 | 19·48 | 35·19 | 28·28 | Calm | | | o. | Smooth | Station 11. |
| „ 4 | 10.40 p.m. | 49 58 N. | 1 27 W. | 48·9 | 9·4 | 19·47 | 35·17 | 28·27 | — | — | — | — | — | |
| „ 4 | 11.45 p.m. | 49 55 N. | 1 09 W. | 48·8 | 9·4 | 19·28 | 34·83 | 27·99 | S. 20 E. | 1 | 1 | o. | Smooth | Station 12. |
| „ 5 | 2.5 a.m. | 50 03 N. | 1 07 W. | 48·7 | 9·3 | 19·37 | 35·00 | 28·13 | — | — | — | c. 8 | Smooth. | |
| „ 5 | 3.3 a.m. | 50 11 N. | 1 11 W. | 48·7 | 9·3 | 19·50 | 35·23 | 28·31 | — | — | — | — | Smooth. | |
| „ 5 | 4.5 a.m. | 50 20 N. | 1 15 W. | 47·8 | 8·8 | 19·24 | 34·76 | 27·93 | S. 30 W. | 3 | 4 | c. 4 | Smooth | Station 13. |
| „ 5 | 6.0 a.m. | 50 26 N. | 1 15 W. | 48·7 | 9·3 | 19·06 | 34·43 | 27·67 | — | — | — | — | — | |
| „ 5 | 7.7 a.m. | 50 33 N. | 1 17 W. | 49·2 | 9·6 | 19·08 | 34·47 | 27·70 | S. 20 E. | 2 | 2 | c. 3 | Smooth | Station 14. |
| „ 4 | 9.20 a.m. | 50 30 N. | 1 00 W. | 48·7 | 9·3 | 19·27 | 34·82 | 27·98 | — | — | — | — | — | |
| „ 4 | 10.50 a.m. | 50 25 N. | 0 42 W. | 48·6 | 9·2 | 19·44 | 35·12 | 28·22 | — | — | — | — | — | |
| „ 4 | Noon | 50 21 N. | 0 19 W. | 49·1 | 9·5 | 19·52 | 35·26 | 28·34 | S. 20 E. | 1 | 1 | c. 2 | Smooth | Station 21. |
| „ 4 | 2.10 p.m. | 50 10 N. | 0 20 W. | 49·1 | 9·5 | 19·48 | 35·19 | 28·28 | — | — | — | — | — | |
| „ 4 | 3.15 p.m. | 50 00 N. | 0 21 W. | 48·7 | 9·3 | 19·38 | 35·01 | 28·14 | S. 20 E. | 1 | 1 | c. 5 | Smooth | Station 24. |
| „ 4 | 5.10 p.m. | 50 06 N. | 0 09 W. | 48·9 | 9·4 | 19·42 | 35·08 | 28·19 | — | — | — | — | — | |

## TABLE II—*continued.*

### MAY, 1904—S.S. *Huxley—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl. ‰ | S. ‰ | $\sigma_0$ | Wind. Direction (True). | Wind. Force. B. | Wind. Force. m/s. | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| May 4 | 6.25 p.m. | 50 13 N. | 0 02 E. | 48·7 | 9·3 | 19·44 | 35·12 | 28·22 | — | — | — | — | Smooth. | |
| „ 4 | 7.28 p.m. | 50 20 N. | 0 14 E. | 48·7 | 9·3 | 19·47 | 35·17 | 28·27 | — | — | — | o. | Smooth. | |
| „ 4 | 8.42 p.m. | 50 27 N. | 0 25 E. | 48·9 | 9·4 | 19·52 | 35·26 | 28·34 | — | — | — | — | — | |
| „ 4 | 9.50 p.m. | 50 33 N. | 0 36 E. | 49·3 | 9·6 | 19·52 | 35·27 | 28·34 | S. 50 W. | 2 | 2 | c. 8 | Smooth | Station 22. |
| „ 6 | 2.30 a.m. | 50 56 N. | 1 19 E. | 48·4 | 9·1 | 19·51 | 35·25 | 28·32 | — | — | — | — | — | |
| „ 6 | 4.20 a.m. | 51 14 N. | 1 39 E. | 48·2 | 9·0 | 19·43 | 35·10 | 28·21 | — | — | — | Heavy rain. | Smooth. | |

Observations on stations were made by D. J. Matthews; surface observations between stations by D. J. Matthews and S. Pace.

### AUGUST, 1904—S.S. *Oithona.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aug. 2 | 7.35 p.m. | 50 10¾ N. | 4 14 W. | 61·9 | 16·6 | 19·42 | 35·08 | 28·19 | S. 20 E. | 1 | 1 | b. | Smooth. | |
| „ 2 | 9.4 p.m. | 50 02 N. | 4 08 W. | 62·8 | 17·1 | 19·43 | 35·10 | 28·21 | S. 20 E. | 1 | 1 | b. | Smooth. | |
| „ 2 | 10.40 p.m. | 49 54 N. | 4 00 W. | 61·2 | 16·2 | 19·47 | 35·17 | 28·27 | S. 20 E. | 1 | 1 | b. | Smooth. | |
| „ 2 | Midnight | 49 45 N. | 3 53 W. | 62·8 | 17·1 | 19·48 | 35·19 | 28·28 | Calm | | | b. | Smooth. | |
| „ 3 | 1.27 a.m. | 49 37 N. | 3 47 W. | 62·4 | 16·9 | 19·48 | 35·20 | 28·29 | Calm | | | b. | Smooth. | |
| „ 3 | 2.53 a.m. | 49 27 N. | 3 42 W. | 59·4 | 15·2 | 19·56 | 35·34 | 28·40 | Calm | | | b. | Smooth. | |
| „ 3 | 3.50 a.m. | 49 20 N. | 3 41 W. | 59·2 | 15·1 | 19·55 | 35·32 | 28·38 | S. 85 E. | 1 | 1 | b. | Smooth | Station 8; owing to an error in the patent log the station was worked about 5 miles N., 28° W. from the correct position. |
| „ 3 | 8.15 a.m. | 49 31 N. | 3 26 W. | 61·0 | 16·1 | 19·49 | 35·21 | 28·30 | Calm | | | b. | Smooth. | |
| „ 3 | 11.35 a.m. | 49 43 N. | 3 11 W. | 62·6 | 16·9 | 19·38 | 35·01 | 28·14 | Calm | | | c. 3 | Smooth | Station 9; 4 miles N. 28° W. of correct position. |
| „ 3 | 2.42 p.m. | 49 53 N. | 3 20 W. | 64·4 | 18·0 | 19·40 | 35·06 | 28·17 | N. 70 E. | 1 | 1 | c. 6 | Smooth. | |
| „ 3 | 3.35 p.m. | 50 01 N. | 3 26 W. | 62·7 | 17·1 | 19·42 | 35·08 | 28·19 | N. 70 E. | 1 | 1 | c. 3 | Smooth | Station 19; miles N. 17° W. of correct position |
| „ 3 | 7.15 p.m. | 50 08 N. | 3 47 W. | 62·3 | 16·8 | 19·42 | 35·08 | 28·19 | S. 30 E. | 1 | 1 | c. 8 | Smooth | Station 20. |
| „ 3 | Patent log working badly; put into Dartmouth to obtain a new one. | | | | | | | | | | | | | |
| „ 4 | 11.30 a.m. | Proceeded to sea. | | | | | | | | | | | | |
| „ 4 | 1.5 p.m. | 50 22 N. | 3 19 W. | 65·1 | 18·4 | 19·34 | 34·95 | 28·08 | S. 20 E. | 2 | 2 | c. 4 | Slight. | |
| „ 4 | 2.15 p.m. | 50 23 N. | 3 08 W. | 63·3 | 17·4 | 19·43 | 35·11 | 28·21 | S. 20 E. | 2 | 2 | c. 3 | Slight | Station 18. |
| „ 4 | 4.24 p.m. | 50 17 N. | 3 00 W. | 64·6 | 18·1 | 19·38 | 35·02 | 28·14 | S. 20 E. | 3 | 3 | c. 9 | Slight. | |
| „ 4 | 5.40 p.m. | 50 11 N. | 2 52 W. | 60·9 | 16·1 | 19·45 | 35·14 | 28·24 | S. 20 E. | 1 | 1 | c. 8 | Smooth | Station 17. |
| „ 4 | 8.20 p.m. | 50 17 N. | 2 38 W. | 59·5 | 15·3 | 19·47 | 35·17 | 28·27 | S. 20 E, | 1 | 1 | c. 8 | Smooth. | |
| „ 4 | 10.15 p.m. | 50 23 N. | 2 28 W. | 61·5 | 16·4 | 19·39 | 35·04 | 28·15 | S. 5 E. | 1 | 1 | o. | Smooth | Station 16. |
| „ 5 | 1.13 a.m. | 50 11 N. | 2 28 W. | 58·6 | 14·8 | 19·46 | 35·16 | 28·25 | S. 40 W. | 1 | 1 | o. | Smooth | Heavy rain squall at midnight. |
| „ 5 | 2.25 a.m. | 50 03 N. | 2 29 W. | 57·7 | 14·3 | 19·49 | 35·21 | 28·30 | S. 40 W. | 1 | 1 | o. | Smooth. | |
| „ 5 | 9.10 a.m. | 49 49 N. | 2 33 W. | 59·4 | 15·2 | 19·38 | 35·02 | 28·14 | S. 40 W. | 4 | 6 | c. 1 | Slight | Station 10. |
| „ 5 | 0.40 p.m. | 49 58 N. | 2 45 W. | 58·6 | 14·8 | 19·48 | 35·20 | 28·29 | S. 70 W. | 3 | 4 | b. | Slight swell. | |
| „ 5 | 2.30 p.m. | 50 06 N. | 2 58 W. | 60·6 | 15·9 | 19·45 | 35·14 | 28·24 | S. 70 W. | 4 | 6 | c. 8 | Moderate. | |
| „ 5 | 4.25 p.m. | 50 13 N. | 3 12 W. | 61·7 | 16·5 | 19·42 | 35·08 | 28·19 | S. 50 W. | 4 | 6 | b. | Moderate | |
| Put into Dartmouth for repairs. | | | | | | | | | | | | | | |
| „ 7 | 9.20 a.m. | Proceeded to sea. | | | | | | | | | | | | |
| „ 7 | 6.40 p.m. | 50 05 N, | 1 58 W. | 59·4 | 15·2 | 19·42 | 35·09 | 28·20 | S. 5 W. | 1 | 1 | o. | Smooth | Station 11. |
| „ 7 | 10.50 p.m. | 49 55 N. | 1 36 W. | 60·3 | 15·7 | 19·37 | 34·99 | 28·12 | Calm | | | o. | Smooth. | |
| „ 8 | 2.10 a.m. | 49 55 N. | 1 09 W. | 60·7 | 15·9 | 19·24 | 34·77 | 27·94 | N. 30 E. | 1 | 1 | o. d. | Smooth | Station 12. |
| „ 8 | 4.40 a.m. | 50 03 N. | 1 13 W. | 60·6 | 15·9 | 19·26 | 34·80 | 28·97 | N. 40 E. | 1 | 1 | o. | Smooth. | |
| „ 8 | 5.20 a.m. | 50 13 N. | 1 14 W. | 59·7 | 15·4 | 19·36 | 34·97 | 28·11 | N. 40 E. | 1 | 1 | c. 5 | Smooth. | |
| „ 8 | 7.20 a.m. | 50 20 N. | 1 15 W. | 59·9 | 15·5 | 19·41 | 35·07 | 28·18 | N. 70 E. | 1 | 1 | c. 2 | Smooth | Station 13. |
| „ 8 | 11.25 a.m. | 50 33 N. | 1 17 W. | 64·3 | 17·9 | 19·22 | 34·72 | 27·90 | S. 30 W. | 1 | 1 | c. 3 | Smooth | Station 14. |
| „ 8 | 2.9 p.m. | 50 30 N. | 1 06 W. | 64·9 | 18·3 | 19·21 | 34·71 | 27·89 | — | — | — | — | — | |
| „ 8 | 3.30 p.m. | 50 27 N. | 0 50 W. | 63·3 | 17·4 | 19·35 | 34·96 | 28·09 | S. 30 W. | 1 | 1 | c. 1 | Smooth. | |
| „ 8 | 4.45 p.m. | 50 24 N. | 0 35 W. | 62·1 | 16·7 | 19·40 | 35·06 | 28·17 | — | — | — | — | — | |

TABLE II—*continued.*

AUGUST, 1904—S.S. *Oithona—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | Cl. °/₀₀ | S. °/₀₀ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Aug. 8 | 6.10 p.m. | 50 21 N. | 0 19 W. | 61·5 | 16·4 | 19·40 | 35·05 | 28·16 | N. 70 W. | 1 | 1 | c. 2 | Smooth | Station 21. |
| „ 8 | 8.23 p.m. | 50 11 N. | 0 20 W. | 60·3 | 15·7 | 19·28 | 34·83 | 27·99 | S. 30 W. | 1 | 1 | b. | Smooth. | |
| „ 8 | 10.25 p.m. | 50 00 N. | 0 21 W. | 60·7 | 15·9 | 19·19 | 34·68 | 27·86 | S. 50 W. | 0-1 | 0-1 | b. | Smooth | Station 24. |
| „ 9 | 1.10 a.m. | 50 06 N. | 0 13 W | 60·6 | 15·9 | 19·21 | 34·70 | 27·89 | N. 15 E. | 1 | 1 | b. | Smooth. | |
| „ 9 | 2.35 a.m. | 50 13 N. | 0 02 W. | 61·0 | 16·1 | 19·25 | 34·78 | 27·95 | Calm. | | | b. | Smooth. | |
| „ 9 | 4 a.m. | 50 20 N. | 0 11 E. | 60·4 | 15·8 | 19·32 | 34·91 | 28·05 | N. 50 E. | 0-1 | 0-1 | c. 5 | Smooth. | |
| „ 9 | 5·25 a.m. | 50 27 N. | 0 25 E. | 60·4 | 15·8 | 19·40 | 35·06 | 28·17 | N. 50 E. | 0-1 | 0-1 | b. | Smooth. | |
| „ 9 | 8.30 a.m. | 50 41 N. | 0 22 E. | 61·5 | 16·4 | 19·37 | 34·99 | 28·12 | — | — | — | — | — | |
| „ 9 | 10.20 a.m. | 50 33 N. | 0 36 E. | 62·5 | 16·9 | 19·40 | 35·05 | 28·16 | N. 20 W. | 1 | 1 | b. | Smooth | Station 22. |
| „ 9 | 0.38 p.m. | 50 26 N. | 0 38 E. | 63·9 | 17·7 | 19·39 | 35·04 | 28·15 | S. | 0·1 | 0·1 | c. 1 | Smooth | Large solar halo. |
| „ 9 | 1.53 p.m. | 50 17 N. | 0 41 E. | 65·3 | 18·5 | 19·35 | 34·96 | 28·09 | S. 20 E. | 1 | 1 | b. | Smooth | Large solar halo. |
| „ 9 | 3 p.m. | 50 10 N. | 0 46 E. | 65·5 | 18·6 | 19·29 | 34·86 | 28·01 | S. 5 E. | 1 | 1 | b. | Smooth. | |
| „ 9 | 4.9 p.m. | 50 03 N. | 0 53 E. | 63·4 | 19·1 | 19·14 | 34·58 | 27·79 | N. 60 W. | 2 | 2 | b. | Smooth. | |
| „ 9 | 5.35 p.m. | 50 03 N. | 0 39 E. | 64·9 | 18·3 | 19·20 | 34·69 | 27·87 | N. 60 W. | 2 | 2 | m. | Smooth. | |
| „ 9 | 7 p.m. | 50 04 N. | 0 26 E. | 61·7 | 16·5 | 19·25 | 34·78 | 27·95 | N. 60 W. | 2 | 2 | m. | Smooth. | |
| „ 9 | 8.28 p.m. | 50 05 N. | 0 13 E. | 61·2 | 16·2 | 19·21 | 34·70 | 27·89 | N. 60 W. | 2 | 2 | b. | Smooth. | |
| „ 9 | 9.55 p.m. | 50 05 N. | 0 03 W. | 60·6 | 15·9 | 19·23 | 34·75 | 27·92 | N. 60 W. | 2 | 2 | b. | Smooth. | |
| „ 9 | 11.25 p.m | 50 05 N. | 0 18 W. | 60·3 | 15·7 | 19·25 | 34·78 | 27·95 | N. 60 W. | 1 | 1 | b. | Smooth. | |
| „ 10 | 0.40 a.m. | 50 05 N. | 0 39 W. | 60·1 | 15·6 | 19·31 | 34·88 | 28·03 | N. 60 W. | 1 | 1 | b; m. | Smooth. | |
| „ 10 | 2.5 a.m. | 50 05 N. | 0 55 W | 59·7 | 15·4 | 19·37 | 34·99 | 28·12 | N. 60 W. | 1 | 1 | b. | Smooth. | |
| „ 10 | 7.15 p.m. | 49 56 N. | 3 23 W. | 61·6 | 16·4 | 19·40 | 35·05 | 28·16 | N. 60 W. | 3 | 4 | o. | Slight | Station 19; second time. |
| Put into Plymouth. | | | | | | | | | | | | | | |
| „ 12 | 5.45 a.m. | Proceeded to Sea. | | | | | | | | | | | | |
| „ 12 | 7.30 a.m. | 50 11 N. | 4 14 W. | 59·9 | 15·5 | 19·39 | 35·03 | 28·15 | — | — | — | — | — | |
| „ 12 | 9.14 a.m. | 50 02 N. | 4 22 W. | 62·5 | 16·9 | 19·40 | 35·05 | 28·16 | S. 75 W. | 3 | 4 | c. 1 | Smooth | Station 1. |
| „ 12 | 0.50 p.m. | 49 53 N. | 4 29 W. | 61·3 | 16·3 | 19·45 | 35·14 | 28·24 | S. 70 W. | 2 | 2 | b. | Slight swell. | |
| „ 12 | 1.59 p.m. | 49 44 N. | 4 35 W. | 63·5 | 17·5 | 19·45 | 35·15 | 28·24 | S. 75 W. | 3 | 4 | b. | Slight. | |
| „ 12 | 3.23 p.m. | 49 36 N. | 4 39 W. | 63·9 | 17·7 | 19·49 | 35·21 | 28·30 | S. 75 W. | 3 | 4 | c. | Slight. | |
| „ 12 | 4·47 p.m. | 49 27 N. | 4 42 W. | 63·7 | 17·6 | 19·52 | 35·26 | 28·34 | N. 60 W. | 1 | 1 | b. | Smooth | Station 2. |
| „ 12 | 7.45 p.m. | 49 16 N. | 4 46 W. | 63·0 | 17·2 | 19·52 | 35·26 | 28·34 | S. 70 W. | 0-1 | 0-1 | b. | Dead smooth. | |
| „ 12 | 9.54 p.m. | 49 05 N. | 4 53 W. | 62·4 | 16·9 | 19·55 | 35·32 | 28·38 | Calm. | | | b. | Dead smooth. | |
| „ 12 | 11.6 p.m. | 48 56 N. | 4 58 W. | 61·9 | 16·6 | 19·57 | 35·35 | 28·41 | Calm. | | | b. | Dead smooth. | Much phosphorescence. |
| „ 13 | 1.3 a.m. | 48 44 N. | 5 06 W. | 63·0 | 17·2 | 19·59 | 35·39 | 28·44 | Calm. | | | b. | Smooth. | |
| „ 13 | 3.27 a.m. | 48 34 N. | 5 13 W. | 55·9 | 13·3 | 19·59 | 35·40 | 28·45 | S. 30 E. | 1 | 1 | b. | Dead smooth. | Station 3. |
| „ 13 | 8.5 a.m. | 48 35 N. | 5 31 W. | 62·6 | 17·0 | 19·59 | 35·39 | 28·44 | S. 30 E. | 1 | 1 | b. | Smooth. | |
| „ 13 | 10.4 a.m. | 48 31 N. | 5 46 W. | 64·4 | 18·0 | 19·52 | 35·27 | 28·34 | S. 30 E. | 1 | 1 | c. 2 | Smooth. | |
| „ 13 | 11.30 a.m. | 48 29 N. | 6 04 W. | 64·9 | 18·3 | 19·49 | 35·21 | 28·30 | S. 20 E. | 1 | 1 | c. 1 | Smooth. | |
| „ 13 | 1 p.m. | 48 28 N. | 6 21 W. | 64·9 | 18·3 | 19·54 | 35·31 | 28·37 | S. 30 W. | 3 | 4 | d. | Slight. | |
| „ 13 | 4.15 p.m. | 48 27 N. | 6 35 W. | 64·2 | 17·9 | 19·57 | 35·35 | 28·41 | S. 20 W. | 3 | 4 | b. m. | Slight | Station 4. |
| „ 13 | 8.12 p.m. | 48 38 N. | 6 13 W. | 64·4 | 18·0 | 19·52 | 35·26 | 28·34 | S. 30 W. | 3 | 4 | b. | Slight. | |
| „ 13 | 10.40 p.m. | 48 49 N. | 6 21 W. | 64·0 | 17·8 | 19·54 | 35·31 | 28·37 | — | — | — | — | — | |
| „ 14 | 1.50 a.m. | 49 06 N. | 6 32 W. | 63·8 | 17·7 | 19·53 | 35·29 | 28·36 | S. 70 W. | 5 | 8 | b. | Rough | Station 5. |
| „ 14 | 5.55 a.m. | 49 24 N. | 6 21 W. | 62·8 | 17·1 | 19·55 | 35·33 | 28·39 | S. 30 W. | 2 | 2 | b. | Smooth. | |
| „ 14 | 8.5 a.m. | 49 38 N. | 6 07 W. | 62·1 | 16·7 | 19·51 | 35·25 | 28·32 | S. 50 W. | 4 | 6 | o. r. | Rough. | |
| „ 14 | 10 a.m. | 49 46 N. | 5 57 W. | 62·1 | 16·7 | 19·52 | 35·26 | 28·34 | S. 30 W. | 6 | 10·5 | o. r. | Rough. | |
| Put into Newlyn for shelter. | | | | | | | | | | | | | | |
| „ 16 | 6.25 a.m. | Proceeded to Sea. | | | | | | | | | | | | |
| „ 16 | 0.50 p.m. | 50 24 N. | 6 05 W. | 61·8 | 16·6 | 19·41 | 35·07 | 28·18 | S. 5 W. | 2 | 2 | o. | Slight | Station 6. |
| „ 16 | 3.40 p.m. | 50 13 N. | 6 00 W. | 58·1 | 14·5 | 19·52 | 35·26 | 28·34 | S. 40 E. | 1 | 1 | o. d. | Slight. | |
| „ 16 | 5.10 p.m. | 50 05 N. | 5 52 W. | 56·8 | 13·8 | 19·52 | 35·26 | 28·24 | S. 5 W. | 1 | 1 | o. d. | Slight. | |
| „ 16 | 7.50 p.m. | 49 56 N. | 5 48 W. | 59·4 | 15·2 | 19·50 | 35·24 | 28·31 | S. 30 W. | 2 | 2 | o. r. | Slight. | |
| „ 16 | 9.45 p.m. | 49 53 N. | 5 38 W. | 60·9 | 16·1 | 19·51 | 35·25 | 28·32 | S. 20 E. | 2 | 2 | o. p. | Smooth. | Station 7. |

Observations on stations were made by D. J. Matthews: surface observations between stations by D. J. M., E. J. Allen, D. Sc., and Charles Martin, B.A.

## TABLE II—*continued.*

### OCTOBER, 1904—S.S. *Huxley.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | Cl. ‰ | S. ‰ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Oct. 31 | 4.31 p.m. | 50 12½ N. | 4 13 W. | 57·6 | 14·2 | 19·51 | 35·25 | 28·32 | N. 50 E. | 1 | 1 | o. | Smooth. | |
| „ 31 | 6 p.m. | 50 02 N. | 4 22 W. | 57·1 | 13·9 | 19·55 | 35·32 | 28·38 | N. 80 E. | 2 | 2 | o. | Slight | Station 1. |
| „ 31 | 9.30 p.m. | 49 51 N | 4 31 W. | 56·5 | 13·6 | 19·55 | 35·32 | 28·38 | N. 50 E. | 1 | 1 | o. | Smooth. | |
| „ 31 | 11.10 p.m | 49 40 N. | 4 38 W. | 56·5 | 13·6 | 19·54 | 35·31 | 28·37 | — | — | — | — | — | |

### NOVEMBER, 1904—S.S. *Huxley.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 1 | 10.15 p.m. | 49 27 N. | 4 42 W. | 56·3 | 13·5 | 19·59 | 35·39 | 28·44 | N. 50 E. | 4 | 6 | o. | Slight | Station 2. |
| „ 2 | 1.41 a.m. | 49 15 N. | 4 51 W. | 55·4 | 13·0 | 19·59 | 35·40 | 28·45 | N. 80 E. | 1 | 1 | o. | Smooth. | |
| „ 2 | 3.13 a.m. | 49 02 N. | 4 59 W. | 55·6 | 13·1 | 19·62 | 35·44 | 28·48 | N. 50 E. | 2 | 2 | o. | Smooth. | |
| „ 2 | 4.58 a.m. | 48 49 N. | 5 08 W. | 56·7 | 13·7 | 19·62 | 35·44 | 28·48 | N. 50 E. | 2 | 2 | o. | Smooth. | |
| „ 2 | 7.5 a.m. | 48 34 N. | 5 13 W. | 55·5 | 13·1 | 19·63 | 35·46 | 28·50 | N. 60 E. | 1 | 1 | o. | Slight | Station 3. |
| „ 2 | 11.15 a.m. | 48 34 N. | 5 28 W. | 54·0 | 12·2 | 19·58 | 35·37 | 28·43 | N. 75 E. | 3 | 4 | o. | Slight. | |
| „ 2 | 0.50 p.m. | 48 32 N. | 5 47 W. | 53·8 | 12·1 | 19·56 | 35 34 | 28·40 | N. 60 E. | 1 | 1 | o. | Smooth. | |
| „ 2 | 2.21 p.m. | 48 29 N. | 6 09 W. | 56·3 | 13·5 | 19·56 | 35·34 | 28·40 | N. 60 E. | 1 | 1 | o. | Smooth. | |
| „ 2 | 4.50 p.m. | 48 27 N. | 6 35 W. | 56·6 | 13·6 | 19·56 | 35·34 | 28·40 | N. 60 E. | 2 | 2 | o. | Smooth | Station 4. |
| „ 2 | 7.55 p.m. | 48 36 N. | 6 36 W. | — | — | — | — | — | N. 10 E. | 2 | 2 | o. | Smooth. | |
| „ 2 | 9.8 p.m. | 48 47 N. | 6 36 W. | 56·5 | 13·6 | 19·55 | 35·32 | 28·38 | N. 10 E. | 3 | 4 | o. | Smooth. | |
| „ 2 | 10.30 p.m. | 48 58 N. | 6 35 W. | 56·3 | 13·5 | 19·54 | 35·30 | 28·37 | N. 10 E. | 3 | 4 | o. | Slight. | |
| „ 3 | 0.12 a.m. | 49 06 N. | 6 32 W. | 55·9 | 13·3 | 19·52 | 35·26 | 28·34 | N. 50 E. | 2 | 2 | o. | Smooth | Station 5. |
| „ 3 | 4.55 a.m. | 49 20 N. | 6 21 W. | 55·2 | 12·9 | 19·52 | 35·26 | 28·34 | N. 70 E. | 3 | 4 | o. | Smooth. | |
| „ 3 | 6.45 a.m. | 49 33 N. | 6 14 W. | 54·5 | 12·5 | 19·60 | 35·41 | 28·46 | Calm. | | | o. | Smooth. | |
| „ 3 | 8.15 a.m. | 49 48 N. | 6 03 W. | 55·2 | 12·9 | 19·59 | 35·39 | 28·44 | N. 70 E. | 1 | 1 | o. | Smooth. | |
| „ 3 | 9.43 a.m. | 49 59 N. | 5 54 W. | 55·9 | 13·3 | 19·57 | 35·35 | 28·41 | N. 30 E. | 1 | 1 | c. 5 | Smooth. | |
| „ 3 | 10.32 a.m. | 50 03 N. | 5 56 W, | 56·3 | 13·5 | 19·56 | 35·34 | 28·40 | N. 70 E. | 0–1 | 0–1 | b. m. | Dead smooth. | |
| „ 3 | 11.35 a.m. | 50 11 N. | 5 56 W. | 56·3 | 13·5 | 19·56 | 35·34 | 28·40 | N. 50 E. | 1 | 1 | b. m. | Smooth. | |
| „ 3 | 0.22 p.m. | 50 18 N. | 5 59 W. | 55·9 | 13·3 | 19·56 | 35·34 | 28·40 | — | — | — | b. | Smooth. | |
| „ 3 | 1.35 p.m. | 50 24 N. | 6 05 W. | 56·2 | 13·4 | 19·56 | 35·34 | 28·40 | W. | 0–1 | 0–1 | c. 1 | Smooth | Station 6. |
| „ 3 | 4.5 p.m. | 50 25 N. | 5 50 W. | 56·3 | 13·5 | 19·56 | 35·34 | 28·40 | N. 60 W. | 1 | 1 | c. 9 | Smooth. | |
| „ 3 | 5.30 p.m. | 50 24 N. | 5 35 W. | 56·1 | 13·4 | 19·56 | 35·34 | 28·40 | — | — | — | o. | Smooth. | |
| „ 3 | 11.20 p.m. | 49 53 N. | 5 38 W. | 56·7 | 13·7 | 19·51 | 35·25 | 28·32 | N. 30 E. | 0–1 | 0–1 | o. | Dead smooth. | Station 7. |
| „ 4 | 2.10 a.m. | 49 42 N. | 5 36 W. | 55·9 | 13·3 | 19·59 | 35·39 | 28·44 | Calm | | | o. | Smooth. | |
| „ 4 | 3.25 a,m. | 49 33 N. | 5 35 W. | 55·4 | 13·0 | 19·62 | 35·44 | 28·48 | — | — | — | o. | Smooth. | |
| „ 4 | 4.40 a.m. | 49 22 N. | 5 33 W. | 54·1 | 12·3 | 19·58 | 35·37 | 28·43 | — | — | — | o. | Smooth. | |
| „ 4 | 5.50 a.m. | 49 11 N. | 5 32 W. | 54·0 | 12·2 | 19·56 | 35·34 | 28·40 | S. 5 E. | 1 | 1 | o. | Smooth. | |
| „ 4 | 7.5 a.m. | 49 19 N. | 5 22 W. | 54·3 | 12·4 | 19·58 | 35·37 | 28·43 | S. 80 E. | 1 | 1 | o. | Smooth. | |
| „ 4 | 7.40 a.m. | 49 24 N. | 5 17 W. | 54·9 | 12·7 | 19·61 | 35·43 | 28·47 | S. 80 E. | 2 | 2 | o. | Smooth. | |
| „ 4 | 9.30 a.m. | 49 36 N. | 5 04 W. | 56·3 | 13·5 | 19·54 | 35·30 | 28·37 | N. 85 E. | 1 | 1 | o. | Smooth. | |
| „ 4 | 11.20 a.m. | 49 47 N. | 4 49 W. | 56·5 | 13·6 | 19·54 | 35·30 | 28·37 | N. 60 E. | 3 | 4 | o. | Smooth. | |
| „ 4 | 1.7 p.m. | 50 00 N. | 4 34 W. | 56·8 | 13·8 | 19·56 | 35·34 | 28·40 | — | — | — | c. 8 | Smooth. | |
| | | | | Put into Plymouth. | | | | | | | | | | |
| „ 7 | 7.15 a.m. | | | Proceeded to Sea. | | | | | | | | | | |
| „ 7 | 9.50 a.m. | 50 14 N. | 3 59 W. | 57·0 | 13·9 | 19·48 | 35·19 | 28·28 | S. 30 W. | 6 | 10·5 | o. r. | Very rough. | |
| | | | | Put into Dartmouth for shelter. | | | | | | | | | | |
| „ 10 | 8.45 a.m. | | | Proceeded to Sea. | | | | | | | | | | |
| „ 10 | 0.15 p.m. | 50 08 N. | 3 47 W. | 56·9 | 13·9 | 19·52 | 35·26 | 28·34 | S. 70 W. | 1 | 1 | o. | Smooth. | Station 20. |
| „ 10 | 2.46 p.m. | 50 02 N. | 3 37 W. | 57·2 | 14·0 | 19·52 | 35·26 | 28·34 | S. 30 W. | 2 | 2 | o. | Slight. | |
| „ 10 | 4.0 p.m. | 49 56 N. | 3 23 W. | 57·1 | 13·9 | 19·54 | 35·30 | 28·37 | S. 50 W. | 3 | 4 | o.d. | Moderate | Station 19. |
| „ 10 | 6.35 p.m. | 49 46 N. | 3 28 W. | 57·4 | 14·1 | 19·56 | 35·34 | 28·40 | S. 40 W. | 5 | 8 | o. | Rough. | |
| „ 10 | 8.25 p.m. | 49 37 N. | 3 31 W. | 57·2 | 14·0 | 19·58 | 35·37 | 28·43 | S. 40 W. | 6 | 10·5 | o. | Rough. | |
| „ 10 | 10.25 p.m. | 49 28 N. | 3 34 W. | 57·0 | 13·9 | 19·56 | 35·34 | 28·40 | S. 50 W. | 6 | 10·5 | o. | Rough. | |
| „ 11 | 0.25 a.m. | 49 16 N. | 3 37 W. | 56·9 | 13·9 | 19·56 | 35·34 | 28·40 | S. 70 W. | 4 | 6 | o. | Rough | Station 8. |

## TABLE II—*continued.*

### NOVEMBER, 1904—S.S. *Huxley—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | Cl. ‰ | S. ‰ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Nov. 11 | 8.13 p.m. | 50 25 N. | 3 17 W. | 56·3 | 13·5 | 19·49 | 35·21 | 28·30 | S. 70 W. | 1 | 1 | o. | Smooth. | |
| „ 11 | 9 p.m. | 50 23 N. | 3 08 W. | 56·7 | 13·7 | 19·46 | 35·16 | 28·25 | S. 70 W. | 4 | 6 | c. 8 | Moderate | Station 18. |
| „ 12 | 0.10 a.m. | 50 11 N. | 2 52 W. | 56·7 | 13·7 | 19·45 | 35·14 | 28·24 | S. 50 W. | 3 | 4 | b. | Slight | Station 17 |
| „ 12 | 2.45 a.m. | 50 02 N. | 2 56 W. | 56·8 | 13·8 | 19·50 | 35·23 | 28·31 | S. 60 W | 3 | 4 | b. | Slight. | |
| „ 12 | 4.12 a.m. | 49 51 N. | 3 03 W. | 57·0 | 13·9 | 19·55 | 35·32 | 28·38 | S. 60 W. | 3 | 4 | b. | Slight. | |
| „ 12 | 5.50 a.m. | 49 39 N. | 3 09 W. | — | — | 19·52 | 35·26 | 28·34 | S. 85 W | 1 | 1 | c. 5 | Smooth | Station 9. |
| „ 12 | 10.50 a.m. | 49 49 N. | 2 33 W. | 57·8 | 14·3 | 19·52 | 35·26 | 28·34 | S. 85 W. | 0–1 | 0–1 | c. 8 | Smooth | Station 10. |
| „ 12 | 3.20 p.m. | 50 05 N. | 1 58 W. | 57·2 | 14·0 | 19·47 | 35·17 | 28·27 | S. 75 W | 0–1 | 0–1 | c. 2 | Smooth | Station 11. |
| „ 12 | 5.55 p.m. | 50 16 N. | 1 51 W. | 57·0 | 13·9 | 19·46 | 35·16 | 28·25 | N. 30 E. | 0–1 | 0–1 | b. | Smooth. | |
| „ 12 | 8.15 p.m. | 50 27 N. | 1 50 W. | 55·9 | 13·3 | 19·45 | 35·14 | 28·24 | N. 85 W. | 0–1 | 0–1 | b. | Smooth | Station 15. |
| „ 13 | 0.20 a.m. | 50 35 N. | 1 17 W. | 54·9 | 12·8 | 19·34 | 34·94 | 28·08 | N. 70 E. | 1–2 | 1–2 | b. | Smooth | Station 14. |
| „ 13 | 2.25 a.m. | 50 26 N. | 1 14 W. | 55·6 | 13·1 | 19·45 | 35·14 | 28·24 | S. 60 E. | 0–1 | 0–1 | b. | Smooth. | |
| „ 13 | 4.45 a.m. | 50 20 N. | 1 15 W. | 56·8 | 13·8 | 19·46 | 35·16 | 28·25 | N. 85 E. | 2 | 2 | c. 5 | Smooth | Station 13. |
| „ 13 | 5.43 a.m. | 50 15 N. | 1 12 W. | 57·4 | 14·1 | 19·41 | 35·07 | 28·18 | S. 60 E. | 0–1 | 0–1 | c. 9 | Smooth. | |
| „ 13 | 6.30 a.m. | 50 05 N. | 1 11 W. | 57·4 | 14·1 | 19·40 | 35·05 | 28·16 | S. 60 E. | 1 | 1 | o. | Smooth. | |
| „ 13 | 8.10 a.m. | 49 55 N. | 1 09 W. | 57·4 | 14·1 | 19·23 | 34·74 | 27·92 | N. 85 E. | 3 | 4 | c. 7 | Slight | Station 12. |
| „ 13 | 11 a.m. | 49 57 N. | 0 47 W. | 57·6 | 14·2 | 19·27 | 34·81 | 27·98 | S. 85 E. | 4 | 6 | Light cloud. | Moderate. | |
| „ 13 | 1.15 p.m. | 50 00 N. | 0 21 W. | 57·3 | 14·1 | 19·34 | 34·95 | 28·08 | S. 40 E. | 2 | 2 | c. 1 | Slight | Station 24. |
| „ 13 | 3.12 p.m. | 50 10 N. | 0 19 W. | 56·8 | 13·8 | 19·39 | 35·03 | 28·15 | S. 85 E. | 2 | 2 | c. 5 | Slight. | |
| „ 13 | 4.30 p.m. | 50 21 N. | 0 19 W. | 56·7 | 13·7 | 19·37 | 34·99 | 28·12 | S. 85 E. | 1 | 1 | b. | Smooth | Station 21. |
| „ 13 | 6.45 p.m. | 50 27 N. | 0 08 W. | 56·5 | 13·6 | 19·41 | 35·07 | 28·18 | S. 75 E. | 1 | 1 | b. | Smooth. | |
| „ 13 | 7.57 p.m. | 50 33 N. | 0 04 W. | 55·8 | 13·2 | 19·41 | 35·07 | 28·18 | S. 85 E. | 1 | 1 | b. | Smooth. | |
| „ 13 | 9.23 p.m. | 50 39 N. | 0 17 E. | 54·1 | 12·3 | 19·40 | 35·06 | 28·17 | N. 85 E. | 1 | 1 | b. | Smooth. | |
| „ 13 | 10.50 p.m. | 50 33 N. | 0 36 E. | 55·9 | 13·3 | 19·40 | 35·06 | 28·17 | S. 85 E. | 2 | 2 | b. | Slight | Station 22. |
| „ 14 | 0.45 a.m. | 50 29 N. | 0 48 E. | 55·8 | 13·2 | 19·37 | 34·99 | 28·12 | S. 60 E. | 2 | 2 | b. | Slight. | |
| „ 14 | 2.30 a.m. | 50 21 N. | 1 08 E. | 54·1 | 12·3 | 19·32 | 34·91 | 28·05 | — | — | — | b. | Slight. | |

Observations on stations were made by D. J. Matthews; surface observations between stations by D. J. Matthews and G. T. Atkinson.

### FEBRUARY, 1905—S.S. *Huxley.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Feb. 3 | 9.35 a.m. | 50 12 N. | 4 14 W. | 49·3 | 9·6 | 19·56 | 35·34 | 28·40 | S. 75 W. | 4 | 6 | c. 9 | Smooth. | |
| „ 3 | 10.55 a.m. | 50 02 N. | 4 22 W. | 50·3 | 10·1 | 19·62 | 35·44 | 28·48 | N. 60 W. | 3 | 4 | o. | Slight | Station 1. |
| „ 3 | 1 p.m. | 49 53 N. | 4 26 W. | 50·2 | 10·1 | 19·64 | 35·48 | 28·51 | S. 75 W. | 4 | 6 | o. | Smooth. | |
| „ 3 | 2 p.m. | 49 44 N. | 4 31 W. | 50·4 | 10·2 | 19·63 | 35·46 | 28·50 | S. 75 W. | 4 | 6 | o. | Smooth. | |
| „ 3 | 3.13 p.m. | 49 36 N. | 4 37 W. | 50·5 | 10·3 | 19·64 | 35·48 | 28·51 | S. 75 W. | 4 | 6 | o. | Moderate. | |
| „ 3 | 5.45 p.m. | 49 27 N. | 4 42 W. | 50·7 | 10·4 | 19·66 | 35·52 | 28·54 | S. 65 W. | 2 | 2 | o. | Slight | Station 2. |
| „ 3 | 9.47 p.m. | 49 17 N. | 4 48 W. | 50·5 | 10·3 | 19·74 | 35·67 | 28·66 | S. 75 W. | 4 | 6 | c. 9 | Moderate. | |
| „ 3 | 11.7 a.m. | 49 06 N. | 4 55 W. | 50·5 | 10·3 | 19·65 | 35·50 | 28·53 | S. 75 W. | 4 | 6 | c. 7 | Moderate. | |
| „ 4 | 0.30 p.m. | 48 56 N. | 5 01 W. | 50·2 | 10·1 | 19·62 | 35·44 | 28·48 | S. 70 W. | 4 | 6 | c. 3 | Moderate. | |
| „ 4 | 1.50 p.m. | 48 45 N. | 5 07 W. | 50·4 | 10·2 | 19·74 | 35·66 | 28·66 | S. 70 W. | 4 | 6 | c. 3 | Moderate. | |
| „ 4 | 4 p.m. | 48 34 N. | 5 13 W. | 50·6 | 10·3 | 19·61 | 35·43 | 28·47 | S. 70 W. | 3 | 4 | c. 1 | Slight | Station 3. |
| „ 4 | 7.35 p.m. | 48 33 N. | 5 27 W. | 50·4 | 10·2 | 19·62 | 35·44 | 28·48 | S. 70 W. | 4 | 6 | o. | Moderate. | |
| „ 4 | 8.52 p.m. | 48 32 N. | 5 43 W. | 49·8 | 9·9 | 19·59 | 35·40 | 28·45 | W. | 4 | 6 | — | Smooth. | |
| „ 4 | 11.46 p.m. | 48 28 N. | 6 18 W. | 50·5 | 10·3 | 19·59 | 35·40 | 28·45 | S. 70 W. | 4 | 6 | c. 1 | Smooth. | |
| „ 5 | 1.20 a.m. | 48 27 N. | 6 35 W. | 51·1 | 10·6 | 19·62 | 35·45 | 28·49 | S. 70 W. | 1 | 1 | b. | Smooth | Station 4. |
| „ 5 | 4.17 a.m. | 48 40 N. | 6 32 W. | 50·2 | 10·1 | 19·59 | 35·39 | 28·44 | N. 60 W. | 2 | 2 | o. | Smooth. | |
| „ 5 | 5.54 a.m. | 48 54 N. | 6 32 W. | 49·8 | 9·9 | 19·59 | 35·39 | 28·44 | N. 20 W. | 1 | 1 | o. | Smooth. | |
| „ 5 | 7.50 a.m. | 49 06 N. | 6 32 W. | 49·7 | 9·9 | 19·56 | 35·34 | 28·40 | S. 60 W. | 1 | 1 | o. | Smooth | Station 5 |
| „ 5 | 11.8 a.m. | 49 17 N. | 6 23 W. | 49·8 | 9·9 | 19·57 | 35·35 | 28·41 | S. 50 W. | 2 | 2 | o. | Smooth. | |
| „ 5 | 0.28 p.m. | 49 27 N. | 6 17 W. | 49·8 | 9·9 | 19·57 | 35·36 | 28·42 | S. 30 W. | 1 | 1 | o. | Smooth. | |
| „ 5 | 1.47 p.m. | 49 38 N. | 6 09 W. | 49·6 | 9·8 | 19·57 | 35·35 | 28·41 | S. 30 W. | 2 | 2 | o. | Smooth. | |

## TABLE II—*continued.*

## FEBRUARY, 1905—S.S. *Huxley—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | Cl. ‰ | S. ‰ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Feb. 5 | 3.5 p.m. | 49 48 N. | 6 03 W. | 49·5 | 9·7 | 19·57 | 35·35 | 28·41 | S. 30 W. | 2 | 2 | o. | Smooth. | |
| „ 5 | 4.22 p.m. | 49 58½ N. | 5 55½ W. | 49·1 | 9·5 | 19·58 | 35·37 | 28·43 | N. 85 W. | 4 | 6 | o. | Smooth. | |
| „ 5 | 5.25 p.m. | 50 07 N. | 5 59 W. | 49·1 | 9·5 | 19·57 | 35·35 | 28·41 | S. 85 W. | 3 | 4 | o. | Smooth. | |
| „ 5 | 6.25 p.m. | 50 15 N. | 6 01 W. | 49·1 | 9·5 | 19·58 | 35·37 | 28·43 | N. 85 W. | 3 | 4 | o. | Smooth. | |
| „ 5 | 7.40 p.m. | 50 24 N. | 6 05 W. | 49·3 | 9·6 | 19·58 | 35·38 | 28·43 | S. 30 W. | 4 | 6 | o. | Moderate | Station 6. |
| „ 6 | 4.45 a.m. | 49 52 N. | 5 09 W. | 49·1 | 9·5 | 19·55 | 35·32 | 28·38 | S. 20 E. | 3 | 4 | o. | Smooth. | |
| „ 6 | 7.25 a.m. | 50 06 N. | 4 33 W. | 49·8 | 9·9 | 19·61 | 35·43 | 28·47 | S. 30 W. | 4 | 6 | o. | Smooth. | |
| | | | | Put into Plymouth. | | | | | | | | | | |
| „ 7 | 11.0 a.m. | | | | | | Proceeded to Sea. | | | | | | | |
| „ 7 | 1.2 p.m. | 50 10 N. | 4 07 W. | 49·1 | 9·5 | 19·57 | 35·35 | 28·41 | S. 50 W. | 4 | 6 | o. | Choppy. | |
| „ 7 | 2.18 p.m. | 50 01 N. | 4 02 W. | 49·8 | 9·9 | 19·61 | 35·43 | 28·47 | S. 30 W. | 4 | 6 | o. | Choppy. | |
| „ 7 | 3.23 p.m. | 49 52 N. | 3 57 W. | 50·0 | 10·0 | 19·67 | 35·53 | 28·56 | S. 30 W. | 4 | 6 | c. 9 | Moderate. | |
| „ 7 | 4.31 p.m. | 49 43 N. | 3 52 W. | 49·8 | 9·9 | 19·60 | 35·41 | 28·46 | S. 30 W. | 4 | 6 | c. 9 | Moderate. | |
| „ 7 | 5.40 p.m. | 49 34 N. | 3 47 W. | 49·6 | 9·8 | 19·57 | 35·35 | 28·41 | S. 50 W. | 3 | 4 | o. | Choppy. | |
| „ 7 | 6.45 p.m. | 49 24 N. | 3 43 W. | 48·9 | 9·4 | | Lost | | S. 30 W. | 3 | 4 | c. 3 | Moderate. | |
| „ 7 | 8.0 p.m. | 49 16 N. | 3 37 W. | 49·4 | 9·7 | 19·57 | 35·36 | 28·42 | S. 85 W. | 3 | 4 | m. | Moderate | Station 8. |
| „ 7 | 10.50 p.m. | 49 28 N. | 3 23 W. | 48·6 | 9·2 | 19·53 | 35·28 | 28·35 | N. 70 W. | 1 | 1 | m. | Smooth. | |
| „ 8 | 0.50 a.m. | 49 39 N. | 3 09 W. | 49·6 | 9·8 | 19·56 | 35·34 | 28·40 | S. 85 W. | 2 | 2 | o. | Slight | Station 9. |
| „ 8 | 2.55 a.m. | 49 47 N. | 3 17 W. | 49·5 | 9·7 | 19·60 | 35·41 | 28·46 | N. 5 W. | 2 | 2 | o. | Moderate. | |
| „ 8 | 4.12 a.m. | 49 56 N. | 3 23 W. | 49·3 | 9·6 | 19·58 | 35·37 | 28·43 | S. 70 W. | 0-1 | 0-1 | o. | Slight. | Station 19 |
| „ 8 | 6.15 a.m. | 50 02 N. | 3 37 W. | 49·1 | 9·5 | 19·54 | 35·30 | 28·37 | N. 40 E. | 1 | 1 | — | — | |
| „ 8 | 7.50 a.m. | 50 08 N. | 3 47 W. | 48·5 | 9·2 | 19·50 | 35·23 | 28·31 | N. 70 E. | 1 | 1 | o. | Smooth | Station 20. |
| „ 8 | 10.30 a.m. | 50 15 N. | 3 26 W. | 47·5 | 8·6 | 19·45 | 35·14 | 28·24 | N. 70 E. | 1 | 1 | o. | Smooth. | |
| „ 8 | 11.50 a.m. | 50 23 N. | 3 08 W. | 46·8 | 8·2 | 19·45 | 35·14 | 28·24 | N. 80 E. | 0-1 | 0-1 | o. | Smooth | Station 18. |
| „ 8 | 2.30 p.m. | 50 11 N. | 2 52 W. | 49·2 | 9·6 | 19·60 | 35·41 | 28·46 | S. 5 W. | 0-1 | 0-1 | o. | Smooth | Station 17. |
| „ 8 | 4.34 p.m. | 50 18 N. | 2 39 W. | 47·5 | 8·6 | 19·50 | 35·23 | 28·31 | N. 75 E. | 1 | 1 | o. m. | Calm. | |
| „ 8 | 5.55 p.m. | 50 23 N. | 2 28 W. | 46·8 | 8·2 | 19·50 | 35·23 | 28·31 | S. 20 E. | 0-1 | 0-1 | o. d. | Smooth | Station 16. |
| „ 8 | 7.40 p.m. | 50 14 N. | 2 31 W. | 48·0 | 8·9 | 19·51 | 35·25 | 28·32 | S. 10 E. | 0-1 | 0-1 | o. m. | Calm. | |
| „ 8 | 8.28 p.m. | 50 06 N. | 2 31 W. | 48·4 | 9·1 | | Lost | | S. 30 E. | 3 | 4 | o. | Smooth. | |
| „ 8 | 9.20 p.m. | 49 58 N. | 2 32 W. | 48·6 | 9·2 | 19·57 | 35·35 | 28·41 | S. 30 E. | 3 | 4 | o. | Smooth. | |
| „ 9 | 0.15 a.m. | 49 49 N. | 2 33 W. | 49·6 | 9·8 | 19·57 | 35·35 | 28·41 | S. 60 E. | 0-1 | 0-1 | o. | Smooth | Station 10. |
| „ 9 | 5.25 a.m. | 50 05 N. | 1 58 W. | 48·9 | 9·4 | 19·55 | 35·32 | 28·38 | S. 20 E. | 0-1 | 0-1 | o. | Smooth | Station 11. |
| „ 9 | 8.13 a.m. | 49 49 N. | 1 36 W. | 48·9 | 9·4 | 19·55 | 35·32 | 28·38 | S. 70 E. | 2 | 2 | o. | Smooth. | |
| „ 9 | 10.10 a.m. | 49 55 N. | 1 09 W. | 46·1 | 7·9 | 19·18 | 34·65 | 27·84 | S. 20 E. | 0-1 | 0-1 | o. | Smooth | Station 12. |
| „ 9 | 11.58 a.m. | 50 02 N. | 1 08 W. | 48·6 | 9·2 | 19·51 | 35·25 | 28·32 | S. 30 E. | 2 | 2 | o. | Smooth. | |
| „ 9 | 1 p.m. | 50 10 N. | 1 11 W. | 47·8 | 8·8 | 19·51 | 35·25 | 28·32 | N. 5 W. | 1 | 1 | o. | Smooth. | |
| „ 9 | 2.10 p.m. | 50 20 N. | 1 15 W. | 48·7 | 9·3 | 19·53 | 35·28 | 28·35 | — | — | — | o. | Smooth | Station 13. |
| „ 9 | 3.40 p.m. | 50 26 N. | 1 15 W. | 48·2 | 9·0 | 19·52 | 35·26 | 28·34 | N. 20 E. | 0-1 | 0-1 | o. | Calm. | |
| „ 9 | 6.20 p.m. | 50 33 N. | 1 17 W. | 44·1 | 6·7 | 19·38 | 35·01 | 28·14 | S. 20 E. | 0-1 | 0-1 | o. m. | Calm | Station 14. |
| „ 9 | 8.6 p.m. | 50 28 N. | 0 59 W. | 45·9 | 7·7 | 19·44 | 35·12 | 28·22 | N. 80 E. | 1 | 1 | o. | Smooth. | |
| „ 9 | 9.24 p.m. | 50 24 N. | 0 39 W. | 47·3 | 8·5 | 19·50 | 35·23 | 28·31 | S. 40 E. | 1 | 1 | o. | Smooth. | |
| „ 9 | 10.50 p.m. | 50 21 N. | 0 19 W. | 47·3 | 8·5 | 19·51 | 35·25 | 28·32 | Calm | | | o. | Dead smooth. | Station 21. |
| „ 10 | 0.55 a.m. | 50 10 N. | 0 18 W. | 48·0 | 8·9 | 19·51 | 35·25 | 28·32 | S. 40 W. | 1 | 1 | o. | Smooth. | |
| „ 10 | 2.30 a.m. | 50 00 N. | 0 21 W. | 48·2 | 9·0 | 19·48 | 35·19 | 28·28 | S. 30 W. | 1 | 1 | o. | Smooth | Station 24. |
| „ 10 | 4.30 a.m. | 50 05 N. | 0 11 W. | 47·8 | 8·8 | 19·42 | 35·08 | 28·19 | Calm | | | o. | Dead smooth. | |
| „ 10 | 5.35 a.m. | 50 10 N. | 0 02 W. | 47·8 | 8·8 | 19·49 | 35·21 | 28·30 | Calm | | | o. | Dead smooth. | |
| „ 10 | 6.37 a.m. | 50 16 N. | 0 07 E. | 47·7 | 8·7 | 19·51 | 35·25 | 28·32 | S. 70 W. | 0 1 | 0·1 | o. | Smooth. | |
| „ 10 | 7.37 a.m. | 50 21 N. | 0 16 E. | 46·9 | 8·3 | 19·48 | 35·19 | 28·28 | S. 80 W. | 1 | 1 | o. | Smooth. | |
| „ 10 | 8.45 a.m. | 50 26 N. | 0 25 E. | 46·9 | 8·3 | 19·48 | 35·19 | 28·28 | S. 50 W. | 1 | 1 | o. | Smooth. | |
| „ 10 | 10.20 a.m. | 50 33 N. | 0 36 E. | 46·9 | 8·3 | 19·51 | 35·25 | 28·32 | S. 50 W. | 3 | 4 | o. | Slight | Station 22. |
| „ 10 | 0.5 p.m. | 50 34 N. | 0 49 E. | 46·6 | 8·1 | 19·51 | 35·25 | 28·32 | S. 50 W. | 3 | 4 | c. 3 | Smooth. | |
| „ 10 | 0.52 p.m. | 50 36 N. | 1 02 E. | 46·0 | 7·8 | 19·47 | 35·17 | 28·27 | S. 50 W. | 3 | 4 | c. 3 | Smooth. | |
| „ 10 | 1.44 p.m. | 50 43 N. | 1 08 E. | 45·3 | 7·4 | 19·47 | 35·17 | 28·27 | S. 50 W. | 3 | 4 | c. 6 | Smooth. | |

## TABLE II—*continued.*

### FEBRUARY, 1905—S.S. *Huxley*—*continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl. ‰ | S. ‰ | $\sigma_0$ | Wind. Direction (True). | Wind. Force. B. | Wind. Force. m/s. | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Feb. 10 | 2.35 p.m. | 50 51 N. | 1 14 E. | 45·7 | 7·6 | 19·47 | 35·17 | 28·27 | S. 50 W. | 3 | 4 | c. 9 | Smooth. | |
| „ 10 | 3.30 p.m. | 50 57½ N. | 1 21 E. | 45·3 | 7·4 | 19·47 | 35·17 | 28·27 | N. 85 W. | 3 | 4 | o. | Smooth. | |
| „ 10 | 4.36 p.m. | 51 04 N. | 1 30 E. | 44·4 | 6·9 | 19·43 | 35·10 | 28·21 | S. 50 W. | 3 | 4 | o. | Smooth. | |
| „ 10 | 5.18 p.m. | 51 11¾ N. | 1 38 E. | 44·1 | 6·7 | 19·45 | 35·14 | 28·24 | S. 50 W. | 3 | 4 | o. | Smooth. | |
| Observations on Stations were made by D. J. Matthews; surface observations between Stations by R. A. Todd, B.Sc., and Charles Martin, B.A. | | | | | | | | | | | | | | |

### MAY, 1905—S.S. *Oithona.*

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May 3 | 6.45 p.m. | 50 38 N. | 0 40 W. | 48·7 | 9·3 | 19·32 | 34·90 | 28·05 | S. 40 E. | 1 | 1 | c. 5 | Smooth. | |
| „ 3 | 8.5 a.m. | 50 38½ N. | 0 21 W. | 48·7 | 9·3 | 19·30 | 34·87 | 28·02 | S. 75 W. | 2 | 2 | c. 9 | Smooth. | |
| „ 3 | 9.45 p.m. | 50 40½ N. | 0 01 W. | 48·7 | 9·3 | 19·41 | 35·07 | 28·18 | S. 75 W. | 2 | 2 | b. | Smooth. | |
| „ 3 | 11.55 p.m. | 50 41 N | 0 20½ E. | 48·4 | 9·1 | 19·40 | 35·05 | 28·16 | — | — | — | — | Smooth. | |
| „ 4 | 2.22 a.m. | 50 33 N. | 0 36 E. | 48·6 | 9·2 | 19·52 | 35·26 | 28·34 | N. 5 W. | 1 | 1 | o. | Smooth | Station 22. |
| „ 4 | 4.40 a.m. | 50 21 N. | 0 44 E. | 49·1 | 9·5 | 19·53 | 35·28 | 28·35 | N. 30 E. | 2 | 2 | o. | Smooth. | |
| „ 4 | 6.15 a.m. | 50 10 N. | 0 52 E. | 48·9 | 9·4 | 19·33 | 34·92 | 28·06 | N. 30 E. | 2 | 2 | o. r. | Smooth. | |
| „ 4 | 8 a.m. | 50 02 N. | 1 00 E. | 49·1 | 9·5 | 18·99 | 34·31 | 27·57 | N. 30 E. | 3 | 4 | o. r. | Smooth. | |
| „ 4 | 8.15 a.m. | 50 00½ N. | 1 01 E. | 48·9 | 9·4 | 18·83 | 34·02 | 27·34 | — | — | — | — | — | |
| „ 4 | 10.15 a.m. | 50 01 N. | 0 42 E. | 49·1 | 9·5 | 19·10 | 34·51 | 27·73 | N. 20 W. | 4 | 6 | c. 9 | Moderate. | |
| „ 4 | Noon | 50 01 N. | 0 20 E. | 49·1 | 9·5 | 19·48 | 35·19 | 28·28 | N. 20 W. | 4 | 6 | c. 1 | Moderate. | |
| „ 4 | 2 p.m. | 50 00 N. | 0 00 | 49·3 | 9·6 | 19·44 | 35·12 | 28·22 | N. 20 W. | 3 | 4 | b. | Moderate. | |
| „ 4 | 4.30 p.m. | 50 00 N. | 0 21 W. | 49·1 | 9·5 | 19·48 | 35·19 | 28·28 | N. 30 E. | 3 | 4 | c. 8. | Slight | Station 24. |
| „ 4 | 6.27 p.m. | 50 10 N. | 0 20 W. | 49·3 | 9·6 | 19·56 | 35·34 | 28·40 | N. 40 E. | 4 | 4 | c. 8. | Choppy. | |
| Sea rising rapidly; put into Gosport for shelter. | | | | | | | | | | | | | | |
| „ 7 | 10.3 a.m. | 50 34 N. | 0 30 W. | 49·6 | 9·8 | 19·40 | 35·05 | 28·16 | S. 70 W. | 1 | 1 | c. 1. | Smooth. | |
| „ 7 | 0.20 p.m. | 50 21 N. | 0 19 W. | 49·6 | 9·8 | 19·53 | 35·28 | 28·35 | S. 50 W. | 1 | 1 | b. | Smooth | Station 21 |
| „ 7 | 2.25 p.m. | 50 13 N. | 0 34 W. | 50·2 | 10·1 | 19·55 | 35·32 | 28·38 | S. 70 W. | 1 | 1 | b. | Slight. | |
| „ 7 | 4.30 p.m. | 50 09 N. | 0 51 W. | 49·8 | 9·9 | 19·56 | 35·34 | 28·40 | S. 70 W. | 4 | 6 | c. 1. | Slight. | |
| „ 7 | 10.20 p.m. | 49 55 N. | 1 09 W. | 49·6 | 9·8 | 19·50 | 35·23 | 28·31 | N. 60 W. | 3 | 4 | c. 5. | Slight | Station 12. |
| „ 8 | 0.20 a.m. | 50 03 N. | 1 11 W. | 49·8 | 9·9 | 19·55 | 35·32 | 28·38 | N. 40 W. | 4 | 6 | o. | Slight. | |
| „ 8 | — | 50 12 N. | 1 13 W. | 49·6 | 9·8 | 19·58 | 35·37 | 28·43 | N. 40 W. | 3 | 4 | o. | Smooth. | |
| „ 8 | 6.30 a.m. | 50 20 N. | 1 15 W. | 49·1 | 9·5 | 19·38 | 35·01 | 28·14 | N. 30 E. | 4 | 6 | o. | Moderate | Station 13. |
| „ 8 | 8.30 a.m. | 50 26 N. | 1 16 W. | 49·1 | 9·5 | 19·32 | 34·90 | 28·05 | N. 30 E. | 5 | 8 | o. | Moderate. | |
| „ 8 | 11.20 a.m. | 50 33 N. | 1 17 W. | 49·8 | 9·9 | 19·27 | 34·81 | 27·98 | N. 30 E. | 4 | 6 | b. | Slight | Station 14. |
| „ 9 | 7.55 a.m. | 50 27 N. | 1 50 W. | 50·0 | 10·0 | 19·48 | 35·19 | 28·28 | N. 30 E. | 2 | 2 | b. | Smooth | Station 15. |
| „ 9 | 9.30 a.m. | 50 19 N. | 1 51 W. | 50·2 | 10·1 | 19·53 | 35·28 | 28·35 | S. 60 E. | 1 | 1 | b. | Smooth. | |
| „ 9 | 10.41 a.m. | 50 12 N. | 1 54 W. | 50·0 | 10·0 | 19·59 | 35·39 | 28·44 | N. 70 E. | 1 | 1 | b. | Slight. | |
| „ 9 | 0.16 p.m. | 50 05 N. | 1 58 W. | 50·4 | 10·2 | 19·62 | 35·44 | 28·48 | N. 85 E. | 1 | 1 | b. m. | Smooth | Station 11. |
| „ 9 | 2.50 p.m. | 50 04 N. | 2 15 W. | 51·4 | 10·8 | 19·61 | 35·43 | 28·47 | N. 70 E. | 0-1 | 0-1 | b. | Smooth. | |
| „ 9 | 8.20 p.m. | 49 49 N | 2 33 W. | 50·0 | 10·0 | 19·58 | 35·37 | 28·43 | N. 30 E. | 1 | 1 | b. | Smooth | Station 10. |
| „ 9 | 10.30 p m. | 50 00 N. | 2 31 W. | 50·0 | 10·0 | 19·57 | 35·35 | 28·41 | Calm | | | b. | Smooth. | |
| „ 9 | 11.55 p.m. | 50 11 N. | 2 32 W. | 50·2 | 10·1 | 19·59 | 35·39 | 28·44 | — | — | — | — | — | |
| „ 10 | 3 a.m. | 50 23 N. | 2 28 W. | 49·8 | 9·9 | 19·50 | 35·23 | 28·31 | Calm | | | b. | Dead smooth | Station 16. |
| „ 10 | 6.30 a.m. | 50 11 N. | 2 52 W. | 50·0 | 10·0 | 19·53 | 35·28 | 28·35 | N. 80 W. | 1 | 1 | b. | Smooth | Station 17. |
| „ 10 | 9.30 a.m. | 50 23 N. | 3 08 W. | 50·9 | 10·5 | 19·51 | 35·25 | 28·32 | S. 65 W. | 1 | 1 | b. | Smooth | Station 18. |
| „ 10 | 11.32 a.m. | 50 21 N. | 3 24 W. | 51·3 | 10·7 | 19·55 | 35·32 | 28·38 | — | — | — | c. 1 | Smooth. | |
| „ 10 | 3.5 p.m. | 50 08 N. | 3 47 W. | 52·0 | 11·1 | 19·49 | 35·21 | 28·30 | S. 65 W. | 1 | 1 | b. | Smooth | Station 20. |
| „ 10 | 4.55 p.m. | 50 02 N. | 3 35 W. | 51·6 | 10·9 | 19·57 | 35·35 | 28·41 | S. 5 E. | 1 | 1 | c. 2 | Smooth. | |
| „ 10 | 6.40 p.m. | 49 56 N. | 3 23 W. | 52·3 | 11·3 | 19·61 | 35·43 | 28·47 | S. 65 W. | 1 | 1 | b. | Smooth | Station 19. |
| „ 10 | 8.27 p.m. | 49 45 N. | 3 11 W. | 51·4 | 10·8 | 19·63 | 35·46 | 28·50 | S. 15 W. | 2 | 2 | c. 1 | Smooth. | |
| „ 10 | 10.50 p.m. | 49 39 N. | 3 09 W. | 51·3 | 10·7 | 19·60 | 35·41 | 28·46 | S. 30 W. | 1 | 1 | b. | Smooth | Station 9. |
| „ 11 | 4.55 a.m. | 49 16 N. | 3 37 W. | 51·1 | 10·6 | 19·63 | 35·46 | 28·50 | S. 75 W. | 1 | 1 | b. | Smooth | Station 8. |

## TABLE II—*continued.*

### MAY, 1905—S.S. *Oithona*—*continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | Cl. °/₀₀ | S. °/₀₀ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| May 11 | 7.10 a.m. | 49 29 N. | 3 50 W. | 50·9 | 10·5 | 19·61 | 35·43 | 28·47 | — | — | — | c. 2 | Long swell. | |
| „ 11 | 8.37 a.m. | 49 39 N. | 3 53 W. | 51·3 | 10·7 | 19·61 | 35·43 | 28·47 | — | — | — | c. 1 | Long swell. | |
| „ 11 | 10.10 a.m. | 49 51 N. | 4 01 W. | 52·2 | 11·2 | 19·63 | 35·46 | 28·50 | N. 85 W. | — | — | c. 7 | Slight. | |
| „ 11 | 11.45 a.m. | 50 03 N. | 4 10 W. | 52·0 | 11·1 | 19·56 | 35·34 | 28·40 | — | — | — | c. 6 | Slight. | |
| „ 11 | 1.25 p.m. | 50 14 N. | 4 13 W. | 52·0 | 11·1 | 19·46 | 35·16 | 28·25 | — | — | — | c. 3 | Smooth. | |
| | | Put into Plymouth. | | | | | | | | | | | | |
| „ 12 | 5 p.m. | Proceeded to sea. | | | | | | | | | | | | |
| „ 12 | — | 50 11 N. | 4 13 W. | — | — | 19·43 | 35·10 | 28·21 | — | — | — | — | — | |
| „ 12 | 9.5 p.m. | 50 02 N. | 4 22 W. | 52·3 | 11·3 | 19·52 | 35·26 | 28·34 | N. 30 E. | 4 | 6 | o. | Moderate | Station 1. |
| „ 12 | 11.8 p.m. | 49 53 N. | 4 28 W. | 51·6 | 10·9 | 19·59 | 35·39 | 28·44 | N. 30 E. | 4 | 6 | b, | Moderate. | |
| „ 13 | 0..57 a.m. | 49 40 N. | 4 35 W. | 51·3 | 10·7 | 19·62 | 35·44 | 28·48 | N. 5 E. | 3 | 4 | b. | Moderate. | |
| „ 13 | 2.3 a.m. | 49 35 N. | 4 38 W. | 51·4 | 10·8 | 19·62 | 35·44 | 28·48 | N. 5 E. | 3 | 4 | b. | Moderate. | |
| „ 13 | 4.15 a.m. | 49 27 N. | 4 42 W. | 51·3 | 10·7 | 19·60 | 35·41 | 28·46 | — | — | — | b. m. | Moderate. | Station 2. |
| | | At anchor for 15 hours on Station 2 for current measurements. | | | | | | | | | | | | |
| „ 14 | 0.45 a.m. | 49 12 N. | 4 50 W. | 52·0 | 11·1 | 19·60 | 35·41 | 28·46 | — | — | — | — | Smooth. | |
| „ 14 | 2.59 a.m. | 49 01 N. | 4 48 W. | 51·8 | 11·0 | 19·58 | 35·37 | 28·43 | N. 30 E. | 1 | 1 | b. | Smooth. | |
| „ 14 | 4.49 a.m. | 48 49 N. | 5 08 W. | 51·3 | 10·7 | 19·57 | 35·35 | 28·41 | S. 70 W. | 1 | 1 | b. m. | Moderate. | |
| „ 14 | 0.30 p.m. | 48 34 N. | 5 13 W. | 52·5 | 11·4 | 19·56 | 35·34 | 28·40 | N. 15 W. | 1 | 1 | b. m. | Smooth | Station 3. |
| „ 14 | 3.37 p.m. | 48 32 N. | 5 29 W. | 53·1 | 11·7 | 19·57 | 35·35 | 28·41 | N. 30 E. | 2 | 2 | c. 3 | Smooth. | |
| „ 14 | 4.50 p.m. | 48 31 N. | 5 44 W. | 52·7 | 11·5 | 19·57 | 35·35 | 28·41 | N. 20 W. | 2 | 2 | b. m. | Slight, long swell. | |
| „ 14 | 6.21 p.m. | 48 30 N. | 5 59 W. | 52·9 | 11·6 | 19·57 | 35·35 | 28·41 | N. 20 W. | 2 | 2 | c. 5 | Long swell. | |
| „ 14 | 7.57 p.m. | 48 28 N. | 6 14 W. | 53·1 | 11·7 | 19·57 | 35·35 | 28·41 | N. 70 W. | 1 | 1 | c. 7 | Heavy swell. | |
| „ 14 | 9.20 p.m. | 48 28 N. | 6 30 W. | 53·1 | 11·7 | 19·58 | 35·37 | 28·43 | N. 60 W. | 1 | 1 | c. 7 | Swell. | |
| „ 15 | 0.22 a.m. | 48 27 N. | 6 35 W. | 53·1 | 11·7 | 19·60 | 35·41 | 28·46 | N. 35 E. | 1 | 1 | o. | Smooth | Station 4. |
| „ 15 | 2.55 a.m. | 48 37 N. | 6 32 W. | 52·7 | 11·5 | 19·58 | 35·37 | 28·43 | N. 30 E. | 1 | 1 | o. | some swell. Slight. | |
| „ 15 | 4.20 a.m. | 48 47 N. | 6 32 W. | 52·7 | 11·5 | 19·56 | 35·34 | 28·40 | N. 30 E. | 1 | 1 | c. 3 | Smooth. | |
| „ 15 | 5.45 a.m. | 48 57 N. | 6 33 W. | 52·3 | 11·3 | 19·56 | 35·34 | 28·40 | — | — | — | c. 3 | Smooth. | |
| „ 15 | 8.37 a.m. | 49 06 N. | 6 32 W. | 52·3 | 11·3 | 19·52 | 35·26 | 28·34 | N. 20 E. | 2 | 2 | o. f. | Smooth | Station 5. |
| „ 15 | noon | 49 15 N. | 6 27 W. | 52·3 | 11·3 | 19·52 | 35·26 | 28·34 | N. 5 E. | 2 | 2 | o. | Slight. | |
| „ 15 | 1.35 p.m. | 49 25 N. | 6 22 W. | 52·2 | 11·2 | 19·53 | 35·28 | 28·35 | — | — | — | — | Long swell. | |
| „ 15 | 2.27 p.m. | 49 30 N. | 6 19 W. | 52·0 | 11·1 | 19·55 | 35·32 | 28·38 | N. 50 E. | 2 | 2 | o. | Slight. | |
| „ 15 | — | 49 37 N. | 6 17 W. | 52·5 | 11·4 | 19·49 | 35·21 | 28·30 | — | — | — | o. | — | |
| „ 15 | 5.14 p.m. | 49 46 N. | 6 12 W. | 52·2 | 11·2 | 19·48 | 35·19 | 28·28 | N. 20 W. | 1 | 1 | c. 2 | Smooth; long swell. | |
| „ 15 | 6.48 p.m. | 49 55 N. | 6 07 W. | 52·2 | 11·2 | 19·47 | 35·17 | 28·27 | — | — | — | — | — | |
| „ 15 | 8.30 p.m. | 50 04 N. | 6 03 W. | 53·2 | 11·8 | 19·46 | 35·16 | 28·25 | N. 30 E. | 1 | 1 | b. | Slight. | |
| „ 15 | 9.40 p.m. | 50 15 N. | 6 02 W. | 50·9 | 10·5 | 19·46 | 35·16 | 28·25 | N. 20 E. | 2 | 2 | c. 1 | Moderate. | |
| „ 16 | 0.20 a.m. | 50 24 N. | 6 05 W. | 51·4 | 10·8 | 19·45 | 35·15 | 28·24 | N. 30 E. | 2 | 2 | b. | Confused swell. | Station 6. |
| „ 16 | 4.20 a.m. | 50 04 N. | 5 48 W. | 50·9 | 10·5 | 19·46 | 35·16 | 28·25 | N. 70 E. | 1 | 1 | c. 1 | Smooth. | |
| „ 16 | 5.6 a.m. | 49 57 N. | 5 48 W. | 50·9 | 10·5 | 19·52 | 35·26 | 28·34 | N. 50 E. | 1 | 1 | c. 1 | Smooth. | |
| „ 16 | 6.40 a.m. | 49 53 N. | 5 38 W. | 51·4 | 10·8 | 19·55 | 35·32 | 28·38 | N. 75 E. | 1 | 1 | b. | Slight | Station 7. |
| „ 16 | 8.45 a.m. | 49 44 N. | 5 27 W. | 51·4 | 10·8 | 19·57 | 35·35 | 28·41 | — | — | — | — | — | |
| „ 16 | 10.3 a.m. | 49 36 N. | 5 22 W. | 52·2 | 11·2 | 19·60 | 35·41 | 28·46 | S. 85 E. | 4 | 6 | b. | Moderate. | |
| „ 16 | 11.43 a.m. | 49 28 N. | 5 14 W. | 52·7 | 11·5 | 19·61 | 35·43 | 28·47 | S. 85 E. | 4 | 6 | b. | Moderate. | |
| „ 16 | 1.15 p.m. | 49 37 N. | 5 04 W. | 52·9 | 11·6 | 19·62 | 35·44 | 28·48 | — | — | — | b. | Moderate. | |
| „ 16 | 2.45 p.m. | 49 43 N. | 4 51 W. | 53·4 | 11·9 | 19·61 | 35·43 | 28·47 | — | — | — | — | — | |
| „ 16 | 4.30 p.m. | 49 54 N. | 4 43 W. | 54·5 | 12·5 | 19·55 | 35·32 | 28·38 | — | — | — | b. | Smooth. | |

Observations on stations were made by D. J. Matthews; surface observations between stations by D. J. Matthews and S. Pace.

### AUGUST, 1905—S.S. *Oithona.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aug. 6 | 10.20 a.m. | 50 42 N. | 0 59 W. | 64·9 | 18·3 | 19·38 | 35·01 | 28·14 | S. 30 W. | 4 | 6 | c. 8 | Slight. | |
| „ 6 | 11.43 a.m. | 50 39 N. | 0 41 W. | 62·2 | 16·8 | 19·42 | 35·08 | 28·19 | S. 80 W. | 4 | 6 | c. 3 | Slight. | |
| „ 6 | 1.2 p.m. | 50 39 N. | 0 21 W. | 62·4 | 16·9 | 19·43 | 35·10 | 28·21 | S. 40 W. | 4 | 6 | c. 1 | Slight. | |

## TABLE II—*continued.*

### AUGUST, 1905—S.S. *Oithona—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | *Cl.* ‰ | *S.* ‰ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks, |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Aug. 6 | 2.15 p.m. | 50 40 N. | 0 02 W. | 61·9 | 16·6 | 19·42 | 35·08 | 28·19 | S. 40 W. | 3 | 4 | c. l | Slight. | |
| „ 6 | 3.40 p.m. | 50 42 N. | 0 09 E. | 63·3 | 17·4 | 19·42 | 35·08 | 28·19 | S. 60 W. | 3 | 4 | b. | Slight. | |
| „ 6 | 5.8 p.m. | 50 41 N. | 0 20 E. | 62·2 | 16·8 | 19·41 | 35·07 | 28·18 | — | — | — | b. | Slight. | |
| „ 6 | 6.45 p.m. | 50 33 N. | 0 36 E. | 60·4 | 15·8 | 19·44 | 35·12 | 28·22 | S. 5 W. | 1 | 1 | c. l | Slight | Station 22. |
| „ 6 | 9.30 p.m. | 50 24 N. | 0 41 E. | 60·6 | 15·9 | 19·41 | 35·07 | 28·18 | S. 60 W. | 2 | 2 | — | Smooth. | |
| „ 6 | 10.50 p.m. | 50 17 N. | 0 47 E. | 61·3 | 16·3 | 19·35 | 34·96 | 28·09 | S. 30 W. | 2 | 2 | — | Smooth. | |
| „ 6 | 11.55 p.m. | 50 09 N. | 0 52 E. | 62·2 | 16·8 | 19·30 | 34·87 | 28·02 | S. 30 W. | 2 | 2 | — | Smooth. | |
| „ 7 | 1.10 a.m. | 50 01 N. | 1 01 E. | 63·0 | 17·2 | 19·26 | 34·79 | 27·96 | S. 20 E. | 5 | 8 | — | Moderate. | |
| „ 7 | 2.35 a.m. | 50 00 N. | 0 44 E. | 62·1 | 16·7 | 19·26 | 34·79 | 27·96 | S. 20 E. | 4 | 6 | c. l | Slight. | |
| „ 7 | 4 a.m. | 50 00 N. | 0 29 E. | 61·5 | 16·4 | 19·27 | 34·81 | 27·98 | S. 30 W. | 5 | 8 | o. | Moderate. | |
| „ 7 | 5.30 a.m. | 50 00 N. | 0 13 E. | 60·6 | 15·9 | 19·26 | 34·79 | 27·96 | S. 20 E. | 4 | 6 | o. p. | Moderate. | |
| „ 7 | 7.10 a.m. | 50 00 N. | 0 04 E. | 60·4 | 15·8 | 19·22 | 34·72 | 27·90 | S. 20 E. | 5 | 8 | o. | Rough. | |
| „ 7 | 8.45 a.m. | 50 00 N. | 0 21 W. | 60·8 | 16·0 | 19·22 | 34·72 | 27·90 | S. 5 W. | 4 | 6 | o. | Rough | Station 24. |
| „ 7 | 11.27 a.m. | 50 10 N. | 0 20 W. | 60·4 | 15·8 | 19·31 | 34·88 | 28·03 | — | — | — | o. | Moderate. | |
| „ 7 | 1.27 p.m. | 50 21 N. | 0 19 W. | 60·3 | 15·7 | 19·43 | 35·10 | 28·21 | S. 5 E. | 1 | 1 | o. p. | Moderate | Station 21. |
| „ 7 | 5.30 p.m. | 50 26 N. | 0 56 W. | 63·1 | 17·3 | 19·44 | 35·12 | 28·22 | — | — | — | — | — | |
| „ 7 | 6.20 p.m. | 50 26 N. | 1 03 W. | 64·2 | 17·9 | 19·37 | 34·99 | 28·12 | — | — | — | — | — | |
| „ 7 | 8.10 p.m. | 50 33 N. | 1 17 W. | 64·2 | 17·9 | 19·35 | 34·96 | 28·09 | S. 50 W. | 1 | 1 | o. | Smooth | Station 14. |
| „ 7 | 9.42 p.m. | 50 26 N. | 1 16 W. | 64·2 | 17·9 | 19·40 | 35·05 | 28·16 | S. 50 W. | 2 | 2 | o. | Smooth. | |
| „ 7 | 11.50 p.m. | 50 20 N. | 1 15 W. | 62·2 | 16·8 | 19·38 | 35·01 | 28·14 | S. 30 W. | 1 | 1 | o. | Smooth | Station 13 |
| „ 8 | 1.15 a.m. | 50 12 N. | 1 15 W. | 59·9 | 15·5 | 19·51 | 35·25 | 28·32 | S. 50 W. | 2 | 2 | o. | Smooth. | |
| „ 8 | 2.7 a.m. | 50 06 N. | 1 13 W. | 59·9 | 15·5 | 19·48 | 35·19 | 28·28 | S. 50 W. | 2 | 2 | o. | Smooth. | |
| „ 8 | 3.5 a.m. | 49 58 N. | 1 10 W. | 59·9 | 15·5 | 19·46 | 35·16 | 28·25 | S. 50 W. | 2 | 2 | o. | Smooth. | |
| „ 8 | 5.20 a.m. | 49 55 N. | 1 09 W. | — | — | 19·31 | 34·88 | 28·03 | S. 85 W. | 2 | 2 | o. | Smooth | Station 12. |
| „ 8 | 7.55 a.m. | 50 00 N. | 1 32 W. | 60·1 | 15·6 | 19·48 | 35·19 | 28·28 | — | — | — | — | Smooth. | |
| „ 8 | 10.43 a.m. | 50 05 N. | 1 58 W. | 59·7 | 15·4 | 19·55 | 35·32 | 28·38 | S. 85 W. | 1 | 1 | b. | Smooth | Station 11. |
| „ 8 | 0.55 p.m. | 50 00 N. | 2 12 W. | 59·9 | 15·5 | 19·50 | 35·23 | 28·31 | — | — | — | o. | Smooth. | |
| „ 8 | 2.22 p.m. | 49 55 N. | 2 26 W. | 59·2 | 15·1 | 19·49 | 35·21 | 28·30 | — | — | — | o. | Smooth. | |
| „ 8 | 6.45 p.m. | 48 49 N. | 2 33 W. | 59·2 | 15·1 | 19·51 | 35·25 | 28·32 | S. 75 W. | — | — | c. 5 | Smooth | Station 10. |
| „ 8 | 9.38 p.m. | 49 56 N. | 2 34 W. | 58·3 | 14·6 | 19·54 | 35·30 | 28·37 | — | — | — | — | Smooth. | |
| „ 8 | 10.42 p.m. | 50 05 N. | 2 30 W. | 58·8 | 14·9 | 19·56 | 35·34 | 28·40 | — | — | — | — | Smooth. | |
| „ 9 | 0.55 a.m. | 50 15 N. | 2 25 W. | 59·4 | 15·2 | 19·54 | 35·30 | 28·37 | — | — | — | — | Smooth. | |
| „ 9 | 1.55 a.m. | 50 23 N. | 2 28 W. | 61·7 | 16·5 | 19·52 | 35·26 | 28·34 | S. 50 W. | 2 | 2 | o. | Smooth | Station 16. |
| „ 9 | 4.0 a.m. | 50 16 N. | 2 40 W. | 59·9 | 15·5 | 19·53 | 35·28 | 28·35 | S. 70 W. | 1 | 1 | o. | Smooth. | |
| „ 9 | 6.10 a.m. | 50 11 N. | 2 52 W. | 58·8 | 14·9 | 19·53 | 35·28 | 28·35 | S. 40 E. | 1 | 1 | o. d. | Dead smooth. | Station 17. |
| „ 9 | 9.55 a.m. | 50 23 N. | 3 08 W. | 60·3 | 15·7 | 19·53 | 35·28 | 28·35 | S. 5 W. | 2 | 2 | o. d. | Slight | Station 18. |
| „ 9 | 0.8 p.m. | 50 18 N. | 3 22 W. | 59·9 | 15·5 | 19·52 | 35·26 | 28·34 | — | — | — | — | Slight. | |
| „ 9 | 3.30 p.m. | 50 08 N. | 3 47 W. | 59·7 | 15·4 | 19·58 | 35·38 | 28·43 | S. 50 W. | 3 | 4 | c. 5 | Slight | Station 20. |
| „ 9 | 5.35 p.m. | 50 00 N. | 3 37 W. | 59·2 | 15·1 | 19·58 | 35·38 | 28·43 | S. 30 W. | 5 | 8 | — | Moderate. | |
| „ 9 | 7.40 p.m. | 49 56 N. | 3 23 W. | 59·0 | 15·0 | 19·61 | 35·43 | 28·47 | S. 75 W. | 4 | 6 | c. 3 | Slight | Station 19. |
| „ 9 | 9.21 p.m. | 49 48 N. | 3 19 W. | 58·5 | 14·7 | 19·60 | 35·42 | 28·46 | — | — | — | — | — | |
| „ 9 | 11.30 p.m. | 49 39 N. | 3 09 W. | 58·5 | 14·7 | 19·51 | 35·25 | 28·32 | S. 75 W. | 3 | 4 | o. | Heavy swell | Station 9. |
| „ 10 | 5.50 a.m. | 49 16 N. | 3 37 W. | 58·1 | 14·5 | 19·53 | 35·28 | 28·35 | S. 50 W. | 3 | 4 | b. | Slight | Station 8. |
| „ 10 | 8.10 a.m. | 49 32 N. | 3 48 W. | 58·1 | 14·5 | 19·53 | 35·28 | 28·35 | — | — | — | — | — | |
| „ 10 | 9.20 a.m. | 49 38 N. | 3 51 W. | 59·4 | 15·2 | 19·56 | 35·34 | 28·40 | — | — | — | c. l | Moderate. | |
| „ 10 | 10.50 a.m. | 49 38 N. | 3 56 W. | 60·1 | 15·6 | 19·58 | 35·37 | 28·43 | — | — | — | — | — | |
| „ 10 | 0.15 p.m. | 49 57 N. | 4 00 W. | 59·9 | 15·5 | 19·59 | 35·40 | 28·45 | N. 60 W. | 4 | 6 | b. | Moderate. | |
| „ 10 | 1.32 p.m. | 50 07 N. | 4 06 W. | 60·4 | 15·8 | 19·59 | 35·40 | 23·45 | N. 60 W. | 5 | 8 | b. | Moderate. | |
| | | | | Put into Plymouth. | | | | | | | | | | |
| „ 11 | 3 p.m. | | | Proceeded to sea. | | | | | | | | | | |
| „ 11 | 4.55 p.m. | 50 15 N. | 4 12 W. | 59·7 | 15·4 | 19·54 | 35·30 | 28·37 | N. 60 W. | 4 | 6 | b. | Moderate. | |
| „ 11 | 7.40 p.m. | 50 02 N. | 4 22 W. | 59·7 | 15·4 | 19·59 | 35·39 | 28·44 | N. 50 W. | 4 | 6 | b. | Moderate | Station 1. |
| „ 11 | 9.25 p.m. | 49 52 N. | 4 28 W. | 59·4 | 15·2 | 19·58 | 35·38 | 28·43 | N. 85 W. | 3 | 4 | b. | Moderate. | |

## TABLE II—*continued.*

### AUGUST, 1905—S.S. *Oithona—continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. | | Cl. ‰ | S. ‰ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Aug. 11 | 10.50 p.m. | 49 44 N. | 4 34 W. | 59·0 | 15·0 | 19·58 | 35·38 | 28·43 | N. 85 W. | 3 | 4 | b. | Moderate. | |
| „ 12 | 0.20 a.m. | 49 34 N. | 4 39 W. | 59·0 | 15·0 | 19·58 | 35·38 | 28·43 | N. 85 W. | 2 | 2 | b. | Moderate. | |
| „ 12 | 2.50 a.m. | 49 27 N. | 4 42 W. | 60·6 | 15·9 | 19·59 | 35·40 | 28·45 | N. 85 W. | 2 | 2 | o. | Falling | Station 2. |
| | | | | Anchored for current measurements. | | | | | | | | | | |
| „ 13 | 2.17 a.m. | 49 18 N. | 4 47 W. | 61·0 | 16·1 | — | Lost | — | Light airs | | | — | Smooth. | |
| „ 13 | 3.30 a.m. | 49 11 N. | 4 54 W. | 60·1 | 15·6 | 19·58 | 35·37 | 28·43 | Light airs | | | — | Smooth. | |
| „ 13 | 4.45 a.m. | 49 01 N. | 4 56 W. | 59·7 | 15·4 | 19·58 | 35·37 | 28·43 | N. 70 E. | 2 | 2 | o. | Smooth. | |
| „ 13 | 6.5 a.m. | 48 52 N. | 5 01 W. | 59·2 | 15·1 | 19·57 | 35·35 | 28·41 | S. 85 E. | 2 | 2 | o. | Smooth. | |
| „ 13 | 7.20 a.m. | 48 42 N. | 5 07 W. | 59·9 | 15·5 | 19·57 | 35·35 | 28·41 | S. 85 E | 2 | 2 | o. | Smooth. | |
| „ 13 | 10.22 a.m. | 48 34 N. | 5 13 W. | 56·7 | 13·7 | 19·54 | 35·31 | 28·37 | N. 85 E. | 4 | 6 | o. | Confused | Station 3. |
| „ 13 | 1.45 p.m. | 48 32 N. | 5 35 W. | 62·6 | 17·0 | 19·55 | 35·33 | 28·39 | N. 75 E. | 4 | 6 | c. 1 | Moderate. | |
| „ 13 | 3.20 p.m. | 48 30 N. | 5 53 W. | 62·8 | 17·1 | 19·55 | 35·32 | 28·38 | N. 75 E. | 4 | 6 | c. 1 | Moderate. | |
| „ 13 | 5.5 p.m. | 48 29 N. | 6 12 W. | 62·8 | 17·1 | 19·55 | 35·32 | 28·38 | N. 75 E. | 4 | 6 | c. 1 | Moderate. | |
| „ 13 | 8.20 p.m. | 48 27 N. | 6 35 W. | 62·8 | 17·1 | 19·59 | 35·39 | 28·44 | N. 75 E. | 4 | 6 | b. | Rough | Station 4. |
| „ 13 | 10.40 p.m. | 48 36 N. | 6 33 W. | 62·2 | 16·8 | 19·57 | 35·35 | 28·41 | N. 50 E. | 4 | 6 | b | Heavy swell. | |
| „ 13 | 11.50 p.m. | 48 47 N. | 6 33 W. | 62·4 | 16·9 | 19·56 | 35·34 | 28·40 | N. 50 E. | 4 | 6 | b. | Moderate. | |
| „ 14 | 1.45 a.m. | 48 58 N. | 6 32 W. | 62·2 | 16·8 | 19·55 | 35·32 | 28·38 | — | — | — | — | — | |
| „ 14 | 4.20 a.m. | 49 06 N. | 6 32 W. | 62·2 | 16·8 | 19·53 | 35·28 | 28·35 | S. 80 E. | 4 | 6 | c. 5 | Moderate | Station 5. |
| „ 14 | 8.42 a.m. | 49 12 N. | 6 27 W. | 61·9 | 16·6 | 19·53 | 35·28 | 28·35 | N. 50 E. | 3 | 4 | — | Moderate. | |
| „ 14 | — | 49 29 N. | 6 22 W. | 61·2 | 16·2 | 19·53 | 35·28 | 28·35 | N. 50 E. | 3 | 4 | b. | Moderate. | |
| „ 14 | 11.7 a.m. | 49 41 N. | 6 13 W. | 60·4 | 15·8 | 19·53 | 35·28 | 28·35 | N. 50 E. | 3 | 4 | b. | Moderate. | |
| „ 14 | 0.55 p.m. | 49 54 N. | 6 13 W. | 61·0 | 16·1 | 19·57 | 35·35 | 28·41 | — | — | — | — | — | |
| „ 14 | 2.17 p.m. | 50 04 N. | 6 04 W. | 61·5 | 16·4 | 19·52 | 35·26 | 28·34 | — | — | — | — | — | |
| „ 14 | 3.30 p.m. | 50 12 N. | 6 03 W. | 62·4 | 16·9 | 19·49 | 35·21 | 28·30 | — | — | — | b. | Slight swell. | |
| „ 14 | — | 50 18 N. | 6 04 W. | 61·5 | 16·4 | 19·55 | 35·32 | 28·38 | — | — | — | — | — | |
| „ 14 | 6.20 p.m. | 50 24 N. | 6 05 W. | 63·0 | 17·2 | 19·48 | 35·19 | 28·28 | N. 40 E. | 1 | 1 | b. | Smooth | Station 6. |
| „ 14 | 9.40 p.m. | 50 04 N. | 5 54 W. | 59·5 | 15·3 | 19·55 | 35·32 | 28·38 | — | — | — | — | — | |
| „ 14 | 11 p.m. | 49 57 N. | 5 49 W. | 60·4 | 15·8 | 19·58 | 35·37 | 28·43 | N. 70 E. | — | — | b. | Smooth. | |
| „ 15 | 0.20 a.m. | 49 53 N. | 5 38 W. | 61·0 | 16·1 | 19·58 | 35·37 | 28·43 | N. 85 E. | 1 | 1 | o. | Smooth | Station 7. |
| „ 15 | 3 a.m. | 49 46 N. | 5 30 W. | 62·2 | 16·8 | 19·59 | 35·39 | 28·44 | S. 85 E. | 2 | 2 | o. | Smooth. | |
| „ 15 | 4.35 a.m. | 49 37 N. | 5 20 W. | 62·2 | 16·8 | 19·59 | 35·39 | 28·44 | — | — | — | c. 8 | Smooth. | |
| „ 15 | 6 a.m. | 49 31 N. | 5 11 W. | 61·9 | 16·6 | 19·59 | 35·39 | 28·44 | — | — | — | — | — | Extra Station |
| „ 15 | — | 49 39 N. | 5 00 W. | 61·0 | 16·1 | 19·57 | 35·35 | 28·41 | — | — | — | — | — | |
| „ 15 | 9.40 a.m. | 49 47 N. | 4 49 W. | 61·2 | 16·2 | 19·59 | 35·39 | 28·44 | N. 70 E. | 2 | 2 | o. | Smooth. | |
| „ 15 | 11 a.m. | 49 54 N. | 4 40 W. | 60·8 | 16·0 | 19·60 | 35·41 | 28·46 | N. 70 E. | 2 | 2 | o. | Smooth. | |
| „ 15 | 0.10 p.m. | 50 03 N. | 4 32 W. | 61·2 | 16·2 | 19·60 | 35·41 | 28·46 | N. 70 E. | 2 | 2 | o. | Smooth. | |
| „ 15 | 1.30 p.m. | 50 10 N. | 4 23 W. | 61·3 | 16·3 | 19·61 | 35·43 | 28·47 | N. 70 E. | 2 | 2 | o. | Smooth. | |

Observations on Stations were made by D. J. Matthews; surface observations between stations by D. J. Matthews, T. V. Hodgson, and W. G. Ramsay.

### SEPTEMBER, 1905—S.S. *Oithona.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aug. 12 | 3.43 p.m. | 50 11 N. | 4 14 W. | 57·7 | 14·3 | 19·57 | 35·35 | 28·41 | S. 70 W. | 2 | 2 | c. 2 | Slight. | |
| „ 12 | 5.5 p.m. | 50 02 N. | 4 22 W. | 58·4 | 14·7 | 19·57 | 35·35 | 28·41 | S. 85 W. | 2 | 2 | b. | Slight | Station 1. |
| „ 12 | 7.20 p.m. | 49 53 N. | 4 26 W. | 57·7 | 14·3 | 19·57 | 35·35 | 28·41 | — | — | — | — | — | |
| „ 12 | 8.50 p.m. | 49 45 N. | 4 31 W. | 57·7 | 14·3 | 19·56 | 35·34 | 28·40 | S. 70 W. | 2 | 2 | b. | Slight. | |
| „ 12 | 10.15 p.m. | 49 35 N. | 4 37 W. | 57·4 | 14·1 | 19·55 | 35·32 | 28·38 | — | — | — | b. | Smooth. | |
| „ 13 | 0.15 a.m. | 49 27 N. | 4 42 W. | 58·1 | 14·5 | 19·54 | 35·30 | 28·37 | N. 85 W. | 1 | 1 | c. 1 | Smooth | Station 2. |
| „ 13 | 3.15 a.m. | 49 17 N. | 4 48 W. | 58·1 | 14·5 | 19·55 | 35·32 | 28·38 | S. 30 W. | 2 | 2 | b. | Smooth. | |
| „ 13 | 5.10 a.m. | 49 05 N. | 4 57 W. | 57·9 | 14·4 | 19·53 | 35·28 | 28·35 | S. 30 W. | 1 | 1 | b. | Smooth. | |
| „ 13 | 7.0 a.m. | 48 53 N. | 5 02 W. | 56·8 | 13·8 | 19·54 | 35·30 | 28·37 | S. 30 W. | 1 | 1 | o. | Smooth. | |
| „ 13 | 8.50 a.m. | 48 42 N. | 5 09 W. | 57·9 | 14·4 | 19·52 | 35·26 | 28·34 | — | — | — | — | Slight. | |
| „ 13 | 11.35 a.m. | 48 34 N. | 5 13 W. | 56·3 | 13·5 | 19·52 | 35·27 | 28·34 | — | — | — | — | — | Station 3. |

## TABLE II—*continued.*

### SEPTEMBER, 1905—S.S. *Oithona—continued.*

| Date. | Greenwich Time. | Latitude | Longitude. | Temperature. | | Cl. °/₀₀ | S. °/₀₀ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Aug. 13 | 2.20 p.m. | 48 32 N. | 5 29 W. | 58·5 | 14·7 | 19·52 | 35·26 | 28·34 | — | — | — | — | Moderate swell. | |
| „ 13 | 4. p.m. | 48 30 N. | 5 44 W. | 60·3 | 15·7 | 19·54 | 35·30 | 28·37 | — | — | — | — | — | |
| „ 13 | 5.50 p.m. | 48 29 N. | 6 02 W. | 60·4 | 15·8 | 19·55 | 35·32 | 28·38 | — | — | — | — | — | |
| „ 13 | 7.40 p.m. | 48 28 N. | 6 19 W. | 59·7 | 15·4 | 19·56 | 35·34 | 28·40 | — | — | — | — | — | |
| „ 13 | 9.20 p.m. | 48 27 N. | 6 35 W. | 60·4 | 15·8 | 19·59 | 35·39 | 28·44 | — | — | — | — | Heavy swell. | Station 4. |
| „ 14 | 0.5 a.m. | 48 36 N. | 6 35 W. | 60·4 | 15·8 | 19·59 | 35·40 | 28·45 | N. 40 W. | 2 | 2 | — | Moderate swell. | |
| „ 14 | 1.45 a.m. | 48 45 N. | 6 34 W. | 59·9 | 15·5 | 19·59 | 35·39 | 28·44 | — | — | — | b. | Moderate swell. | |
| „ 14 | 3.25 a.m. | 48 54 N. | 6 33 W. | 59·0 | 15·0 | 19·58 | 35·37 | 28·43 | — | — | — | — | Moderate swell. | |
| „ 14 | 4.45 a.m. | 49 06 N. | 6 32 W. | 59·5 | 15·3 | 19·56 | 35·34 | 28·40 | — | — | — | — | Heavy swell. | Station 5 |
| „ 14 | 7.50 a.m. | 49 10 N. | 6 18 W. | 58·3 | 14·6 | 19·53 | 35·28 | 28·35 | — | — | — | — | — | |
| „ 14 | 9.40 a.m. | 49 15 N. | 6 02 W. | 58·3 | 14·6 | 19·52 | 35·26 | 28·34 | — | — | — | — | — | |
| „ 14 | 11.20 a.m. | 49 19 N. | 5 49 W. | 59·4 | 15·2 | 19·53 | 35·28 | 28·35 | N. 75 E. | 4 | 6 | — | Heavy swell. | |
| „ 14 | 1.20 p.m. | 49 25 N. | 5 35 W. | 59·5 | 15·3 | 19·54 | 35·30 | 28·37 | — | — | — | — | Rough. | |
| „ 14 | 3.15 p.m. | 49 32 N. | 5 21 W. | 59·4 | 15·2 | 19·55 | 35·32 | 28·38 | — | — | — | — | — | |
| „ 14 | 4.55 p.m. | 49 41 N. | 5 12 W. | 59·2 | 15·1 | 19·55 | 35·33 | 28·39 | — | — | — | — | — | |
| „ 14 | 6.30 p.m. | 49 49 N. | 5 01 W. | 59·0 | 15·0 | 19·56 | 35·34 | 28·40 | — | — | — | — | Rough. | |
| 14 | 8 p.m. | 49 56 N. | 4 49 W. | 56·8 | 13·8 | 19·57 | 35·35 | 28·41 | — | — | — | — | — | |
| „ 14 | 9.30 p.m. | 50 03 N. | 4 40 W. | — | — | 19·58 | 35·37 | 28·43 | — | — | — | — | — | |

Observations on stations were made by D. J. Matthews: surface observations between stations by D. J. Matthews and T. V. Hodgson.

### NOVEMBER, 1905—S.S. *Huxley.*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 6 | 0.5 a.m. | Proceeded to sea. | | | | | | | | | | | | |
| „ 6 | 1.35 a.m. | 50 11 N. | 4 15 W. | 55·0 | 12·8 | 19·58 | 35·37 | 28·43 | S. 70 W. | 1 | 1 | b. | Smooth. | |
| „ 6 | 3 a.m. | 50 02 N. | 4 22 W. | 55·2 | 12·9 | 19·60 | 35·41 | 28·46 | N. 60 W. | 1 | 1 | b p. | Smooth | Station 1. |
| „ 6 | 6.12 a.m. | 49 53 N. | 4 26 W. | 55·4 | 13·0 | 19·59 | 35·39 | 28·44 | N. 85 W. | 2 | 2 | c. 5 | Slight. | |
| „ 6 | 7.26 a.m. | 49 44 N. | 4 31 W. | 54·9 | 12·7 | 19·57 | 35·35 | 28·41 | N. 85 W. | 2 | 2 | c. 5 | Slight. | |
| „ 6 | 8.40 a.m. | 49 36 N. | 4 36 W. | 55·4 | 13·0 | 19·58 | 35·37 | 28·43 | ? | 1 | 1 | c. 5 | Slight. | |
| „ 6 | 10.10 a.m. | 49 27 N. | 4 42 W. | 55·0 | 12·8 | 19·57 | 35·35 | 28·41 | N. 60 W. | 1 | 1 | o. to c. 5 | Slight | Station 2. |
| Anchored for seven hours for current measurements. | | | | | | | | | | | | | | |
| „ 6 | 9.25 p.m. | 49 19 N. | 4 46 W. | 55·0 | 12·8 | 19·53 | 35·28 | 28·35 | S. 60 W. | 1 | 1 | c. 1 | Slight. | |
| „ 6 | 10.40 p.m. | 49 12 N. | 4 51 W. | 54·5 | 12·5 | 19·54 | 35·30 | 28·37 | S. 60 W. | 1 | 1 | c. 1 | Slight. | |
| „ 6 | 11.55 p.m. | 49 03 N. | 4 57 W. | 53·8 | 12·1 | 19·55 | 35·32 | 28·38 | S. 60 W. | 1 | 1 | c. 5 | Slight. | |
| „ 7 | 1.7 a.m. | 48 55 N. | 5 03 W. | 53·1 | 11·7 | 19·55 | 35·32 | 28·38 | S. 40 W. | 1 | 1 | c. 5 | Slight. | |
| „ 7 | 6 a.m. | 48 34 N. | 5 13 W. | 53·3 | 11·8 | 19·56 | 35·34 | 28·40 | S. 70 W. | 1 | 1 | c. 5 | Smooth | Station 3. |
| „ 7 | 9.22 a.m. | 48 32 N. | 5 27 W. | 53·1 | 11·7 | 19·56 | 35·34 | 28·40 | — | — | — | o. | Slight. | |
| „ 7 | 10.31 a.m. | 48 31 N. | 5 41 W. | 53·2 | 11·8 | 19·59 | 35·39 | 28·44 | Calm | | | c. 5 | Slight. | |
| „ 7 | 11.39 a.m. | 48 30 N. | 5 54 W. | 53·6 | 12·0 | 19·61 | 35·43 | 28·47 | — | — | — | — | — | |
| „ 7 | 0.50 p.m. | 48 29 N. | 6 07 W. | 53·6 | 12·0 | 19·61 | 35·43 | 28·47 | S. 70 W. | 1 | 1 | c. 5 | Slight. | |
| „ 7 | 2.5 p.m. | 48 28 N. | 6 21 W. | 54·0 | 12·2 | 19·64 | 35·48 | 28·51 | S. 70 W. | 1 | 1 | c. 5 | Slight. | |
| „ 7 | 3.30 p.m. | 48 27 N. | 6 35 W. | 53·9 | 12·2 | 19·66 | 35·52 | 28·54 | N. 60 W. | 2 | 2 | c. 2 | Slight | Station 4. |
| „ 7 | 6.25 p.m. | 48 20 N. | 6 50 W. | 53·8 | 12·1 | 19·66 | 35·52 | 28·54 | N. 60 W. | 2 | 2 | c. 2 | Slight. | |
| „ 7 | 7.43 p.m. | 48 15 N. | 7 04 W. | 54·0 | 12·2 | 19·66 | 35·52 | 28·54 | N. 60 W. | 3 | 4 | c. 3 | Slight. | |
| „ 7 | 9.10 p.m. | 48 10 N. | 7 15 W. | 54·0 | 12·2 | 19·67 | 35·53 | 28·56 | — | — | — | — | — | |
| „ 7 | 10.35 p.m. | 48 05 N. | 7 29 W. | 54·0 | 12·2 | 19·67 | 35·53 | 28·56 | N. 50 W. | — | — | — | Rising. | |
| „ 7 | Midnight | 48 00 N. | 7 43 W. | 54·0 | 12·2 | 19·69 | 35·57 | 28·59 | — | — | — | — | — | |
| „ 8 | 4 a.m. | 47 46 N. | 7 50 W. | 54·3 | 12·4 | 19·69 | 35·57 | 28·59 | N. 60 W. | 1 | 1 | b. | Slight | Extra station. |
| „ 8 | 8.45 a.m. | 47 51 N. | 7 46 W. | 53·8 | 12·1 | 19·68 | 35·55 | 28·57 | N. 50 W. | 1 | 1 | c. 1 | Slight. | |
| „ 8 | 10.30 a.m. | 48 09 N. | 7 40 W. | 54·1 | 12·3 | 19·68 | 35·55 | 28·57 | N. 50 W. | 1 | 1 | c. 1 | Slight. | |
| „ 8 | 0.12 p.m. | 48 21 N. | 7 33 W. | 54·3 | 12·4 | 19·68 | 35·55 | 28·57 | — | — | — | — | — | |
| „ 8 | 1.35 p.m. | 48 33 N. | 7 22 W. | 54·5 | 12·5 | 19·67 | 35·53 | 28·56 | N. 60 W. | 1 | 1 | c. 2 | Slight. | |

## TABLE II—*continued.*

## NOVEMBER, 1905—S.S. *Huxley—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. | | Cl. ‰ | S. ‰ | $\sigma_0$ | Wind. | | | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | F. | C. | | | | Direction (True). | Force. B. | Force. m/s. | | | |
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Nov. 8 | 3 p.m. | 48 42 N. | 7 10 W. | 54·1 | 12·3 | 19·63 | 35·52 | 28·54 | N. 60 W. | 1 | 1 | c. 1 | Slight. | |
| „ 8 | 4.36 p.m. | 48 50 N. | 6 56 W. | 53·6 | 12·0 | 19·64 | 35·48 | 28·51 | — | — | — | — | — | |
| „ 8 | 5.57 p.m. | 48 59 N. | 6 43 W. | 53·1 | 11·7 | | Lost. | | N. 50 W. | 1 | 1 | c. 1 | Slight. | |
| „ 8 | 7.59 p.m. | 49 06 N. | 6 32 W. | 52·1 | 11·2 | 19·56 | 35·34 | 28·40 | S. 70 W. | 1 | 1 | b. | Smooth | Station 5. |
| „ 8 | 11.45 p.m. | 49 15 N. | 6 26 W. | 52·0 | 11·1 | 19·53 | 35·28 | 28·35 | — | — | — | b. | Slight. | |
| „ 9 | 1.15 a.m. | 49 25 N. | 6 20 W. | 52·0 | 11·1 | 19·53 | 35·28 | 28·35 | — | — | — | b. | Slight. swell. | |
| „ 9 | 2.42 a.m. | 49 35 N. | 6 14 W. | 52·3 | 11·3 | 19·54 | 35·30 | 28·37 | N. 70 E. | 1 | 1 | b. | Slight. | |
| „ 9 | 4.10 a.m. | 49 45 N. | 6 08 W. | 52·9 | 11·6 | 19·54 | 35·31 | 28·37 | N. 70 E. | 1 | 1 | b. | Slight. | |
| „ 9 | 5.35 a.m. | 49 55 N, | 6 01 W. | 52·9 | 11·6 | 19·56 | 35·34 | 28·40 | N. 70 E. | 1 | 1 | b. | Slight. | |
| „ 9 | 7.3 a.m. | 50 05 N. | 5 55 W. | 53·6 | 12·0 | 19·53 | 35·28 | 28·35 | N. 70 E. | 1 | 1 | o. | Slight. | |
| „ 9 | 10.20 a.m. | 50 24 N. | 6 05 W. | 53·3 | 11·8 | 19·57 | 35·35 | 28·41 | S. 30 E. | 1 | 1 | o. | Slight | Station 6. |
| „ 9 | 1.5 p.m. | 50 18 N. | 5 59 W. | 54·0 | 12·2 | 19·58 | 35·38 | 28·43 | S. 30 E. | 2 | 2 | o. | Slight. | |
| „ 9 | 2.12 p.m. | 50 11 N. | 5 54 W. | 53·8 | 12·1 | 19·58 | 35·37 | 28·43 | — | — | — | o. | Slight. | |
| „ 9 | 3.50 p.m. | 50 03 N. | 5 49 W. | 53·8 | 12·1 | 19·57 | 35·35 | 28·41 | — | — | — | o. | Slight. | |
| „ 9 | 5.3 p.m. | 49 57 N. | 5 48¾ W. | 53·8 | 12·1 | 19·58 | 35·37 | 28·43 | — | — | — | o. d. | Moderate. | |
| „ 9 | 6.5 p.m, | 49 53 N. | 5 38 W. | 53·6 | 12·0 | 19·58 | 35·37 | 28·43 | S. 30 E, | 4 | 6 | o.r. | Moderate | Station 7. |
| „ 9 | 9.28 p.m. | 49 50 N. | 5 23 W. | 54·1 | 12·3 | 19·60 | 35·41 | 28·46 | S. 30 E. | 6 | 10·5 | o. | Rough. | |
| „ 9 | 11.20 p.m. | 49 46 N. | 5 09 W. | 54·3 | 12·4 | 19·59 | 35·39 | 28·44 | S. 30 E. | 6 | 10·5 | o. | Rough. | |
| „ 10 | 1.40 a.m. | 49 44 N. | 4 52 W, | 54·7 | 12·6 | 19·58 | 35·37 | 28·43 | S. 30 E. | 6 | 10·5 | o. | Rough. | |
| „ 10 | 3.45 a.m. | 49 53 N. | 4 41 W. | 54·9 | 12·7 | 19·58 | 35·37 | 28·43 | S. | 4 | 6 | o. | Rough. | |
| „ 10 | 5.15 a.m. | 50 02 N. | 4 29 W. | 54·7 | 12·6 | 19·61 | 35·43 | 28·47 | S. 30 E. | 2 | 2 | o. | Moderate. | |
| „ 10 | 7 a.m. | 50 12 N. | 4 19 W. | — | — | 19·61 | 35·43 | 28·47 | — | — | — | — | — | |
| | | | | Put into Plymouth. | | | | | | | | | | |
| „ 12 | 2 p.m. | | | Proceeded to sea. | | | | | | | | | | |
| „ 12 | 3.45 p.m. | 50 15 N. | 4 05 W. | 54·5 | 12·5 | 19·49 | 35·21 | 28·30 | S. 5 W. | 4 | 6 | o. | Rough. | |
| „ 12 | 4.38 p.m. | 50 09 N. | 4 01 W. | 54·1 | 12·3 | 19·52 | 35·26 | 28·34 | S. 15 E. | 5 | 8 | o. | Rough. | |
| „ 12 | 5.30 p.m. | | | Sea rising rapidly; put back to Plymouth. | | | | | | | | | | |
| „ 14 | 3.35 p.m. | | | Proceeded to sea. | | | | | | | | | | |
| „ 14 | 4.19 p.m. | 50 15 N. | 4 07 W. | 53·6 | 12·0 | 19·56 | 35·34 | 28·40 | N. 50 E. | 2 | 2 | c. 8 m. | Slight. | |
| „ 14 | 4.56 p.m. | 50 10 N. | 4 04 W. | 53·6 | 12·0 | 19·57 | 35·35 | 28·41 | N. 50 E. | 3 | 4 | c. 8. | Slight. | |
| „ 14 | 6.11 p.m. | 50 01 N. | 4 00 W. | 54·5 | 12·5 | 19·57 | 35·35 | 28·41 | N. 50 E. | — | — | — | — | |
| „ 14 | 7.33 p.m. | 49 51 N. | 3 55 W. | 54·5 | 12·5 | 19·55 | 35·32 | 28·38 | N. 50 E. | 1 | 1 | o. r. | Slight. | |
| „ 14 | 8.48 p.m. | 49 41 N. | 3 50 W. | 54·7 | 12·6 | 19·57 | 35·35 | 28·41 | N. 50 E. | 4 | 6 | o. | Moderate. | |
| „ 14 | 10.5 p.m. | 49 33 N. | 3 45 W. | 55·0 | 12·8 | 19·57 | 35·35 | 28·41 | N. 70 E. | 5 | 8 | o. | Rough. | |
| „ 14 | 11.23 p.m. | 49 23 N. | 3 40 W. | 55·0 | 12·8 | 19·57 | 35·35 | 28·41 | N. 70 E. | 5 | 8 | o. | Rough. | |
| „ 15 | 0.20 a.m. | 49 16 N. | 3 37 W. | 53·8 | 12·1 | 19·59 | 35·39 | 28·44 | N. 50 E. | 5 | 8 | c. 9 | Rough | Station 8. |
| „ 15 | 5.39 a.m. | 49 27 N. | 3 27 W. | 55·4 | 13·0 | 19·56 | 35·34 | 28·40 | N. 40 E. | 5 | 8 | o. | Rough. | |
| „ 15 | 4.20 p.m. | | | Sea too rough for work; put into Dartmouth. | | | | | | | | | | |
| „ 16 | 3.20 p.m. | | | Proceeded to sea. | | | | | | | | | | |
| „ 16 | 5.55 p.m. | 50 08 N. | 3 47 W. | 53·8 | 12·1 | 19·59 | 35·39 | 28·44 | N. 30 E. | 1 | 1 | b. | Smooth | Station 20. |
| „ 16 | 8.40 p.m. | 50 02 N. | 3 35 W. | 54·1 | 12·3 | 19·59 | 35·39 | 28·44 | N. 30 E. | 1 | 1 | b. | Smooth. | |
| „ 16 | 9.53 p.m. | 49 56 N. | 3 23 W. | 54·2 | 12·4 | 19·58 | 35·37 | 28·43 | N. 5 E. | 2 | 2 | b. | Slight | Station 19. |
| „ 17 | 0.19 a.m. | 49 47 N. | 3 15 W. | 54·5 | 12·5 | 19·57 | 35·35 | 28·41 | N. 30 E. | 1 | 1 | b. | Slight. | |
| „ 17 | 1.28 a.m. | 49 39 N. | 3 09 W. | 54·9 | 12·8 | 19·56 | 35·34 | 28·40 | N. 5 E. | 2 | 2 | c. 5 | Slight | Station 9. |
| „ 17 | 4.53 a.m. | 49 44 N. | 2 52 W. | 54·1 | 12·3 | 19·56 | 35·34 | 28·40 | N. 5 E. | 1 | 1 | b. | Slight. | |
| „ 17 | 8.30 a.m. | 49 49 N. | 2 33 W. | 54·7 | 12·6 | 19·57 | 35·35 | 28·41 | N. 30 E. | 2 | 2 | c. 8 | Smooth | Station 10. |
| „ 17 | 11.26 a.m. | 49 58 N. | 2 35 W. | 54·0 | 12·2 | 19·58 | 35·38 | 28·43 | N. 10 W. | 1 | 1 | — | Smooth. | |
| „ 17 | 0.35 p.m. | 50 05 N. | 2 43 W. | 54·1 | 12·3 | 19·60 | 35·41 | 28·46 | N. 15 W. | 1 | 1 | c. 7 | Smooth. | |
| „ 17 | 1.45 p.m. | 50 11 N. | 2 52 W. | 53·9 | 12·2 | 19·58 | 35·37 | 28·43 | Calm | | | — | Smooth | Station 17. |
| „ 17 | 3.50 p.m. | 50 16 N | 3 01 W. | 53·8 | 12·1 | 19·58 | 35·37 | 28·43 | Calm | | | c. 7 | Smooth. | |
| „ 17 | 4.45 p.m. | 50 23 N. | 3 08 W. | 53·2 | 11·8 | 19·58 | 35·37 | 28·43 | N. 70 E. | 1 | 1 | c. 5 | Smooth | Station 18. |
| „ 17 | 7.25 p.m. | 50 22 N. | 2 49 W. | 53·6 | 12·0 | 19·58 | 35·37 | 28·43 | — | — | — | c. 5 | Smooth. | |
| „ 17 | 9.5 p.m. | 50 23 N. | 2 28 W. | 52·1 | 11·2 | 19·58 | 35·37 | 28·43 | N. 60 E. | 4 | 6 | c. 9 r. | Slight | Station 16. |

## TABLE II—*continued.*

### NOVEMBER, 1905—S.S. *Huxley—continued.*

| Date. | Greenwich Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl. ‰ | S. ‰ | $\sigma_0$ | Wind. Direction (True). | Wind. Force. B. | Wind. Force. m/s. | Sky. | Sea. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ° ′ | ° ′ | | | | | | ° | | | | | |
| Nov. 17 | 11.23 p.m. | 50 16 N. | 2 20 W. | 52·5 | 11·4 | 19·59 | 35·39 | 28·44 | N. 70 E. | 4 | 6 | o. r. | Moderate | Saint Elmo's Fire on masts. |
| „ 18 | 0.25 a.m. | 50 10 N. | 2 12 W. | 53·2 | 11·8 | 19·56 | 35·34 | 28·40 | N. 60 E. | 5 | 8 | o. | Moderate. | |
| „ 18 | 1.50 a.m. | 50 05 N. | 1 58 W. | 53·7 | 12·0 | 19·55 | 35·33 | 28·39 | S. 60 E. | 4 | 6 | o. p. | Slight | Station 11. |
| „ 18 | 5.43 a.m. | 49 59 N. | 1 44 W. | 54·5 | 12·5 | 19·55 | 35·32 | 28·38 | S. 15 E. | — | — | o. | Moderate. | |
| „ 18 | 9.30 a.m. | 49 55 N. | 1 09 W. | 54·1 | 12·3 | 19·53 | 35·28 | 28·35 | S. 60 E. | 4 | 6 | o. | Slight | Station 12. |
| „ 18 | 11.30 a.m. | 50 01 N. | 1 11 W. | 54·3 | 12·4 | 19·53 | 35·28 | 28·35 | N. 85 E. | 4 | 6 | c. 3. | Moderate. | |
| „ 18 | 0.25 p.m. | 50 08 N. | 1 12 W. | 54·3 | 12·4 | 19·50 | 35·24 | 28·31 | N. 85 E. | 4 | 6 | c. 6 | Moderate. | |
| „ 18 | 1.10 p.m. | 50 14 N. | 1 13 W. | 53·4 | 11·9 | 19·53 | 35·29 | 28·36 | S. 60 E. | 4 | 6 | — | Moderate. | |
| „ 18 | 2 p.m. | 50 20 N. | 1 15 W. | 53·0 | 11·7 | 19·55 | 35·33 | 28·39 | S. 80 E. | 6 | 10·5 | o. | Rough | Station 1 . |
| „ 18 | 3.45 p.m. | 50 27 N. | 1 16 W. | 50·7 | 10·4 | 19·55 | 35·33 | 28·39 | — | 6 | 10·5 | o. | Rough. | |
| „ 18 | 4.55 p.m. | 50 33 N. | 1 17 W. | 49·8 | 9·9 | 19·43 | 35·11 | 28·21 | N. 50 E. | 7 | 13 | o. | Rough | Station 14. |
| „ 18 | Midnight. | 50 28 N. | 0 52 W. | 52·3 | 11·3 | 19·57 | 35·35 | 28·41 | N. 50 E. | 8 | 16 | o. | Very rough. | |
| „ 19 | Noon. | Anchored off Lymington. | | | | | | | | | | | | |
| „ 21 | 11.15 a.m. | Proceeded to sea. | | | | | | | | | | | | |
| „ 21 | 1 p.m. | 50 42⅔ N. | 0 59½ W. | 46·8 | 8·2 | 19·39 | 35·04 | 28·15 | — | — | — | — | Smooth | Off Nab Lightship. |
| „ 21 | 2.2 p.m. | 50 38 N. | 0 49 W. | 49·1 | 9·5 | 19·53 | 35·28 | 28·35 | N. 70 E. | 1 | 1 | c. 2 | Slight. | |
| „ 21 | 3.4 p.m. | 50 32 N. | 0 39 W. | 51·6 | 10·9 | 19·56 | 35·34 | 28·40 | N. 85 E. | 1 | 1 | c. 5 | Slight. | |
| „ 21 | 4.5 p.m. | 50 26 N. | 0 29 W. | 52·2 | 11·2 | 19·56 | 35·34 | 28·40 | S. 15 E. | 2 | 2 | o. | Smooth. | |
| „ 21 | 5 p.m. | 50 21 N. | 0 19 W. | 52·9 | 11·6 | — | — | — | S. 30 W. | 2 | 2 | o. | Smooth | Station 21. |
| „ 21 | 7.20 p.m. | 50 11 N. | 0 19 W. | 53·1 | 11·7 | 19·45 | 35·14 | 28·24 | S. 30 W. | 2 | 2 | o. | Slight. | |
| „ 21 | 8.54 p.m. | 50 00 N. | 0 21 W. | 53·3 | 11·8 | 19·45 | 35·14 | 28·24 | S. 5 E. | 2 | 2 | o. | Smooth | Station 24. |
| „ 21 | 11.8 p.m. | 50 09 N. | 0 15 W. | 52·7 | 11·5 | 19·48 | 35·19 | 28·28 | S. 5 W. | 3 | 4 | o. | Slight. | |
| „ 22 | 0.27 a.m. | 50 17 N. | 0 07 W. | 52·7 | 11·5 | 19·52 | 35·26 | 28·34 | S. 30 W. | 2 | 2 | o. | Slight. | |
| „ 22 | 1.41 a.m. | 50 25 N. | 0 01 E. | 52·2 | 11·2 | 19·54 | 35·30 | 28·37 | S. 30 W. | 1 | 1 | c. 9 | Slight. | |
| „ 22 | 2.56 a.m. | 50 33 N. | 0 08 E. | 51·8 | 11·0 | 19·52 | 35·26 | 28·34 | S. 60 W. | 1 | 1 | b. | Smooth. | |
| „ 22 | 4.14 a.m. | 50 41 N. | 0 16 E. | 48·4 | 9·1 | 19·45 | 35·14 | 28·24 | Calm | | | — | Smooth. | |
| „ 22 | 5.17 a.m | 50 37 N. | 0 25 E. | — | — | 19·49 | 35·21 | 28·30 | Calm | | | — | Smooth. | |
| „ 22 | 6.30 a.m. | 50 33 N. | 0 36 E. | 51·6 | 10·9 | 19·53 | 35·28 | 28·35 | S. 5 E. | 1 | 1 | o. | Smooth | Station 22. |
| „ 22 | 8.40 a.m. | 50 28 N. | 0 46 E. | 51·4 | 10·8 | 19·52 | 35·26 | 28·34 | — | — | — | — | Slight. | |
| „ 22 | 9.50 a.m. | 50 24 N. | 0 55 E. | 51·3 | 10·7 | 19·47 | 35·17 | 28·27 | S. 15 E. | 1 | 1 | c. 1 | Smooth. | |
| „ 22 | 11.0 a.m. | 50 19 N. | 1 04 E. | 50·5 | 10·3 | 19·47 | 35·17 | 28·27 | S. 15 E. | 4 | 6 | c. 1 | Moderate. | |
| „ 22 | 0.12 p.m. | 50 14 N. | 1 15 E. | 49·5 | 9·7 | 19·40 | 35·05 | 28·16 | S. 5 E. | 4 | 6 | c. 2 | Moderate. | |
| „ 22 | 1.45 p.m. | 50 22 N. | 1 10 E. | 49·8 | 9·9 | 19·42 | 35·08 | 28·19 | S. 40 W. | 4 | 6 | c. 9 | Moderate. | |
| „ 22 | 3.22 p.m. | 50 31 N. | 1 06 E. | 51·3 | 10·7 | 19·44 | 35·12 | 28·22 | S. 30 W. | 4 | 6 | — | Rough. | |
| „ 22 | 4.40 p.m. | 50 41 N. | 1 02 E. | 51·3 | 10·7 | 19·44 | 35·13 | 28·23 | S. 40 W. | 5 | 8 | — | Rough. | |
| „ 22 | 5.54 p.m. | 50 50 N. | 1 09 E. | 51·6 | 10·9 | 19·52 | 35·26 | 28·34 | S. 20 W. | 4 | 6 | — | Moderate. | |
| „ 22 | 6.55 p.m. | 50 59 N. | 1 16 E. | 49·5 | 9·7 | 19·42 | 35·08 | 28·19 | S. 30 W. | — | — | — | Moderate. | |
| „ 22 | 7.52 p.m. | 51 05 N. | 1 29 E. | 49·1 | 9·5 | 19·46 | 35·16 | 28·25 | S. 30 W. | — | — | c. 5 | Moderate. | |

Observations on stations were made by D. J. Matthews; surface observations between stations by D. J. Matthews, L. R. Crawshay, M.A., and G. E. Bullen.

# TABLE III.

## Surface Observations made on Cross-channel Steamers, &c.

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl.‰ | S.‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | JANUARY, 1904. | | | | | | |
| | | NEWHAVEN-CAEN. | | | | | | |
| 16 | 32.5 p.m. | 49° 48′ N. | 0° 11′ W. | 47 | 8·3 | 19·45 | 35·14 | 28·24 |
| 16 | 4.10 p.m. | 50 00 N. | 0 12 W. | 47½ | 8·6 | 19·54 | 35·30 | 28·37 |
| 16 | 6.05 p.m. | 50 12 N. | 0 11 W. | 48 | 8·9 | 19·61 | 35·43 | 28·47 |
| 16 | 7.20 p.m. | 50 24 N. | 0 11 W. | 48 | 8·9 | 19·73 | 35·64 | 28·64 |
| 16 | 9.05 p.m. | 50 36 N. | 0 00 W. | 45½ | 7·5 | 19·55 | 35·32 | 28·38 |
| 31 | 0.30 a.m. | 49 46 N. | 0 07 W. | 45 | 7·2 | 19·43 | 35·10 | 28·21 |
| 31 | 1.55 a.m. | 49 58 N. | 0 07 W. | 46 | 7·8 | 19·53 | 35·28 | 28·35 |
| 31 | 3.30 a.m. | 50 10 N. | 0 07 W. | 46 | 7·8 | 19·59 | 35·39 | 28·44 |
| 31 | 5 a.m. | 50 22 N. | 0 07 W. | 47 | 8·3 | 19·57 | 35·35 | 28·41 |
| | | MEDITERRANEAN-CARDIFF.* | | | | | | |
| 2 | 7 p.m. | 38 00 N. | 9 30 W. | 58 | 14·4 | 19·96 | 36·06 | 28·98 |
| 3 | 10.30 a.m. | 40 00 N. | 9 45 W. | 58 | 14·4 | 19·91 | 35·97 | 28·91 |
| 3 | 11.30 p.m. | 42 00 N. | 9 00 W. | 56¼ | 13·4 | 19·84 | 35·84 | 28·80 |
| 4 | 3.0 p.m. | 44 00 N. | 9 00 W. | 55 | 12·8 | 19·77 | 35·71 | 28·70 |
| 5 | 7.30 p.m. | 46 00 N. | 7 50 W. | 53 | 11·7 | 19·74 | 35·66 | 28·66 |
| 6 | 10.30 a.m. | 48 00 N. | 7 00 W. | 52½ | 11·4 | 19·71 | 35·61 | 28·62 |
| | | FEBRUARY, 1904. | | | | | | |
| | | NEWHAVEN-CAEN. | | | | | | |
| 11 | 8.55 p.m. | 50 35 N. | 0 01 E. | 45 | 7·2 | 19·56 | 35·34 | 28·40 |
| 11 | 10.25 p.m. | 50 23 N. | 0 00 | 46 | 7·8 | 19·55 | 35·32 | 28·38 |
| 11 | 11.50 p.m. | 50 11 N. | 0 02 W. | 46 | 7·8 | 19·57 | 35·35 | 28·41 |
| 12 | 1.05 a.m. | 49 59 N. | 0 04 W. | 44 | 6·7 | 19·40 | 35·05 | 28·16 |
| 12 | 2.35 a.m. | 49 47 N. | 0 08 W. | 44 | 6·7 | 19·31 | 34·88 | 28·03 |
| 25 | 5.15 a.m. | 50 35 N. | 0 02 E. | 45 | 7·2 | 19·47 | 35·17 | 28·27 |
| 25 | 6.30 a.m. | 50 23 N. | 0 00 | 46 | 7·8 | 19·62 | 35·44 | 28·48 |
| 25 | 7.45 a.m. | 50 11 N. | 0 03 W. | 46 | 7·8 | 19·63 | 35·46 | 28·50 |
| 25 | 9.10 a.m. | 49 59 N. | 0 06 W. | 44 | 6·7 | 18·68 | 33·75 | 27·12 |
| 25 | 10.30 a.m. | 49 47 N. | 0 08 W. | 42 | 5·6 | 18·63 | 33·66 | 27·04 |
| | | S.S. *Helga*—IRISH COAST. | | | | | | |
| 3 | — | 50 19 N. | 10 17 W. | — | — | 19·64 | 35·48 | 28·51 |
| 3 | — | 50 27 N. | 10 11 W. | — | — | 19·62 | 35·44 | 28·48 |
| 3 | — | 50 46 N. | 10 00 W. | — | — | 19·52 | 35·26 | 28·34 |
| 3 | — | 51 14 N. | 9 42 W. | — | — | 19·46 | 35·16 | 28·25 |
| | | PLYMOUTH-CORK. | | | | | | |
| 27 | 4 p.m. | 50 15 N. | 6 01 W. | 47¼ | 8·4 | 19·54 | 35·30 | 28·37 |
| 27 | 5.55 p.m. | 50 30 N. | 6 23 W. | 47¼ | 8·4 | 19·53 | 35·28 | 28·35 |
| 27 | 7.40 p.m. | 50 44 N. | 6 44 W. | 47 | 8·3 | 19·52 | 35·26 | 28·34 |
| 27 | 9.35 p.m. | 50 59 N. | 7 06 W. | 47 | 8·3 | 19·51 | 35·25 | 28·32 |
| 27 | 11.24 p.m. | 51 13 N. | 7 28 W. | 47 | 8·3 | | Lost. | |
| 28 | 1.15 a.m. | 51 28 N. | 7 48 W. | 46½ | 8·1 | 19·45 | 35·14 | 28·24 |
| | | SOUTHAMPTON-NEW YORK. | | | | | | |
| 7 | 3.31 a.m. | 49 46 N. | 5 16 W. | 49·9 | 9·9 | 19·68 | 35·55 | 28·57 |
| 7 | 5.15 a.m. | 49 47 N. | 6 07 W. | 49·3 | 9·6 | 19·55 | 35·32 | 28·38 |
| 7 | 6.25 a.m. | 49 44 N. | 6 38 W. | 48·3 | 9·1 | 19·58 | 35·37 | 28·43 |
| 7 | 8.49 a.m. | 49 44 N. | 7 29 W. | 49·8 | 9·9 | 19·65 | 35·50 | 28·53 |
| 7 | 10.55 a.m. | 49 45 N. | 8 41 W. | 49·8 | 9·9 | 19·73 | 35·64 | 28·64 |
| 7 | 1.05 p.m. | 49 46 N. | 9 45 W. | 50·1 | 10·1 | 19·61 | 35·43 | 28·47 |
| 15 | 5.30 a.m. | 49 53½ N. | 5 12 W. | 47½ | 8·6 | 19·52 | 35·26 | 28·34 |
| 15 | 8.45 a.m. | 49 50 N. | 6 00 W. | 48 | 8·9 | 19·57 | 35·35 | 28·41 |
| | | FEBRUARY, 1904—*continued.* | | | | | | |
| | | SOUTHAMPTON-NEW YORK—*continued.* | | | | | | |
| 15 | Noon | 49° 49′ N. | 6° 42′ W. | 48½ | 9·2 | 19·58 | 35·37 | 23·43 |
| 15 | 4 p.m. | 49 50 N. | 7 31 W. | 49 | 9·4 | 19·58 | 35·37 | 28·43 |
| 15 | 8 p.m. | 49 50 N. | 8 20 W. | 48¼ | 9·0 | 19·59 | 35·39 | 28·44 |
| 16 | 1.30 a.m. | 49 47 N. | 9 26 W. | 48¼ | 9·0 | 19·64 | 35·48 | 28·51 |
| | | SOUTHAMPTON-WEST INDIES. | | | | | | |
| 4 | 6.30 a.m. | 48 59 N. | 5 20 W. | 50½ | 10·1 | 19·55 | 35·32 | 28·38 |
| 4 | 9.30 a.m. | 48 37 N. | 6 10 W. | 51½ | 10·8 | 19·71 | 35·61 | 28·62 |
| 4 | 1.10 p.m. | 48 05 N. | 7 05 W. | 51½ | 10·8 | 19·71 | 35·61 | 28·62 |
| 4 | 4.10 p.m. | 47 40 N. | 7 40 W. | 51½ | 10·8 | 19·72 | 35·62 | 28·63 |
| 4 | 9.45 p.m. | 47 15 N. | 8 30 W. | 51½ | 10·8 | 19·70 | 35·59 | 28·60 |
| 5 | 2.30 a.m. | 46 36 N. | 10 15 W. | 51½ | 10·8 | 19·74 | 35·66 | 28·66 |
| | | MARCH, 1904. | | | | | | |
| | | NEWHAVEN-CAEN. | | | | | | |
| 10 | 5.20 a.m. | 50 35 N. | 0 02 E. | 44 | 6·7 | 19·33 | 34·92 | 28·06 |
| 10 | 6.40 a.m. | 50 23 N. | 0 01 E. | 45½ | 7·3 | 19·58 | 35·37 | 28·43 |
| 10 | 8 a.m. | 50 11 N. | 0 03 W. | 46 | 7·8 | 19·61 | 35·43 | 28·47 |
| 10 | 9.36 a.m. | 49 59 N. | 0 03 W. | 45½ | 7·3 | 19·42 | 35·08 | 28·19 |
| 10 | 11 a.m. | 49 47 N. | 0 06 W. | 44½ | 6·9 | 19·21 | 34·70 | 27·89 |
| 24 | 3.30 a.m. | 50 34 N. | 0 01 E. | 44 | 6·7 | 19·52 | 35·26 | 28·34 |
| 24 | 4.45 a.m. | 50 22 N. | 0 00. | 45 | 7·2 | 19·59 | 35·39 | 28·44 |
| 24 | 6 a.m. | 50 10 N. | 0 01 W. | 46 | 7·8 | 19·60 | 35·41 | 28·46 |
| 24 | 7.25 a.m. | 49 58 N. | 0 03 W. | 46 | 7·8 | 19·58 | 35·37 | 28·43 |
| 24 | 8.45 a.m. | 49 46 N. | 0 05 W. | 45 | 7·2 | 19·36 | 34·97 | 28·11 |
| | | SOUTHAMPTON-NEW YORK. | | | | | | |
| 5 | 8.20 a.m. | 49 37 N. | 10 00 W. | 45 | 7·2 | 19·64 | 35·49 | 28·52 |
| 5 | 10.20 a.m. | 49 39 N. | 9 00 W. | 43 | 6·1 | 19·65 | 35·50 | 28·53 |
| 5 | 0.20 p.m. | 49 44 N. | 8 00 W. | 45 | 7·2 | 19·60 | 35·41 | 28·46 |
| 5 | 2.40 p.m. | 49 47 N. | 7 00 W. | 44 | 6·7 | 19·61 | 35·43 | 28·47 |
| 5 | 5.15 p.m. | 49 49 N. | 6 00 W. | 43 | 6·1 | 19·60 | 35·41 | 28·46 |
| | | BRISTOL-WEST INDIES. | | | | | | |
| 1 | 1 a.m. | 50 47 N. | 10 12 W. | 47½ | 8·4 | 19·55 | 35·32 | 28·38 |
| 1 | 4 a.m. | 50 54 N. | 9 11 W. | 46 | 7·8 | 19·51 | 35·25 | 28·32 |
| 1 | 7 a.m. | 50 59 N. | 7 55 W. | 46 | 7·8 | 19·52 | 35·26 | 28·34 |
| 1 | 10.38 a.m. | 51 02 N. | 7 00 W. | 45 | 7·2 | 19·50 | 35·23 | 28·31 |
| 1 | 0.30 p.m. | 51 02 N. | 6 25 W. | 45½ | 7·5 | 19·46 | 35·16 | 28·25 |
| 1 | 4.24 p.m. | 51 06 N. | 4 55 W. | 45 | 7·2 | 19·51 | 35·25 | 28·32 |
| | | SOUTHAMPTON-CAPE TOWN. | | | | | | |
| 25 | 8 p.m. | 43 14 N. | 9 29 W. | 49½ | 9·7 | 19·70 | 35·59 | 28·60 |
| 26 | 8 a.m. | 45 24 N. | 7 50 W. | 48½ | 9·2 | 20·03 | 36·18 | 29·08 |
| 26 | 8 p.m. | 47 40 N. | 6 03 W. | 47 | 8·3 | 20·11 | 36·33 | 29·20 |
| 27 | 8 a.m. | 49 58 N. | 4 01 W. | 45 | 7·2 | 20·10 | 36·31 | 29·18 |
| | | APRIL, 1904. | | | | | | |
| | | NEWHAVEN-CAEN. | | | | | | |
| 11 | 9.30 p.m. | 50 35 N. | 0 01 E. | 46 | 7·8 | 19·33 | 34·92 | 28·06 |
| 11 | 10.45 p.m. | 50 23 N. | 0 01 W. | 47 | 8·3 | 19·55 | 35·32 | 28·3 |
| 11 | Midnight | 50 11 N. | 0 02 W. | 46¾ | 2 | | Lost. | |
| 12 | 1.25 a.m. | 49 59 N. | 0 03 W. | 47 | 8·3 | 19·37 | 35·00 | 28·23 |
| 12 | 2.45 a.m. | 49 47 N. | 0 05 W. | 47 | 8·3 | 19·45 | 35·14 | 28·24 |
| 21 | 2.30 a.m. | 50 35 N. | 0 02 E. | 46 | 7·8 | 19·28 | 34·83 | 27·99 |

* Samples and temperatures taken at a seacock 17 feet (5 metres) below water line.

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | APRIL, 1904—*continued.* | | | | | |
| | | | NEWHAVEN-CAEN—*continued.* | | | | | |
| 21 | 3.45 a.m. | 50 23 N. | 0 01 W. | 47 | 8·3 | 19·45 | 35·14 | 28·24 |
| 21 | 5 a.m. | 50 11 N. | 0 03 W. | 48 | 8·9 | 19·50 | 35·23 | 28·31 |
| 21 | 6.25 a.m. | 49 59 N. | 0 06 W. | 48 | 8·9 | 19·52 | 35·26 | 28·34 |
| 21 | 7 a.m. | 49 47 N. | 0 08 W. | 48 | 8·9 | 19·46 | 35·16 | 28·25 |
| | | | MAY, 1904. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 5 | 1.50 a.m. | 50 35 N. | 0 00 | 47 | 8·3 | 19·33 | 34·92 | 28·06 |
| 5 | 3.30 a.m. | 50 23 N. | 0 03 W. | 48 | 8·9 | 19·50 | 35·23 | 28·31 |
| 5 | 5.05 a.m. | 50 11 N. | 0 07 W. | 49 | 9·4 | 19·42 | 35·08 | 28·19 |
| 5 | 6.45 a.m. | 49 59 N. | 0 10 W. | 49 | 9·4 | 19·36 | 34·97 | 28·11 |
| 5 | 8.30 a.m. | 49 47 N. | 0 10 W. | 49 | 9·4 | 19·07 | 34·45 | 27·68 |
| 18 | 11.50 p.m. | 50 35 N. | 0 00 | 49 | 9·4 | 19·33 | 34·92 | 28·06 |
| 19 | 1.10 a.m. | 50 23 N. | 0 03 W. | 49 | 9·4 | 19·33 | 34·93 | 28·07 |
| 19 | 2.30 a.m. | 50 11 N. | 0 07 W. | 50 | 10·0 | 19·48 | 35·20 | 28·29 |
| 19 | 3.50 a.m. | 49 59 N. | 0 10 W. | 50 | 10·0 | 18·84 | 34·04 | 27·35 |
| 19 | 5.15 a.m. | 49 47 N. | 0 10 W. | 51 | 10·6 | 18·82 | 34·01 | 27·33 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 5 | 0.15 a.m. | 48 53 N. | 2 25 W. | 50½ | 10·3 | 19·39 | 35·03 | 28·15 |
| 5 | 4.45 p.m. | 49 19 N. | 2 25 W. | 51¼ | 10·7 | 19·44 | 35·12 | 28·22 |
| 5 | 11.05 p.m. | 49 31 N. | 2 30 W. | 49½ | 9·7 | 19·48 | 35·19 | 28·28 |
| 6 | 1.30 a.m. | 49 43 N. | 2 55 W. | 49 | 9·4 | 19·49 | 35·21 | 28·30 |
| 6 | 3.20 a.m. | 49 55 N. | 3 22 W. | 47 | 8·3 | | Lost. | |
| 6 | 6.20 a.m. | 50 08 N. | 3 49 W. | 48½ | 9·2 | 19·53 | 35·28 | 28·35 |
| 18 | 9 p.m. | 48 53 N. | 2 25 W. | 53 | 11·7 | 19·41 | 35·07 | 28·18 |
| 19 | 7.15 p.m. | 49 19 N. | 2 25 W. | 51¼ | 10·7 | 19·49 | 35·21 | 28·30 |
| 19 | 11 p.m. | 49 31 N. | 2 30 W. | 51 | 10·6 | 19·46 | 35·16 | 28·25 |
| 20 | 1.12 a.m. | 49 43 N. | 2 55 W. | 51 | 10·6 | 19·51 | 35·25 | 28·32 |
| 20 | 3 a.m. | 49 55 N. | 3 22 W. | 51 | 10·6 | 19·61 | 35·43 | 28·47 |
| 20 | 4.40 a.m. | 50 08 N. | 3 49 W. | 51 | 10·6 | 19·61 | 35·43 | 28·47 |
| | | | PLYMOUTH-CORK. | | | | | |
| 7 | 4.30 p.m. | 50 18 N. | 5 58 W. | 49 | 9·4 | 19·49 | 35·21 | 28·30 |
| 7 | 6.30 p.m. | 50 33 N. | 6 22 W. | 48 | 8·9 | 19·35 | 34·96 | 28·09 |
| 7 | 8.30 p.m. | 50 47 N. | 6 44 W. | 47½ | 8·6 | 19·36 | 34·97 | 28·11 |
| 7 | 10.30 p.m. | 51 01 N. | 7 05 W. | 48 | 8·9 | 19·41 | 35·07 | 28·18 |
| 8 | 0.30 a.m. | 51 15 N. | 7 27 W. | 47¾ | 8·7 | 19·40 | 35·05 | 28·16 |
| 8 | 2.30 a.m. | 51 29 N. | 7 48 W. | 48¼ | 9·0 | 19·40 | 35·05 | 28·16 |
| | | | S.S. *Helga*-OFF IRISH COAST. | | | | | |
| 3 | 0.20 p.m. | 50 19 N. | 10 17 W. | 50·9 | 10·5 | 19·60 | 35·41 | 28·46 |
| 3 | 7.30 p.m. | 50 27 N. | 10 52 W. | 51·3 | 10·7 | 19·63 | 35·46 | 28·50 |
| 3 | 10.0 p.m. | 50 42 N. | 10 29 W. | 50 | 10·0 | 19·51 | 35·25 | 28·32 |
| 4 | 0.30 a.m. | 50 56 N. | 9 54 W. | 50 | 10·0 | 19·45 | 35·14 | 28·24 |
| 4 | 4.0 a.m. | 51 14 N. | 9 42 W. | 49·5 | 9·7 | 19·37 | 34·99 | 28·12 |
| | | | LONDON-PHILADELPHIA. | | | | | |
| 15 | 0.22 a.m. | 49 52 N. | 5 27 W. | 56 | 13·3 | 19·60 | 35·41 | 28·46 |
| 16 | 8.30 a.m. | 49 53 N. | 8 00 W. | 56 | 13·3 | 19·53 | 35·28 | 28·35 |
| 16 | 4.40 p.m. | 49 53 N. | 10 03 W. | 52 | 11·1 | 19·60 | 35·41 | 28·46 |
| 17 | 0.30 a.m. | 49 49 N. | 12 00 W. | 51 | 10·6 | 19·70 | 35·59 | 28·60 |
| 17 | 9.0 a.m. | 49 42 N. | 14 18 W. | 51 | 10·6 | 19·72 | 35·62 | 28·63 |
| 17 | 0.45 p.m | 49 40 N. | 15 30 W. | 51 | 10·6 | 19·67 | 35·53 | 28·56 |
| | | | SOUTHAMPTON-NEW YORK. | | | | | |
| 20 | 9.23 p.m. | 49 07 N. | 13 43 W. | 53 | 11·7 | 19·65 | 35·50 | 28·53 |
| 21 | 0.30 a.m. | 49 15 N. | 12 16 W. | 54 | 12·2 | 19·67 | 35·53 | 28·56 |

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | MAY, 1904—*continued.* | | | | | |
| | | | SOUTHAMPTON—NEW YORK—*continued.* | | | | | |
| 21 | 4.45 a.m. | 49 18 N. | 10 21 W. | 53½ | 11·9 | 19·55 | 35·32 | 28·38 |
| 21 | 7.50 a.m. | 49 40 N. | 8 55 W. | 52 | 11·1 | 19·55 | 35·32 | 28·38 |
| 21 | Noon | 49 52 N. | 7 00 W. | 55 | 12·8 | 19·54 | 35·30 | 28·37 |
| 21 | 2.37 p.m. | 49 52 N. | 5 50 W. | 52 | 11·1 | 19·57 | 35·35 | 28·41 |
| 28 | 1.40 a.m. | 49 41 N. | 10 00 W. | 56 | 13·3 | 19·49 | 35·21 | 28·30 |
| 28 | 3.50 a.m. | 49 44 N. | 9 00 W. | 55 | 12·8 | 19·50 | 35·23 | 28·31 |
| 28 | 6.0 a.m. | 49 45 N. | 8 00 W. | 54 | 12·2 | 19·50 | 35·23 | 28·31 |
| 28 | 8.0 a.m. | 49 44 N. | 7 00 W. | 54 | 12·2 | 19·48 | 35·19 | 28·28 |
| 28 | 10.05 a.m. | 49 50 N. | 6 00 W. | 53 | 11·7 | 19·47 | 35·17 | 28·27 |
| 28 | 0.40 p.m. | 49 47 N. | 5 00 W. | 53 | 11·7 | 19·51 | 35·25 | 28·32 |
| | | | LONDON-NEW YORK. | | | | | |
| 22 | 3.05 p.m. | 40 12 N. | 65 01 W. | 67 | 19·4 | 19·71 | 35·61 | 28·62 |
| 23 | 3.10 p.m. | 40 12 N. | 57 04 W. | 66 | 18·9 | 19·95 | 36·04 | 28·96 |
| 24 | 3.10 p.m. | 40 37 N. | 48 06 W. | 65 | 18·3 | 20·13 | 36·36 | 29·23 |
| 25 | 3.08 p.m. | 43 18 N. | 40 57 W. | 62 | 16·7 | 19·96 | 36·06 | 28·98 |
| 26 | 3.05 p.m. | 45 56 N. | 33 03 W. | 57 | 13·9 | 19·81 | 35·79 | 28·76 |
| 27 | 3.04 p.m. | 48 00 N. | 24 14 W. | 55 | 12·8 | 19·70 | 35·59 | 28·60 |
| 22 | — | 49 00 N. | 14 16 W. | 53¼ | 11·8 | 19·69 | 35·57 | 28·59 |
| 22 | — | 49 13 N. | 12 24 W. | 53⅜ | 12·1 | 19·67 | 35·53 | 28·56 |
| 22 | — | 49 21 N. | 10 18 W. | 52 | 11·1 | 19·62 | 35·44 | 28·48 |
| 23 | — | 49 30 N. | 7 56 W. | 52½ | 11·4 | 19·57 | 35·35 | 28·41 |
| 23 | — | 49 35 N. | 7 02 W. | 51⅝ | 10·9 | 19·55 | 35·32 | 28·38 |
| 23 | — | 49 52 N. | 5 41 W. | 51⅝ | 10·9 | 19·60 | 35·41 | 28·46 |
| | | | LONDON-BOSTON. | | | | | |
| 23 | 6.30 p.m. | 49 44 N. | 5 55 W. | 53 | 11·7 | 19·54 | 35·30 | 28·37 |
| 23 | Midnight | 49 43 N. | 7 12 W. | 53 | 11·7 | 19·48 | 35·19 | 28·28 |
| 24 | 6.0 a.m. | 49 40 N. | 8 50 W. | 53 | 11·7 | 19·53 | 35·28 | 28·35 |
| 24 | Noon | 49 38 N. | 10 25 W. | 53½ | 11·9 | 19·58 | 35·37 | 28·43 |
| 24 | 6.10 p.m | 49 35 N. | 11 52 W. | 54½ | 12·5 | 19·66 | 35·52 | 28·54 |
| 25 | 0.10 a.m. | 49 32 N. | 13 26 W. | 55 | 12·8 | 19·54 | 35·30 | 28·37 |
| | | | BRISTOL-WEST INDIES. | | | | | |
| 7 | 9.30 p.m. | 51 03 N. | 5 01 W. | 48 | 8·9 | 19·45 | 35·14 | 28·24 |
| 8 | 3.0 a.m. | 50 40 N. | 6 43 W. | 48 | 8·9 | 19·44 | 35·12 | 28·22 |
| 8 | 8.30 a.m. | 50 11 N. | 8 45 W. | 50 | 10·0 | 19·53 | 35·28 | 28·35 |
| 8 | 3.45 p.m. | 49 37 N. | 10 57 W. | 50 | 10·0 | 19·59 | 35·57 | 28·59 |
| 8 | 11.55 p.m. | 48 50 N. | 13 40 W. | 51 | 10·6 | 19·76 | 35·70 | 28·69 |
| 9 | 4.0 a.m. | 48 27 N. | 15 00 W. | 51 | 10·6 | 19·68 | 35·55 | 28·57 |
| | | | SOUTHAMPTON-MADEIRA. | | | | | |
| 1 | 8.0 a.m. | 48 28 N. | 5 15 W. | 50 | 10·0 | 19·57 | 35·35 | 28·41 |
| 1 | Noon | 47 35 N. | 5 56 W. | 50·5 | 10·3 | 19·76 | 35·70 | 28·69 |
| 1 | 4.0 p.m. | 46 36 N. | 6 41 W. | 53 | 11·7 | 19·75 | 35·68 | 28·67 |
| 1 | 8.0 p.m. | 45 44 N. | 7 03 W. | 54 | 12·2 | 19·73 | 35·64 | 28·64 |
| 2 | 4.0 a.m. | 43 57 N. | 9 00 W. | 54 | 12·2 | 19·67 | 35·53 | 28·56 |
| 2 | Noon | 42 04 N. | 10 12 W. | 56 | 13·3 | 19·81 | 35·79 | 28·76 |
| | | | SOUTHAMPTON-LISBON. | | | | | |
| 7 | Noon | 48 10 N. | 5 30 W. | 52 | 11·1 | 19·63 | 35·46 | 28·50 |
| 7 | 10.0 p.m. | 46 8 N. | 6 48 W. | 52 | 11·1 | 19·60 | 35·41 | 28·46 |
| 8 | 8.0 a.m. | 43 55 N. | 8 40 W. | 56 | 13·3 | 19·58 | 35·37 | 28·43 |
| 8 | 1.0 p.m. | 42 50 N. | 9 25 W. | 56 | 13·3 | 19·67 | 35·53 | 28·56 |
| 8 | 10.0 p.m. | 41 40 N. | 9 00 W. | 58 | 14·4 | 19·66 | 35·52 | 28·54 |
| 9 | 5.0 a.m. | 40 00 N. | 9 40 W. | 57 | 13·9 | 19·69 | 35·57 | 28·59 |

TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | JUNE, 1904. | | | | | |
| | | | NEWHAVEN--CAEN. | | | | | |
| 15 | midnight | 50 35 N | 0 01 E. | 52 | 11·1 | 19·33 | 34·92 | 28·06 |
| 16 | 1.15 a.m. | 50 23 N. | 0 02 W. | 53 | 11·7 | 19·46 | 35·16 | 28·25 |
| 16 | 2.25 a.m. | 50 11 N. | 0 05 W. | 53 | 11·7 | 19·40 | 35·05 | 28·16 |
| 16 | 3.45 a.m. | 49 59 N. | 0 08 W. | 54 | 12·2 | 19·38 | 35·01 | 28·14 |
| 16 | 5.10 a.m. | 49 47 N. | 0 11 W. | 54 | 12·2 | 19·34 | 34·94 | 28·08 |
| 30 | 0.42 a.m. | 50 35 N. | 0 02 E. | 57 | 13·9 | 19·21 | 34·70 | 27·89 |
| 30 | 1.25 a.m. | 50 23 N. | 0 01 W. | 59 | 15·0 | 19·38 | 35·01 | 28·14 |
| 30 | 2.45 a.m. | 50 11 N. | 0 03 W. | 59 | 15·0 | 19·39 | 35·03 | 28·15 |
| 30 | 4 a.m. | 49 59 N. | 0 06 W. | 55½ | 13·1 | 19·33 | 34·92 | 28·06 |
| 30 | 5.15 a.m. | 49 47 N. | 0 08 W. | 57 | 13·9 | 19·25 | 34·78 | 27·95 |
| 30 | 6.25 a.m. | 49 35 N. | 0 10 W. | 61 | 16·1 | 17·92 | 32·38 | 26·01 |
| | | | SOUTHAMPTON—HAVRE. | | | | | |
| 30 | 0.42 a.m. | Calshot lightship | | 57 | 13·9 | 18·71 | 33·80 | 27·16 |
| 30 | 1.25 a.m. | Nab lightship | | 59 | 15·0 | 19·18 | 34·65 | 27·84 |
| 30 | 2.45 a.m. | 50 21 N. | 0 42 W. | 59 | 15·0 | 19·40 | 35·05 | 28·16 |
| 30 | 4 a.m. | 50 02 N. | 0 26 W. | 55½ | 13·1 | 19·34 | 34·94 | 28·08 |
| 30 | 5.15 a.m. | 49 42 N. | 0 10 W. | 57 | 13·9 | 19·21 | 34·70 | 27·89 |
| 30 | 6.25 a.m. | 49 33 N. | 0 01 E. | 61 | 16·1 | 17·33 | 31·31 | 25·16 |
| | | | SOUTHAMPTON—ST. MALO. | | | | | |
| 29 | 7.10 p.m. | Calshot light-vessel | | 59½ | 15·3 | 18·67 | 33·73 | 27·10 |
| 29 | 8.34 p.m. | Off the Needles | | 60 | 15·6 | 18·95 | 34·23 | 27·51 |
| 29 | 10.50 p.m. | 50 11 N. | 0 44 W. | 55 | 12·8 | 19·43 | 35·10 | 28·21 |
| 30 | 1.07 a.m. | 49 44 N. | 2 01 W. | 57½ | 14·2 | 19·29 | 34·85 | 28·00 |
| 30 | 3.07 a.m. | 49 15 N. | 2 18 W. | 57½ | 14·2 | 19·39 | 35·03 | 28·15 |
| 30 | 4.32 a.m. | S.W. Minquiers in line. | | 57½ | 14·2 | 19·39 | 35·03 | 28·15 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 1 | 8 p.m. | 48 53 N. | 2 25 W. | 55 | 12·8 | 19·54 | 35·30 | 28·37 |
| 2 | 8.10 p.m. | 49 19 N. | 2 25 W. | 53 | 11·7 | 19·55 | 35·32 | 28·38 |
| 3 | 0.30 a.m. | 49 31 N. | 2 30 W. | 52¾ | 11·5 | 19·48 | 35·19 | 28·28 |
| 3 | 2.30 a.m. | 49 43 N. | 2 55 W. | 54 | 12·2 | 19·43 | 35·10 | 28·21 |
| 3 | 4.30 a.m. | 49 53 N. | 3 22 W. | 52 | 11·1 | 19·44 | 35·12 | 28·22 |
| 3 | 6.55 a.m. | 50 08 N. | 3 49 W. | 53½ | 11·9 | 19·34 | 34·94 | 28·08 |
| 15 | 8 p.m. | 48 53 N. | 2 23 W. | 55 | 12·8 | 19·42 | 35·08 | 28·19 |
| 16 | 8.30 p.m. | 49 19 N. | 2 35 W. | 54 | 12·2 | 19·43 | 35·10 | 28·21 |
| 16 | Midnight. | 49 31 N. | 2 30 W. | 54¼ | 12·3 | 19·42 | 35·08 | 28·19 |
| 17 | 2 a.m. | 49 43 N. | 2 55 W. | 54 | 12·2 | 19·44 | 35·12 | 28·22 |
| 17 | 4.25 a.m. | 49 55 N. | 3 22 W. | 54 | 12·2 | 19·52 | 35·26 | 28·34 |
| 17 | 6.30 a.m. | 50 08 N. | 3 49 W. | 54 | 12·2 | 19·51 | 35·25 | 28·32 |
| 29 | 8.15 p.m. | 48 53 N. | 2 25 W. | 57¼ | 14·0 | 19·36 | 34·97 | 28·11 |
| 30 | 7.30 p.m. | 49 19 N. | 2 25 W. | 56 | 13·3 | 19·43 | 35·10 | 28·21 |
| 30 | 11.10 p.m. | 49 31 N. | 2 30 W. | 57 | 13·9 | | Lost. | |
| | | | JULY, 1904. | | | | | |
| 1 | 2.20 a.m. | 49 43 N. | 2 55 W. | 55½ | 13·1 | 19·39 | 35·03 | 28·15 |
| 1 | 3.30 a.m. | 49 55 N. | 3 22 W. | 56 | 13·3 | 19·43 | 35·10 | 28·21 |
| 1 | 5.10 a.m. | 50 08 N. | 3 49 W. | 56 | 13·3 | 19·50 | 35·23 | 28·31 |
| | | | JUNE, 1904. | | | | | |
| | | | LONDON-NEW YORK. | | | | | |
| 2 | Noon. | 48 57 N. | 42 12 W. | 42 | 5·6 | 18·95 | 34·23 | 27·51 |
| 3 | Noon. | 49 53 N. | 35 48 W. | 52 | 11·1 | 19·63 | 35·46 | 28·50 |
| 4 | Noon. | 50 40 N. | 29 02 W. | 48 | 8·9 | 19·36 | 34·97 | 28·11 |
| 5 | Noon. | 50 40 N. | 21 49 W. | 54 | 12·2 | 19·59 | 35·39 | 28·44 |
| 6 | Noon. | 50 25 N. | 14 47 W. | 55 | 12·8 | 19·62 | 35·44 | 28·48 |
| 7 | Noon. | 50 10 N. | 8 02 W. | 56 | 13·3 | 19·44 | 35·12 | 28·22 |

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | JULY, 1904. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 15 | 11.7 p.m. | 49 35 N. | 0 08 W. | 62 | 16·7 | 18·23 | 32·94 | 26·46 |
| 16 | 0.30 a.m. | 49 47 N. | 0 06 W. | 60 | 15·6 | | Lost. | |
| 16 | 1.55 a.m. | 49 59 N. | 0 04 W. | 58 | 14·4 | 19·25 | 34·78 | 27·95 |
| 16 | 3.27 a.m. | 50 11 N. | 0 01 W. | 58 | 14·4 | | Lost. | |
| 16 | 4.50 a.m. | 50 23 N. | 0 00 | 58 | 14·4 | 19·44 | 35·12 | 28·22 |
| 16 | 6.10 a.m. | 50 35 N. | 0 01 E. | 58 | 14·4 | 19·35 | 34·96 | 28·09 |
| 27 | 11.30 p.m. | 50 35 N. | 0 01 E. | 60 | 15·6 | 19·31 | 34·88 | 28·03 |
| 28 | 0.50 a.m. | 50 23 N. | 0 00 | 59½ | 15·3 | 19·40 | 35·05 | 28·16 |
| 28 | 2.10 a.m. | 50 11 N. | 0 02 W. | 59½ | 15·3 | 19·27 | 34·81 | 27·98 |
| 28 | 3.30 a.m. | 49 59 N. | 0 04 W. | 60½ | 15·8 | 19·22 | 34·72 | 27·90 |
| 28 | 4.50 a.m. | 49 47 N. | 0 06 W. | 63 | 17·2 | 19·10 | 34·51 | 27·73 |
| 28 | 6.10 a.m. | 49 35 N. | 0 08 W. | 64 | 17·8 | 18·26 | 32·99 | 26·51 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 14 | 2 a.m. | 50 35 N. | 0 53 W. | 60 | 15·6 | 19·22 | 34·72 | 27·90 |
| 14 | 2.50 a.m. | 50 23 N. | 0 44 W. | 58½ | 14·7 | 19·34 | 34·94 | 28·08 |
| 14 | 3.40 a.m. | 50 10 N. | 0 33 W. | 56 | 13·3 | 19·35 | 34·96 | 28·09 |
| 14 | 4.25 a.m. | 49 57 N. | 0 22 W. | 56 | 13·3 | 19·23 | 34·74 | 27·92 |
| 14 | 5 a.m. | 49 44 N. | 0 12 W. | 57½ | 14·2 | 19·20 | 34·69 | 27·87 |
| 14 | 5.50 a.m. | 49 32 N. | 0 02 W. | 60 | 15·6 | 19·01 | 34·34 | 27·60 |
| 28 | 1.50 a.m. | 50 35 N. | 0 53 W. | 62 | 16·7 | 19·20 | 34·69 | 27·87 |
| 28 | 2.40 a.m. | 50 23 N. | 0 43 W. | 58½ | 14·7 | 19·33 | 34·92 | 28·06 |
| 28 | 3.30 a.m. | 50 10 N. | 0 33 W. | 58 | 14·4 | 19·33 | 34·92 | 28·06 |
| 28 | 4.20 a.m. | 49 57 N. | 0 23 W. | 57½ | 14·2 | 19·17 | 34·63 | 27·83 |
| 28 | 5.10 a.m. | 49 45 N. | 0 13 W. | 59½ | 15·3 | 19·15 | 34·60 | 27·80 |
| 28 | 6 a.m. | 49 33 N. | 0 03 W. | 63 | 17·2 | 18·52 | 33·46 | 26·88 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 12 | 10.18 p.m. | 49 15 N. | 2 18 W. | 60½ | 15·8 | 19·39 | 35·03 | 28·15 |
| 13 | 1.40 a.m. | 49 44 N. | 2 01 W. | 58 | 14·4 | 19·33 | 34·92 | 28·06 |
| 13 | 2.40 a.m. | 49 58 N. | 1 55 W. | 57½ | 14·2 | 19·38 | 35·01 | 28·14 |
| 13 | 3.36 a.m. | 50 08 N. | 1 50 W. | 57 | 13·9 | 19·39 | 35·03 | 28·15 |
| 13 | 4.31 a.m. | 50 20 N. | 1 45 W. | 56½ | 13·6 | 19·44 | 35·12 | 28·22 |
| 13 | 5.24 a.m. | 50 30 N. | 1 40 W. | 59 | 15·0 | 19·25 | 34·78 | 27·95 |
| 29 | 10.30 p.m. | 50 28 N. | 1 43 W. | 61 | 16·1 | 19·28 | 34·83 | 27·99 |
| 29 | 11.27 p.m. | 50 17 N. | 1 50 W. | 59 | 15·0 | 19·40 | 35·05 | 28·16 |
| 30 | 0.21 a.m. | 50 06 N. | 1 57 W. | 58½ | 14·7 | 19·37 | 34·99 | 28·12 |
| 30 | 1.15 a.m. | 49 55 N. | 2 03 W. | 58½ | 14·7 | 19·27 | 34·81 | 27·98 |
| 30 | 2.08 a.m. | 49 44 N. | 2 01 W. | 60 | 15·6 | 19·26 | 34·79 | 27·96 |
| 30 | 4.05 a.m. | 49 15 N. | 2 18 W. | 63 | 17·2 | 19·35 | 34·96 | 28·09 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 13 | 8 p.m. | 48 53 N. | 2 25 W. | 60¼ | 15·7 | 19·40 | 35·05 | 28·16 |
| 14 | 6.55 p.m. | 49 19 N. | 2 25 W. | 62 | 16.7 | 19·37 | 34·99 | 28·12 |
| 14 | 11.15 p.m. | 49 31 N. | 2 30 W. | 58½ | 14·7 | 19·42 | 35·08 | 28·19 |
| 15 | 1.15 a.m. | 49 43 N. | 2 55 W. | 60 | 15·6 | 19·41 | 35·07 | 28·18 |
| 15 | 3.25 a.m. | 49 55 N. | 3 22 W. | 61¼ | 16·2 | 19·51 | 35·25 | 28·32 |
| 15 | 4.35 a.m. | 50 08 N. | 3 49 W. | 60 | 15·6 | 19·50 | 35·23 | 28·31 |
| 27 | 7.20 p.m. | 48 53 N. | 2 25 W. | 61½ | 16·4 | 19·37 | 34·99 | 28·12 |
| 28 | 6.10 p.m. | 49 19 N. | 2 25 W. | 64 | 17·8 | 19·36 | 34·97 | 28·11 |
| 28 | 11 p.m. | 49 31 N. | 2 30 W. | 60¼ | 15·7 | 19·40 | 35·05 | 28·16 |
| 29 | 1 a.m. | 49 43 N. | 2 55 W. | 59 | 15·0 | 19·40 | 35·05 | 28·16 |
| 29 | 3 a.m. | 49 55 N. | 3 22 W. | 60 | 15·6 | 19·44 | 35·12 | 28·22 |
| 29 | 5 a.m. | 50 08 N. | 3 49 W. | 58½ | 14·7 | 19·41 | 35·07 | 28·81 |

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | AUGUST, 1904. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 11 | 10.40 p.m. | 50° 35′ N. | 0° 01′ E. | 62 | 16·7 | 19·37 | 34·99 | 28·12 |
| 12 | 0.10 a.m. | 50 23 N. | 0 01½ W. | 60½ | 15·8 | 19·36 | 34·97 | 28·11 |
| 12 | 1.35 a.m. | 50 11 N. | 0 04 W. | 60½ | 15·8 | 19·28 | 34·83 | 27·99 |
| 12 | 2.50 a.m. | 49 59 N. | 0 06 W. | 62 | 16·7 | 19·20 | 34·69 | 27·87 |
| 12 | 4.20 a.m. | 49 47 N. | 0 09 W. | 63 | 17·2 | 19·13 | 34·56 | 27·77 |
| 24 | 10.25 p.m. | 50 34 N. | 0 01 E. | 61½ | 16·4 | 19·39 | 35·03 | 28·15 |
| 24 | 11.30 p.m. | 50 22 N. | 0 01 W. | 60½ | 15·8 | 19·36 | 34·97 | 28·11 |
| 25 | 0.35 a.m. | 50 10 N. | 0 02½ W. | 61 | 16·1 | 19·28 | 34·83 | 27·99 |
| 25 | 1.45 a.m. | 49 59 N. | 0 04 W. | 61½ | 16·4 | 19·23 | 34·74 | 27·92 |
| 25 | 2.45 a.m. | 49 47 N. | 0 06 W. | 63 | 17·2 | 19·17 | 34·63 | 27·83 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 9 | 1.50 a.m. | 50 34 N. | 0 52 W. | 64½ | 18·1 | 19·28 | 34·83 | 27·99 |
| 9 | 2.40 a.m. | 50 22 N. | 0 42 W. | 61 | 16·1 | 19·38 | 35·01 | 28·14 |
| 9 | 3.30 a.m. | 50 10 N. | 0 33 W. | 61 | 16·1 | 19·26 | 34·79 | 27·96 |
| 9 | 4.20 a.m. | 49 56 N. | 0 22 W. | 61 | 16·1 | 19·17 | 34·63 | 27·83 |
| 9 | 5.10 a.m. | 49 43 N. | 0 11 W. | 63½ | 17·5 | 19·10 | 34·51 | 27·73 |
| 9 | 6. a.m. | 49 36 N. | 0 05 W. | 65 | 18·3 | 18·20 | 32·88 | 26·42 |
| 23 | 1.50 a.m. | 50 34 N. | 0 52 W. | 61½ | 16·4 | 19·12 | 34·54 | 27·76 |
| 23 | 2.40 a.m. | 50 20 N. | 0 41 W. | 61 | 16·1 | 19·37 | 34·99 | 28·12 |
| 23 | 3.30 a.m. | 50 08 N. | 0 31 W. | 60½ | 15·8 | 19·37 | 34·99 | 28·12 |
| 23 | 4.20 a.m. | 49 56 N. | 0 21 W. | 59¾ | 15·4 | 19·22 | 34·72 | 27·90 |
| 23 | 5.10 a.m. | 49 43 N. | 0 11 W. | 62½ | 16·9 | 19·17 | 34·63 | 27·83 |
| 23 | 6.04 a.m. | 49 32 N. | 0 02 W. | 64 | 17·8 | 18·27 | 33·01 | 26·52 |
| | | | SOUTHAMPTON—St. MALO. | | | | | |
| 12 | 9.30 p.m. | 50 28 N. | 1 43 W. | 62¼ | 16·8 | 19·36 | 34·97 | 28·11 |
| 12 | 10.25 p.m. | 50 17 N. | 1 50 W. | 60 | 15·6 | 19·46 | 35·16 | 28·25 |
| 12 | 11.20 p.m. | 50 06 N. | 1 57 W. | 59½ | 15·3 | 19·42 | 35·08 | 28·19 |
| 13 | 0.15 a.m. | 49 55 N. | 2 03 W. | 59½ | 15·3 | 19·41 | 35·07 | 28·18 |
| 13 | 1.05 a.m. | 49 44 N. | 2 01 W. | 60½ | 15·8 | 19·32 | 34·90 | 28·05 |
| 13 | 3.05 a.m. | 49 15 N. | 2 18 W. | 63¼ | 17·3 | 19·40 | 35·05 | 28·16 |
| 26 | 9.36 p.m. | 50 28 N. | 1 43 W. | 62½ | 16·9 | 19·39 | 35·03 | 28·15 |
| 26 | 10.31 p.m. | 50 17 N. | 1 50 W. | 61¾ | 16·5 | 19·42 | 35·08 | 28·19 |
| 26 | 11.26 p.m. | 50 06 N. | 1 57 W. | 60½ | 15·8 | 19·41 | 35·07 | 28·18 |
| 27 | 0.21 a.m. | 49 55 N. | 2 03 W. | 61 | 16·1 | 19·42 | 35·08 | 28·19 |
| 27 | 1.15 a.m. | 49 44 N. | 2 01 W. | 61½ | 16·4 | 19·36 | 34·97 | 28·11 |
| 27 | 3.15 a.m. | 49 15 N. | 2 18 W. | 62½ | 16·9 | 18·39 | 33·22 | 26·70 |
| | | | PLYMOUTH—St. BRIEUC. | | | | | |
| 10 | 6.20 p.m. | 48 53 N. | 2 25 W. | 62¼ | 16·8 | 19·37 | 34·99 | 28·12 |
| 11 | 5.30 p.m. | 49 19 N. | 2 25 W. | 63¼ | 17·3 | 19·36 | 34·97 | 28·11 |
| 11 | 11.15 p.m. | 49 31 N. | 2 30 W. | 61½ | 16·4 | 19·39 | 35·03 | 28·15 |
| 12 | 1.20 a.m. | 49 43 N. | 2 55 W. | 58 | 14·4 | 19·43 | 35·10 | 28·21 |
| 12 | 3.30 a.m. | 49 55 N. | 3 22 W. | 58 | 14·4 | Lost. | | |
| 12 | 5.20 a.m. | 50 08 N. | 3 49 W. | 59½ | 15·3 | 19·44 | 35·12 | 28·22 |
| | | | PLYMOUTH—CORK. | | | | | |
| 27 | 6.20 p.m. | 50 15 N. | 6 01 W. | 59¾ | 15·4 | 19·50 | 35·23 | 28·31 |
| 27 | 8.13 p.m. | 50 30 N. | 6 23 W. | 62 | 16·7 | 19·38 | 35·01 | 28·14 |
| 27 | 10.08 p.m. | 50 44 N. | 6 44 W. | 60 | 15·6 | 19·28 | 34·83 | 27·99 |
| 27 | Midnight | 50 59 N. | 7 06 W. | 60¼ | 15·7 | 19·27 | 34·81 | 27·98 |
| 28 | 1.50 a.m. | 51 13 N. | 7 28 W. | 61 | 16·1 | 19·27 | 34·81 | 27·98 |
| 28 | 3.45 a.m. | 51 28 N. | 7 48 W. | 60½ | 15·8 | 19·27 | 34·81 | 27·98 |

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | AUGUST, 1904—*continued.* | | | | | |
| | | | S.S. *Helga*—OFF IRISH COAST. | | | | | |
| 4 | 9 a.m. | 50° 19′ N. | 10° 17′ W. | 61·0 | 16·1 | 19·56 | 35·34 | 28·40* |
| 4 | 11 a.m. | 50 27 N. | 10 11 W. | 61·0 | 16·1 | 19·56 | 35·34 | 28·40 |
| 4 | 1.55 p.m. | 50 36 N. | 10 06 W. | 61·2 | 16·2 | 19·57 | 35·35 | 28·41 |
| 4 | 4 p.m. | 50 46 N. | 10 00 W. | 60·6 | 15·9 | 19·57 | 35·35 | 28·41† |
| 4 | 5.45 p.m. | 50 56 N. | 9 54 W. | 61 | 16·1 | 19·54 | 35·30 | 28·37 |
| 4 | 7.45 p.m. | 51 05 N. | 9 47 W. | 61 | 16·1 | 19·51 | 35·25 | 28·32‡ |
| 4 | — | 51 14 N. | 9 42 W. | — | — | 19·36 | 34·97 | 28·11 |
| | | | LONDON-PHILADELPHIA. | | | | | |
| 8 | 9.15 a.m. | 50 03 N. | 6 50 W. | — | — | 19·42 | 35·08 | 28·19 |
| 8 | 4 p.m. | 50 16 N. | 8 57 W. | — | — | 19·51 | 35·25 | 28·32 |
| 8 | Midnight | 50 30 N. | 11 30 W. | — | — | 19·52 | 35·26 | 28·34 |
| 9 | 8 p.m. | 50 46 N. | 13 40 W. | — | — | 19·54 | 35·30 | 28·37 |
| 9 | 4.15 p.m. | 50 38 N. | 16 20 W. | — | — | 19·58 | 35·37 | 28·43 |
| 9 | Midnight. | 50 38 N. | 18 30 W. | — | — | 19·48 | 35·19 | 28·28 |
| | | | CHERBOURG-NEW YORK. | | | | | |
| 7 | 5 a.m. | 49 49 N. | 6 00 W. | 63 | 17·2 | 19·53 | 35·28 | 28·35 |
| 7 | 9.25 a.m. | 49 50 N. | 7 49 W. | 64 | 17·8 | 19·37 | 34·99 | 28·12 |
| 7 | 1.30 p.m. | 49 49 N. | 9 33 W. | 64 | 17·8 | 19·66 | 35·52 | 28·54 |
| 7 | 5.40 p.m. | 49 44 N. | 11 16 W. | 62 | 16·7 | 19·66 | 35·52 | 28·54 |
| 7 | 10 p.m. | 49 42 N. | 13 04 W. | 61½ | 16·4 | 19·67 | 35·53 | 28·56 |
| 8 | 1.52 a.m. | 49 37 N. | 15 00 W. | 60 | 15·6 | 19·64 | 35·48 | 28·51 |
| | | | LONDON—GIBRALTAR. | | | | | |
| 4 | 5.30 p.m. | 41 50 N. | 9 30 W. | 69½ | 20·8 | 19·88 | 35·91 | 28·86 |
| 5 | 5.45 a.m. | 44 50 N. | 8 14 W. | 67¾ | 19·8 | 19·75 | 35·68 | 28·67 |
| 5 | Noon. | 46 14 N. | 7 18 W. | 66½ | 19·0 | 19·77 | 35·71 | 28·70 |
| 5 | 5 p.m. | 47 23 N. | 6 25 W. | 62¾ | 17·1 | 19·71 | 35·61 | 28·62 |
| 5 | 10.45 a.m. | 48 42 N. | 5 24 W. | 64 | 17·8 | 19·63 | 35·46 | 28·50 |
| 6 | 1 a.m. | 49 15 N. | 5 00 W. | 63 | 17·2 | 19·57 | 35 35 | 28·4* |
| 6 | 8 a.m. | 48 50 N. | 5 00 W. | 64 | 17·8 | 19·52 | 35·26 | 28·34 |
| 8 | 2 p.m. | 48 03 N. | 6 10 W. | 66 | 18·9 | 19·60 | 35·41 | 28·46 |
| 8 | 8 p.m. | 47 00 N. | 6 51 W. | 65½ | 18·6 | 19·71 | 35·61 | 28·62 |
| 9 | 4 a.m. | 45 42 N. | 7 53 W. | 68 | 20·0 | 19·72 | 35·62 | 28·63 |
| 9 | Noon. | 44 23 N. | 8 47 W. | 70 | 21·1 | 19·76 | 35·70 | 28·69 |
| 9 | 8 p.m. | 43 05 N. | 9 35 W. | 64½ | 18·1 | 19·74 | 35·66 | 28·66 |
| | | | SEPTEMBER, 1904. | | | | | |
| | | | NEWHAVEN—CAEN. | | | | | |
| 7 | 9.40 p.m. | 50 35 N. | 0 01 E. | 61¾ | 16·5 | 19·17 | 34·63 | 27·83 |
| 7 | 11 p.m. | 50 23 N. | 0 01 W. | 61 | 16·1 | 19·32 | 34·90 | 28·05 |
| 8 | 0.20 a.m. | 50 11 N. | 0 02 W. | 61 | 16·1 | 19·29 | 34·85 | 28·00 |
| 8 | 1.40 a.m. | 49 59 N. | 0 04 W. | 61½ | 16·4 | 19·23 | 34·74 | 27·92 |
| 8 | 3 a.m. | 49 47 N. | 0 05 W. | 61 | 16·1 | 19·16 | 34·61 | 27·82 |
| 21 | 10.35 p.m. | 50 35 N. | 0 01 E. | 61 | 16·1 | 19·37 | 34·99 | 28·12 |
| 21 | 11.55 p.m. | 50 23 N. | 0 02 W. | 59 | 15·0 | 19·37 | 34·99 | 28·12 |
| 22 | 1.20 a.m. | 50 11 N. | 0 05 W. | 59 | 15·0 | 19·32 | 34·90 | 28·05 |
| 22 | 2.56 a.m. | 49 59 N. | 0 08 W. | 60 | 15·6 | 19·29 | 34·85 | 28·00 |
| 22 | 4.10 a.m. | 49 47 N. | 0 10 W. | 60 | 15·6 | 19·21 | 34·70 | 27·89 |
| | | | SOUTHAMPTON—HAVRE. | | | | | |
| 6 | 1.50 a.m. | 50 34 N. | 0 52 W. | 63 | 17·2 | 19·23 | 34·74 | 27·92 |
| 6 | 2.40 a.m. | 50 23 N. | 0 44 W. | 62½ | 16·9 | 19·35 | 34·96 | 28·09 |
| 6 | 3.30 a.m. | 50 11 N. | 0 33 W. | 62 | 16·7 | 19·36 | 34·97 | 28·11 |

* At 40 fathoms the salinity was 35·46 and the temperature 10·6° c. † At 64 fathoms the salinity was 35·30 and the temperature 9·3° c.
‡ Homogeneous from top to bottom.

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl.‰ | S.‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | SEPTEMBER, 1904—*continued.* | | | | | |
| | | | SOUTHAMPTON-HAVRE—*continued.* | | | | | |
| | | ° ′ | ° ′ | | | | | |
| 6 | 4.20 a.m. | 49 59 N. | 0 24 W. | 62½ | 16·9 | 19·24 | 34·76 | 27·93 |
| 6 | 5.10 a.m. | 49 47 N. | 0 14 W. | 63 | 17·2 | 19·15 | 34·60 | 27·80 |
| 6 | 6 a.m. | 49 33 N. | 0 03 W. | 64 | 17·8 | 18·74 | 33·86 | 27·20 |
| 29 | 1.50 a.m. | 50 36 N. | 0 54 W. | 58¼ | 14·6 | 19·25 | 34·78 | 27·95 |
| 29 | 2.40 a.m. | 50 25 N. | 0 45 W. | 60 | 15·6 | 19·39 | 34·92 | 28·06 |
| 29 | 3.30 a.m. | 50 14 N. | 0 35 W. | 60 | 15·6 | 19·39 | 35·03 | 28·15 |
| 29 | 4.20 a.m. | 50 00 N. | 0 24 W. | 60¼ | 15·7 | 19·33 | 34·92 | 28·06 |
| 29 | 5.10 a.m. | 49 48 N. | 0 15 W. | 60½ | 15·8 | 19·24 | 34·76 | 27·93 |
| 29 | 6.10 a.m. | 49 33 N. | 0 03 W. | 63¾ | 17·6 | 19·14 | 34·58 | 27·79 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 9 | 8.25 p.m. | 50 28 N. | 1 43 W. | 62½ | 16·9 | 19·42 | 35·08 | 28·19 |
| 9 | 9.19 p.m. | 50 17 N. | 1 50 W. | 60¾ | 15·9 | 19·42 | 35·08 | 28·19 |
| 9 | 10.13 p.m. | 50 06 N | 1 57 W. | 60½ | 15·8 | 19·47 | 35·17 | 28·27 |
| 9 | 11.07 p.m. | 49 55 N. | 2 03 W. | 61¼ | 16·2 | 19·44 | 35·12 | 28·22 |
| 10 | 0·02 a.m. | 49 44 N. | 2 01 W. | 61⅝ | 16·5 | 19·37 | 34·99 | 28·12 |
| 10 | 1.58 a.m. | 49 15 N. | 2 18 W. | 62½ | 16·9 | 19·40 | 35·05 | 28·16 |
| 30 | 7.30 a.m. | 6 miles N. of St. Malo. | | 56 | 13·3 | 19·39 | 35·03 | 28·15 |
| 30 | 10.25 p.m. | Off La Corbiere. | | 56½ | 13·6 | 19·40 | 35·05 | 28·16 |
| | | | OCTOBER, 1904. | | | | | |
| 1 | 1 a.m. | Race of Alderney. | | 56 | 13·3 | 19·24 | 34·76 | 27·93 |
| 1 | 2 a.m. | 15 miles N.E. of Alderney. | | 56½ | 13·6 | 19·12 | 34·54 | 27·76 |
| 1 | 3 a.m. | Mid Channel. | | 55½ | 13·1 | 19·35 | 34·96 | 28·09 |
| 1 | 4 a.m. | 15 miles S.W. of Needles. | | 56¼ | 13·4 | 19·37 | 34·99 | 28·12 |
| | | | AUGUST, 1904. | | | | | |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 31 | 9.40 p.m. | 48 53 N. | 2 25 W. | 62¼ | 16·8 | 19·38 | 35·01 | 28·14 |
| | | | SEPTEMBER, 1904. | | | | | |
| 1 | 5 p.m. | 49 19 N. | 2 25 W. | 61½ | 16·4 | 19·43 | 35·10 | 28·21 |
| 1 | 10.40 p.m. | 49 31 N. | 2 30 W. | 60⅝ | 15·8 | 19·44 | 35·12 | 28·22 |
| 2 | 1.10 a.m. | 49 49 N. | 2 55 W. | 58 | 14·4 | 19·51 | 35·25 | 28·32 |
| 2 | 3.35 a.m. | 49 55 N. | 3 22 W. | 58 | 14·4 | 19·47 | 35·17 | 28·27 |
| 2 | 5.15 a.m. | 50 08 N. | 3 49 W. | 58½ | 14·7 | 19·42 | 35·08 | 28·19 |
| 22 | 6 a.m. | 48 53 N. | 2 25 W. | 59 | 15·0 | 19·40 | 35·05 | 28·16 |
| 22 | 9 p.m. | 49 19 N. | 2 25 W. | 60 | 15·6 | 19·42 | 35·08 | 28·19 |
| 23 | 3 a.m. | 49 31 N. | 2 30 W. | 60 | 15·6 | 19·44 | 35·12 | 28·22 |
| 23 | 5 a.m. | 49 43 N. | 2 55 W. | 59½ | 15·3 | 19·52 | 35·26 | 28·34 |
| 23 | 7 a.m. | 49 55 N. | 3 22 W. | 58½ | 14·7 | 19·52 | 35·26 | 28·34 |
| 23 | 9.15 a.m. | 50 08 N. | 3 49 W. | 59 | 15·0 | 19·45 | 35·14 | 28·34 |
| | | | OCTOBER, 1904. | | | | | |
| | | | NEWHAVEN—CAEN. | | | | | |
| 9 | Noon | 49 47 N. | 0 01 W. | 59 | 15·0 | 19·20 | 34·69 | 27·87 |
| 9 | 1.35 p.m. | 49 59 N. | 0 00 | 59 | 15·0 | 19·31 | 34·88 | 28·03 |
| 9 | 3.10 p.m. | 50 11 N. | 0 01 E. | 59 | 15·0 | 19·35 | 34·96 | 28·09 |
| 9 | 4.30 p.m. | 50 23 N. | 0 02 E. | 59 | 15·0 | 19·37 | 34·99 | 28·12 |
| 9 | 6.10 p.m. | 50 35 N. | 0 02 E. | 59 | 15·0 | 19·39 | 35·03 | 28·15 |
| 21 | 9.50 p.m. | 49 46 N. | 0 02 W. | 58 | 14·4 | 19·23 | 34·74 | 27·92 |
| 21 | 11.5 p.m. | 49 58 N. | 0 00 | 58 | 14.4 | 19·29 | 34·85 | 28·00 |
| 22 | 0.35 a.m. | 50 10 N. | 0 01 E. | 58 | 14·4 | 19·35 | 34·96 | 28·09 |
| 22 | 2.10 a.m. | 50 22 N. | 0 02 E. | 58 | 14·4 | 19·38 | 35·01 | 28·14 |
| 22 | 3.40 a.m. | 50 34 N. | 0 03 E. | 58 | 14·4 | 19·38 | 35·01 | 28·14 |

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl.‰ | S.‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | OCTOBER, 1904—*continued.* | | | | | |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| | | ° ′ | ° ′ | | | | | |
| 8 | 1.50 a.m. | 50 35 N. | 0 53 W. | 57 | 13·9 | 19·32 | 34·90 | 28·05 |
| 8 | 2.40 a.m. | 50 23 N. | 0 43 W. | 58 | 14·4 | 19·36 | 34·97 | 28·11 |
| 8 | 3.30 a.m. | 50 10 N. | 0 33 W. | 58 | 14·4 | 19·36 | 34·97 | 28·11 |
| 8 | 4.20 a.m. | 49 57 N. | 0 22 W. | 58½ | 14·7 | 19·31 | 34·88 | 28·03 |
| 8 | 5.10 a.m. | 49 46 N. | 0 14 W. | 59 | 15·0 | 19·22 | 34·72 | 27·90 |
| 8 | 6 a.m. | 49 41 N. | 0 09 W. | 58¾ | 14·8 | 18·85 | 34·05 | 27·36 |
| 22 | 1.50 a.m. | 50 35 N. | 0 53 W. | 58 | 14·4 | 19·23 | 34·74 | 27·92 |
| 22 | 2.45 a.m. | 50 22 N. | 0 42 W. | 58½ | 14·7 | 19·31 | 34·88 | 28·03 |
| 22 | 3.30 a.m. | 50 01 N. | 0 26 W. | 59 | 15·0 | 19·38 | 35·01 | 28·14 |
| 22 | 4.20 a.m. | 49 48 N. | 0 15 W. | 59 | 15·0 | 19·28 | 34·83 | 27·99 |
| 22 | 5.10 a.m. | 49 44 N. | 0 12 W. | 59 | 15·0 | 19·24 | 34·76 | 27·93 |
| 22 | 6.05 a.m. | Off Cape La Heve. | | 58 | 14·4 | 19·06 | 34·43 | 27·67 |
| | | | SOUTHAMPTON—ST. MALO. | | | | | |
| 7 | 7.36 p.m. | 50 28 N. | 1 43 W. | 56½ | 13·6 | 19·25 | 34·78 | 27·95 |
| 7 | 8.31 p.m. | 50 17 N. | 1 50 W. | 56 | 13·3 | 19·40 | 35·05 | 28·16 |
| 7 | 9.26 p.m. | 50 06 N. | 1 57 W. | 55½ | 13·1 | 19·42 | 35·08 | 28·19 |
| 7 | 10.21 p.m. | 49 55 N. | 2 03 W. | 56 | 13·3 | 19·42 | 35·08 | 28·19 |
| 7 | 11.11 p.m. | 49 44 N. | 2 01 W. | 57 | 13·9 | 19·32 | 34·90 | 28·05 |
| 8 | 1.12 a.m. | 49 15 N. | 2 18½ W. | 57½ | 14·2 | 19·37 | 34·99 | 28·12 |
| 21 | 7.15 p.m. | 50 28 N. | 1 43 W. | 56½ | 13·6 | 19·28 | 34·83 | 27·99 |
| 21 | 8.10 p.m. | 50 17 N. | 1 50 W. | 57 | 13·9 | 19·33 | 34·92 | 28·06 |
| 21 | 9.51 p.m. | 50 06 N. | 1 57 W. | 57½ | 14·2 | 19·40 | 35·05 | 28·16 |
| 21 | 10 p.m. | 49 55 N. | 2 03 W. | 58 | 14·4 | 19·41 | 35·07 | 28·18 |
| 21 | 10.55 p.m. | 49 44 N. | 2 01 W. | 58¼ | 14·6 | 19·31 | 34·88 | 28·03 |
| 22 | 1 a.m. | 49 15 N. | 2 18½ W. | 58¼ | 14·6 | 19·40 | 35·05 | 28·16 |
| | | | PLYMOUTH—ST. BRIEUC. | | | | | |
| 6 | 4.20 p.m. | 48 53 N. | 2 25 W. | 60½ | 15·8 | 19·40 | 35·05 | 28·16 |
| 7 | 6.10 a.m. | 49 19 N. | 2 25 W. | 58¾ | 14·0 | 19·41 | 35·07 | 28·18 |
| 7 | 11.15 a.m. | 49 31 N. | 2 30 W. | 59 | 15·0 | 19·46 | 35·16 | 28·25 |
| 7 | 3 p.m. | 49 43 N. | 2 55 W. | 58 | 14·4 | 19·54 | 35·30 | 28·37 |
| 7 | 8 p.m. | 49 56 N. | 3 22 W. | 57½ | 14·2 | 19·55 | 35·32 | 28·38 |
| 7 | 10.20 p.m. | 50 08 N | 3 49 W. | 58 | 14·4 | 19·47 | 35·17 | 28·27 |
| 20 | 6 a.m. | 48 53 N. | 2 25 W. | 59 | 15·0 | 19·42 | 35·08 | 28·19 |
| 20 | 7 p.m. | 49 19 N. | 2 25 W. | 59½ | 15·3 | 19·45 | 35·14 | 28·24 |
| 21 | 1 a.m. | 49 31 N. | 2 30 W. | 60 | 15·6 | 19·48 | 35·19 | 28·28 |
| 21 | 3.15 a.m. | 49 43 N. | 2 55 W. | 59 | 15·0 | 19·53 | 35·28 | 28·35 |
| 21 | 5.30 a.m. | 49 55 N. | 3 22 W. | 59 | 15·0 | 19·52 | 35·26 | 28·34 |
| 21 | 7.30 a.m. | 50 08 N. | 3 49 W. | 58½ | 14·7 | 19·50 | 35·23 | 28·31 |
| | | | NOVEMBER, 1904. | | | | | |
| | | | NEWHAVEN—CAEN. | | | | | |
| 2 | 7.25 p.m. | 50 35 N. | 0 01 E. | 57 | 13·9 | 19·36 | 34·97 | 28·11 |
| 2 | 8.40 p.m. | 50 23 N. | 0 00 | 57 | 13·9 | 19·38 | 35·01 | 28·14 |
| 2 | 10 p.m. | 50 11 N. | 0 01 W. | 57½ | 14·2 | 19·38 | 35·02 | 28·14 |
| 2 | 11.20 p.m. | 49 59 N. | 0 02 W. | 57½ | 14·2 | 19·37 | 35·00 | 28·13 |
| 3 | 0.40 a.m. | 49 47 N. | 0 04 W. | 57½ | 14·2 | 19·36 | 34·98 | 28·11 |
| 16 | 7.40 p.m. | 50 35 N. | 0 01½ E. | 55 | 12·8 | 19·35 | 34·96 | 28·09 |
| 16 | 8.45 p.m. | 50 23 N. | 0 00 | 55 | 12·8 | 19·40 | 35·05 | 28·16 |
| 16 | 9.50 p.m. | 50 11 N. | 0 02 W. | 55 | 12·8 | 19·35 | 34·96 | 28·09 |
| 16 | 11 p.m. | 49 59 N. | 0 04 W. | 55 | 12·8 | 19·28 | 34·83 | 27·99 |
| 17 | 0.15 a.m. | 49 47 N. | 0 05½ W. | 55 | 12·8 | 19·25 | 34·78 | 27·95 |

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | NOVEMBER, 1904—*continued.* | | | | | | |
| | | SOUTHAMPTON—HAVRE. | | | | | | |
| 5 | 1.50 a.m. | 50 37 N. | 0 55 W. | 56 | 13·3 | 19·36 | 34·97 | 28·11 |
| 5 | 2.40 a.m. | 50 23 N. | 0 44 W. | 57 | 13·9 | 19·37 | 34·99 | 28·12 |
| 5 | 3.30 a.m. | 50 10 N. | 0 33 W. | 57 | 13·9 | 19·40 | 35·05 | 28·16 |
| 5 | 4.25 a.m. | 49 51 N. | 0 18 W. | 56½ | 13·6 | | Lost. | |
| 5 | 5.15 a.m. | 49 44 N. | 0 11 W. | 55½ | 13·1 | 19·26 | 34·79 | 27·96 |
| 5 | 6.05 a.m. | 49 32 N. | 0 02 W. | 54 | 12·2 | 18·89 | 34·13 | 27·42 |
| 20 | 1.50 a.m. | 50 35 N. | 0 53 W. | 54 | 12·2 | 19·27 | 34·82 | 27·98 |
| 20 | 2.40 a.m. | 50 22 N. | 0 42 W. | 55 | 12·8 | 19·34 | 34·94 | 28·08 |
| 20 | 3.30 a.m. | 50 10 N. | 0 33 W. | 55½ | 13·1 | 19·34 | 34·94 | 28·08 |
| 20 | 4.20 a.m. | 49 56 N. | 0 22 W. | 55½ | 13·1 | | Lost. | |
| 20 | 5.10 a.m. | 49 44 N. | 0 12 W. | 54½ | 12·5 | 19·15 | 34·60 | 27·80 |
| 20 | 6 a.m. | 49 32 N. | 0 02 W. | 54 | 11·7 | | Lost. | |
| | | SOUTHAMPTON—ST. MALO. | | | | | | |
| 5 | 5 a.m. | 49 15 N. | 2 18½ W | 56½ | 13·6 | 19·31 | 34·88 | 28·03 |
| 5 | 7.10 a.m. | 49 44 N. | 2 01 W. | 56¾ | 13·7 | 19·45 | 35·14 | 28·24 |
| 5 | 8.05 a.m. | 49 56 N. | 1 56½ W. | 57½ | 14·2 | 19·40 | 35·05 | 28·16 |
| 5 | 9 a.m. | 50 07 N. | 1 51 W. | 57½ | 14·2 | 19·41 | 35·07 | 28·18 |
| 5 | 9.55 a.m. | 50 19 N. | 1 46 W. | 57½ | 14·2 | 19·42 | 35·08 | 28·19 |
| 5 | 10.50 a.m. | 50 30 N. | 1 41 W. | 56½ | 13·6 | 19·37 | 34·99 | 28·12 |
| 19 | 4.48 a.m. | 49 15 N. | 2 18½ W. | 57 | 13·9 | 19·39 | 35·03 | 28·15 |
| 19 | 7 a.m. | 49 44 N. | 2 01 W. | 57 | 13·9 | 19·44 | 35·12 | 28·22 |
| 19 | 7.55 a.m. | 49 56 N. | 1 56 W. | 56¾ | 13·7 | 19·41 | 35·07 | 28·18 |
| 19 | 8.50 a.m. | 50 07 N. | 1 51 W. | 56¾ | 13·7 | 19·44 | 35·12 | 28·22 |
| 19 | 9.45 a.m. | 50 19 N. | 1 46 W. | 56¾ | 13·7 | 19·43 | 35·10 | 28·21 |
| 19 | 10.40 a.m. | 50 30 N. | 1 41 W. | 55¾ | 13·2 | 19·41 | 35·07 | 28·18 |
| | | PLYMOUTH—ST. BRIEUC. | | | | | | |
| 3 | 4 a.m. | 48 53 N. | 2 25 W. | 56½ | 13·6 | 19·42 | 35·08 | 28·19 |
| 3 | 6 p.m. | 49 19 N. | 2 25 W. | 57½ | 14·2 | 19·46 | 35·16 | 28·25 |
| 3 | 11 p.m. | 49 31 N. | 2 30 W. | 58½ | 14·7 | 19·47 | 35·17 | 28·27 |
| 4 | 1.30 a.m. | 49 43 N. | 2 55 W. | 58 | 14·4 | 19·52 | 35·26 | 28·34 |
| 4 | 3.45 a.m. | 49 58 N. | 3 22 W. | 57 | 13·9 | 19·50 | 35·23 | 28·31 |
| 4 | 6 a.m. | 50 08 N. | 3 49 W. | 56 | 13·3 | 19·47 | 35·17 | 28·27 |
| 18 | 6 a.m. | 48 53 N. | 2 25 W. | 55 | 12·8 | 19·43 | 35·10 | 28·21 |
| 18 | 5.30 p.m. | 49 19 N. | 2 25 W. | 55 | 12·8 | 19·47 | 35·17 | 28·27 |
| 18 | 9 p.m. | 49 31 N. | 2 30 W. | 55½ | 13·1 | 19·47 | 35·17 | 28·27 |
| 18 | 11 p.m. | 49 43 N. | 2 55 W. | 55½ | 13·1 | 19·53 | 35·28 | 28·35 |
| 19 | 1 a.m. | 49 55 N. | 3 22 W. | 55 | 12·8 | 19·57 | 35·35 | 28·41 |
| 19 | 3.15 a.m. | 50 08 N. | 3 49 W. | 55 | 12·8 | 19·51 | 35·25 | 28·32 |
| | | PLYMOUTH-CORK. | | | | | | |
| 12 | 9.40 p.m. | 51 28 N. | 7 46 W. | 53¼ | 11·8 | 19·34 | 34·94 | 28·08 |
| 12 | 11.40 p.m. | 51 14 N. | 7 25 W. | 54 | 12·2 | 19·39 | 35·03 | 28·15 |
| 13 | 1.55 a.m. | 50 59 N. | 7 03 W. | 55 | 12·8 | 19·39 | 35·03 | 28·15 |
| 13 | 3.55 a.m. | 50 44 N. | 6 40 W. | 54 | 12·2 | 19·45 | 35·14 | 28·24 |
| 13 | 5.50 a.m. | 50 30 N. | 6 20 W. | 55½ | 13·1 | 19·48 | 35·19 | 28·28 |
| 13 | 7.45 a.m. | 50 14 N. | 5 57 W. | 56½ | 13·6 | 19·52 | 35·26 | 28·34 |
| | | S.S. *Helga*—OFF IRISH COAST. | | | | | | |
| 1 | 1.25 a.m. | 50 19 N. | 10 17 W. | 57 | 13·9 | 19·67 | 35·53 | 28·56* |
| 1 | 3.37 p.m. | 50 27 N. | 10 11 W. | 56·8 | 13·8 | 19·64 | 35·48 | 28·51 |
| 1 | 7.40 p.m. | 50 46 N. | 10 00 W. | 56·5 | 13·6 | 19·59 | 35·39 | 28·44 |
| 1 | Midnight. | 51 05 N. | 9 48 W. | 55·5 | 13·1 | 19·45 | 35·14 | 28·24 |
| | | NOVEMBER, 1901—*continued.* | | | | | | |
| | | S.S. *Helga*—OFF IRISH COAST—*continued.* | | | | | | |
| 2 | 2 a.m. | 51 14 N. | 9 42 W. | 56·1 | 13·4 | 19·38 | 35·01 | 28·14 |
| 3 | 8 a.m. | 52 05 N. | 12 00 W. | 52·2 | 11·2 | 19·61 | 35·43 | 28·47 |
| 3 | 4.23 p.m. | 52 05 N. | 11 44 W. | 55·7 | 13·2 | 19·59 | 35·39 | 28·44 |
| 3 | 5·03 p.m. | 52 05 N. | 11 27 W. | 55 | 12·8 | 19·44 | 35·12 | 28·22 |
| | | DECEMBER, 1904. | | | | | | |
| | | NEWHAVEN—CAEN. | | | | | | |
| 1 | 5.35 a.m. | 50 35 N. | 0 01 E, | 54 | 12·2 | 19·39 | 35·03 | 28·15 |
| 1 | 6.50 a.m. | 50 23 N. | 0 01 W. | 55 | 12·8 | 19·40 | 35·05 | 28·16 |
| 1 | 8 a.m. | 50 11 N. | 0 04 W. | 55 | 12·8 | 19·38 | 35·01 | 28·14 |
| 1 | 9.15 a.m. | 49 59 N. | 0 06 W. | 54 | 12·2 | 19·31 | 34·88 | 28·03 |
| 1 | 10.35 a.m. | 49 47 N. | 0 08 W. | 53 | 11·7 | 19·24 | 34·76 | 27·93 |
| 14 | 4.30 p.m. | 50 35 N. | 0 02 E. | 52 | 11·1 | 19·34 | 34·94 | 28·08 |
| 14 | 5.45 p.m. | 50 23 N. | 0 00 | 53 | 11·7 | 19·40 | 35·06 | 28·17 |
| 14 | 7 p.m. | 50 11 N. | 0 01 W. | 53 | 11·7 | 19·37 | 34·99 | 28·12 |
| 14 | 8.10 p.m. | 49 59 N. | 0 03 W. | 52½ | 11·4 | 19·29 | 34·85 | 28·00 |
| 14 | 9.20 p.m. | 49 47 N. | 0 05 W. | 51¾ | 10·9 | 19·17 | 34·63 | 27·83 |
| | | SOUTHAMPTON—HAVRE. | | | | | | |
| 4 | 1.45 a.m. | 50 35 N. | 0 53 W. | 53½ | 11·9 | 19·43 | 35·10 | 28·21 |
| 4 | 2.40 a.m. | 50 20 N. | 0 41 W. | 53½ | 11·9 | 19·41 | 35·07 | 28·18 |
| 4 | 3.30 a.m. | 50 10 N. | 0 33 W. | 54½ | 12·5 | 19·44 | 35·12 | 28·22 |
| 4 | 4.20 a.m. | 49 57 N. | 0 22 W. | 54½ | 12·5 | 19·34 | 34·94 | 28·08 |
| 4 | 5.10 a.m. | 49 44 N. | 0 12 W. | 53 | 11·7 | 19·22 | 34·72 | 27·90 |
| 4 | 6 a.m. | 49 35 N. | 0 05 W. | 51 | 10·6 | 18·94 | 34·22 | 27·49 |
| 18 | 1.50 a.m. | 50 36 N. | 0 54 W. | 48½ | 9·2 | 19·14 | 34·58 | 27·79 |
| 18 | 2.40 a.m. | 50 23 N. | 0 44 W. | 52½ | 11·4 | 19·42 | 35·08 | 28·19 |
| 18 | 3.30 a.m. | 50 11 N. | 0 33 W. | 53½ | 11·9 | 19·35 | 34·96 | 28·09 |
| 18 | 4.20 a.m. | 49 59 N. | 0 24 W. | 54 | 12·2 | 19·27 | 34·81 | 27·98 |
| 18 | 5.10 a.m. | 49 47 N. | 0 14 W. | 53 | 11·7 | 19·18 | 34·65 | 27·84 |
| 18 | 6 a.m. | 49 35 N. | 0 05 W. | 49 | 9·4 | 17·85 | 32·25 | 25·91 |
| | | SOUTHAMPTON-ST. MALO. | | | | | | |
| 3 | 3.41 a.m. | 49 15 N. | 2 18 W. | 50¾ | 10·4 | 19·34 | 34·94 | 28·08 |
| 3 | 5.55 a.m. | 49 44 N. | 2 01 W. | 50 | 10·0 | 19·32 | 34·90 | 28·05 |
| 3 | 6.50 a.m. | 49 56 N. | 1 56 W. | 50½ | 10·3 | 19·45 | 35·14 | 28·24 |
| 3 | 7.45 a.m. | 50 07 N. | 1 51 W. | 50½ | 10·1 | 19·45 | 35·14 | 28·24 |
| 3 | 8.40 a.m. | 50 19 N. | 1 46 W. | 50½ | 10·1 | 19·43 | 35·10 | 28·21 |
| 3 | 9.35 a.m. | 50 30 N. | 1 41 W. | 49 | 9·4 | 19·38 | 35·01 | 28·14 |
| 18 | 3.38 a.m. | 49 15 N. | 2 18½ W. | 49½ | 9·7 | 19·38 | 35·02 | 28·14 |
| 18 | 5.47 a.m. | 49 44 N. | 2 01 W. | 49½ | 9·7 | 19·41 | 35·07 | 28·18 |
| 18 | 6.40 a.m. | 49 56 N. | 1 56½ W. | 51 | 10·6 | 19·47 | 35·17 | 28·27 |
| 18 | 7.35 a.m. | 50 08 N. | 1 51 W. | 51 | 10·6 | 19·45 | 35·14 | 28·24 |
| 18 | 8.30 a.m. | 50 20 N. | 1 46 W. | 49½ | 9·7 | 19·46 | 35·16 | 28·25 |
| 18 | 9.25 a.m. | 50 32 N. | 1 40 W. | 48¼ | 9·0 | 19·43 | 35·10 | 28·21 |
| | | PLYMOUTH-ST. BRIEUC. | | | | | | |
| 1 | 1 a.m. | 48 53 N. | 2 25 W. | 54 | 12·2 | 19·39 | 35·03 | 28·15 |
| 1 | 5 p.m. | 49 19 N. | 2 25 W. | 55½ | 13·1 | 19·48 | 35·19 | 28·28 |
| 1 | 10.45 p.m. | 49 31 N. | 2 30 W. | 54¾ | 12·6 | 19·50 | 35·23 | 28·31 |
| 2 | 1 a.m. | 49 43 N. | 2 55 W. | 55 | 12·8 | 19·49 | 35·21 | 28·30 |
| 2 | 3.20 a.m. | 49 55 N. | 3 22 W. | 55 | 12·8 | 19·53 | 35·28 | 28·35 |
| 2 | 5.20 a.m. | 50 08 N. | 3 49 W. | 53½ | 11·9 | 19·48 | 35·19 | 28·28 |
| 13 | Noon | 48 53 N. | 2 25 W. | 52 | 11·1 | 19·43 | 35·11 | 28·21 |

* Salinity the same at all depths. Temperature at 50 fathoms, 11·5° C.; at 80 fathoms, 10·6° C.

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | DECEMBER, 1904—*continued.* | | | | | |
| | | | PLYMOUTH-ST. BRIEUC—*continued.* | | | | | |
| 15 | 5 p.m. | 49° 19′ N. | 2° 25′ W. | 54 | 12·2 | 19·46 | 35·16 | 28·25 |
| 15 | 11 p.m. | 49 31 N. | 2 30 W. | 54 | 12·2 | 19·47 | 35·18 | 28·27 |
| 16 | 1.45 a.m. | 49 43 N. | 2 55 W. | 54 | 12·2 | 19·52 | 35·26 | 28·34 |
| 16 | 3.30 a.m. | 49 55 N. | 3 22 W. | 54½ | 12·5 | 19·56 | 35·34 | 28·40 |
| 16 | 6 a.m. | 50 08 N. | 3 49 W. | 53 | 11·7 | 19·46 | 35·16 | 28·25 |
| 28 | 11 p.m. | 48 53 N. | 2 25 W. | 51 | 10·6 | 19·42 | 35·08 | 28·19 |
| 29 | 5 p.m. | 49 19 N. | 2 25 W. | 52½ | 11·4 | 19·49 | 35·21 | 28·30 |
| 29 | 10.45 p.m. | 49 31 N. | 2 30 W. | 53 | 11·7 | 19·51 | 35·25 | 28·32 |
| 30 | 1.20 a.m. | 49 43 N. | 2 55 W. | 53 | 11·7 | 19·56 | 35·34 | 28·40 |
| 30 | 5.20 a.m. | 49 55 N. | 3 22 W. | 53 | 11·7 | 19·59 | 35·39 | 28·44 |
| 30 | 10 a.m. | 50 08 N. | 3 49 W. | 53 | 11·7 | 19·47 | 35·17 | 28·27 |
| | | | JANUARY, 1905. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 4 | 10.20 p.m. | 50 35 N. | 0 02 E. | 50 | 10·0 | 19·32 | 34·90 | 28·05 |
| 4 | 11.40 p.m. | 50 23 N. | 0 00 | 51 | 10·6 | 19·47 | 35·17 | 28·27 |
| 5 | 0.55 a.m. | 50 11 N. | 0 01 W. | 51 | 10·6 | 19·50 | 35·23 | 28·31 |
| 5 | 2.10 a.m. | 49 59 N. | 0 03 W. | 51½ | 10·8 | 19·46 | 35·16 | 28·25 |
| 5 | 3.30 a.m. | 49 47 N. | 0 05 W. | 50½ | 10·3 | 19·35 | 34·96 | 28·09 |
| 18 | 9.20 p.m. | 50 53 N. | 0 02 E. | 48¾ | 9·3 | 19·37 | 34·99 | 28·12 |
| 18 | 10.30 p.m. | 50 23 N. | 0 00 | 49 | 9·4 | 19·50 | 35·23 | 28·31 |
| 18 | 11.40 p.m. | 50 11 N. | 0 02 W. | 50 | 10·0 | 19·52 | 35·26 | 28·34 |
| 19 | 0.50 a.m. | 49 50 N. | 0 04 W. | 49 | 9·4 | 19·41 | 35·07 | 28·18 |
| 19 | 2 a.m. | 49 47 N. | 0 06 W. | 48 | 8·9 | 19·29 | 34·85 | 28·00 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 1 | 1.40 a.m. | 50 36 N. | 0 54 W. | 44½ | 6·9 | 19·25 | 34·78 | 27·95 |
| 1 | 2·30 a.m. | 50 24 N. | 0 44 W. | 48 | 8·9 | 19·41 | 35·07 | 28·18 |
| 1 | 3·20 a.m. | 50 12 N. | 0 34 W. | 48 | 8·9 | 19·47 | 35·17 | 28·27 |
| 1 | 4·10 a.m. | 50 00 N. | 0 25 W. | 48½ | 9·2 | 19·38 | 35·01 | 28·14 |
| 1 | 5 a.m. | 49 48 N. | 0 15 W. | 47 | 8·3 | 19·32 | 34·90 | 28·05 |
| 1 | 5.50 a.m. | 49 35 N. | 0 04 W. | 46½ | 8·1 | 18·89 | 34·13 | 27·42 |
| 15 | 1.50 a.m. | 50 36 N. | 0 54 W. | 43 | 6·1 | 19·29 | 34·85 | 28·00 |
| 15 | 2.45 a.m. | 50 24 N. | 0 44 W. | 45½ | 7·5 | 19·47 | 35·17 | 28·27 |
| 15 | 3.45 a.m. | 50 14 N. | 0 35 W. | 46 | 7·8 | 19·48 | 35·19 | 28·28 |
| 15 | 4.45 a.m. | 50 02 N. | 0 26 W. | 46½ | 8·1 | 19·56 | 35·34 | 28·40 |
| 15 | 5.45 a.m. | 49 52 N. | 0 18 W. | 45½ | 7·5 | 19·54 | 35·30 | 28·37 |
| 15 | 7 a.m. | 49 42 N. | 0 10 W. | 43 | 6·1 | 19·49 | 35·21 | 28·30 |
| 29 | 1.40 a.m. | 50 37 N. | 0 55 W. | 42½ | 5·8 | 19·35 | 34·96 | 28·09 |
| 29 | 2.30 a.m. | 50 23 N. | 0 44 W. | 47½ | 8·6 | 19·56 | 35·34 | 28·40 |
| 29 | 3.10 a.m. | 50 12 N. | 0 34 W. | 48 | 8·9 | 19·44 | 35·12 | 28·22 |
| 29 | 4.10 a.m. | 49 58 N. | 0 22 W. | 47 | 8·3 | 19·33 | 34·92 | 28·06 |
| 29 | 5 a.m. | 49 46 N. | 0 14 W. | 46 | 7·8 | 19·30 | 34·87 | 28·02 |
| 29 | 5.50 a.m. | 49 31 N. | 0 02 W. | 43½ | 6·4 | 18·05 | 32·61 | 26·20 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 2 | 7.17 p.m. | 50 28 N. | 1 43 W. | 45½ | 7·5 | 19·39 | 35·03 | 28·15 |
| 2 | 8.07 p.m. | 50 17 N. | 1 50 W. | 46 | 7·8 | 19·44 | 35·12 | 28·22 |
| 2 | 8.57 p.m. | 50 06 N. | 1 57 W. | 48½ | 9·2 | 19·51 | 35·25 | 28·32 |
| 2 | 9.47 p.m. | 49 55 N. | 2 03 W. | 48¼ | 9·0 | 19·50 | 35·23 | 28·31 |
| 2 | 10.40 p.m. | 49 44 N. | 2 01 W. | 48 | 8·9 | 19·43 | 35·10 | 28·21 |
| 3 | 0.40 a.m. | 49 15 N. | 2 18½ W. | 45¼ | 7·3 | 19·47 | 35·17 | 28·27 |
| 17 | 3.55 a.m. | 50 28 N. | 1 43 W. | 44¼ | 6·8 | 19·39 | 35·03 | 28·15 |
| 17 | 4.55 a.m. | 50 17 N. | 1 50 W. | 46 | 7·8 | 19·43 | 35·10 | 28·21 |
| 17 | 5.55 a.m. | 50 06 N. | 1 57 W. | 46¾ | 8·2 | 19·50 | 35·23 | 28·31 |
| | | | JANUARY, 1905—*continued.* | | | | | |
| | | | SOUTHAMPTON-ST. MALO—*continued.* | | | | | |
| 17 | 6.55 a.m. | 49° 55′ N. | 2° 03′ W. | 47½ | 8·6 | 19·55 | 35·32 | 28·38 |
| 17 | 7.48 a.m. | 49 44 N. | 2 01 W. | 45½ | 7·5 | 19·51 | 35·25 | 28·32 |
| 17 | 10.06 a.m. | 49 15 N. | 2 18 W. | 46 | 7·8 | 19·52 | 35·26 | 28·34 |
| 31 | 3.53 a.m. | 50 28 N. | 1 43 W. | 44¼ | 6·8 | 19·47 | 35·17 | 28·27 |
| 31 | 4.53 a.m. | 50 17 N. | 1 50 W. | 43½ | 6·4 | 19·49 | 35·21 | 28·30 |
| 31 | 5.53 a.m. | 50 06 N. | 1 57 W. | 45½ | 7·5 | 19·56 | 35·34 | 28·40 |
| 31 | 6.53 a.m. | 49 55 N. | 2 03 W. | 46 | 7·8 | 19·53 | 35·28 | 28·35 |
| 31 | 7.45 a.m. | 49 44 N. | 2 01 W. | 44½ | 6·9 | 19·36 | 34·97 | 28·11 |
| 31 | 9.54 a.m. | 49 15 N. | 2 18½ W. | 44¾ | 7·1 | 19·52 | 35·26 | 28·34 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 11 | 11 p.m. | 48 53 N. | 2 25 W. | 50 | 10·0 | 19·47 | 35·17 | 28·27 |
| 12 | 5 p.m | 49 19 N. | 2 25 W. | 51 | 10·6 | 19·52 | 35·26 | 28·34 |
| 12 | 11 p.m. | 49 31 N. | 2 30 W. | 50½ | 10·3 | 19·52 | 35·26 | 28·34 |
| 13 | 1 a.m. | 49 43 N. | 2 55 W. | 50 | 10·0 | 19·60 | 35·41 | 28·46 |
| 13 | 3.15 a.m. | 49 55 N. | 3 22 W. | 50 | 10·0 | 19·61 | 35·43 | 28·47 |
| 13 | 5 a.m. | 50 08 N. | 3 49 W. | 49½ | 9·7 | 19·53 | 35·28 | 28·35 |
| 28 | Midnight | 48 53 N. | 2 25 W. | 47½ | 8·6 | 19·50 | 35·23 | 28·31 |
| 28 | 2 a.m. | 49 19 N. | 2 55 W. | 48 | 8·9 | 19·51 | 35·25 | 28·32 |
| 28 | 4 a.m. | 49 31 N. | 3 09 W. | 50 | 10·0 | 19·56 | 35·34 | 28·40 |
| 28 | 6 a.m. | 49 43 N. | 3 24 W. | 48½ | 9·2 | 19·60 | 35·41 | 28·46 |
| 28 | 8 a.m. | 49 55 N. | 3 38 W. | 50 | 10·0 | 19·61 | 35·43 | 28·47 |
| 28 | 9.15 a.m. | 50 08 N. | 3 54 W. | 51 | 10·6 | 19·55 | 35·32 | 28·38 |
| | | | FEBRUARY, 1905. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 9 | 1.20 a.m. | 50 35 N. | 0 02 E. | 46 | 7·8 | 19·38 | 35·01 | 28·14 |
| 9 | 2.35 a.m. | 50 23 N. | 0 01 W. | 47½ | 8·6 | 19·46 | 35·16 | 28·25 |
| 9 | 3.50 a.m. | 50 11 N. | 0 03 W. | 49 | 9·4 | 19·52 | 35·26 | 28·34 |
| 9 | 5.05 a.m. | 49 59 N. | 0 05 W. | 49 | 9·4 | 19·46 | 35·16 | 28·25 |
| 9 | 6.30 a.m. | 49 47 N. | 0 08 W. | 48 | 8·9 | 19·37 | 34·99 | 28·12 |
| 15 | 9 p.m. | 50 35 N. | 0 02 E. | 46 | 7·8 | 19·43 | 35·10 | 28·21 |
| 15 | 11 p.m. | 50 23 N. | 0 00 | 47½ | 8·6 | 19·51 | 35·25 | 28·32 |
| 16 | 0·30 a.m. | 50 11 N. | 0 02 W. | 48 | 8·9 | 19·53 | 35·28 | 28·35 |
| 16 | 2 a.m. | 49 59 N. | 0 04 W. | 48½ | 9·2 | 19·50 | 35·23 | 28·31 |
| 16 | 3.30 a.m. | 49 47 N. | 0 06 W. | 48 | 8·9 | 19·47 | 35·17 | 28·27 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 12 | 1.50 a.m. | 50 35 N. | 0 52½ W. | 43½ | 6·4 | 19·47 | 35·17 | 28·27 |
| 12 | 2.40 a.m. | 50 23 N. | 0 43 W. | 45½ | 7·5 | 19·52 | 35·26 | 28·34 |
| 12 | 3.30 a.m. | 50 11 N. | 0 33 W. | 47 | 8·3 | 19·50 | 35·23 | 28·31 |
| 12 | 4.20 a.m. | 49 56 N. | 0 21 W. | 45 | 7·2 | 19·41 | 35·07 | 28·18 |
| 12 | 5.10 a.m. | 49 44 N. | 0 10 W. | 45½ | 7·5 | 19·39 | 35·03 | 28·15 |
| 12 | 6 a.m. | 49 33 N. | 0 02 W. | 43¼ | 6·2 | 17·99 | 32·50 | 26·11 |
| 26 | 1.50 a.m. | 50 36 N. | 0 54 W. | 43½ | 6·4 | | Lost | |
| 26 | 2.50 a.m. | 50 23 N. | 0 44 W. | 45½ | 7·5 | 19·55 | 35·32 | 28·38 |
| 26 | 3.42 a.m. | 50 10 N. | 0 33 W. | 46½ | 8·1 | 19·50 | 35·23 | 28·31 |
| 26 | 4.30 p.m. | 49 59 N. | 0 24 W. | 47½ | 8·6 | 19·45 | 35·14 | 28·24 |
| 26 | 5.20 p.m. | 49 46 N. | 0 14 W. | 46 | 7·8 | 19·50 | 35·23 | 28·31 |
| 26 | 6.25 p.m. | 49 33 N. | 0 03 W. | 45 | 7·2 | 19·34 | 34·94 | 28·08 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 14 | — | 50 28 N. | 1 40 W. | — | — | 19·39 | 35·03 | 28·15 |
| 14 | — | 50 16 N. | 1 45 W. | — | — | 19·41 | 35·07 | 28·18 |
| 14 | — | 50 05 N. | 1 50 W. | — | — | 19·49 | 35·21 | 28·30 |
| 14 | — | 49 53 N. | 1 55 W. | — | — | 19·47 | 35·17 | 28·27 |

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl.‰ | S.‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY, 1905—*continued.* | | | | | | |
| | | SOUTHAMPTON-ST. MALO—*continued.* | | | | | | |
| 14 | — | 49 44 N. | 2 00 W. | — | — | 19·31 | 34·88 | 28·03 |
| 14 | — | 49 15 N. | 2 19 W. | — | — | 19·50 | 35·23 | 28·31 |
| 28 | 2.19 a.m. | 50 28 N. | 1 43 W. | 38½ | 3·6 | 19·15 | 34·60 | 27·80 |
| 28 | 3.22 a.m. | 50 17 N. | 1 50 W. | 41 | 5·0 | 19·44 | 35·12 | 28·22 |
| 28 | 4.25 a.m | 50 06 N. | 1 57 W. | 42½ | 5·8 | 19·50 | 35·23 | 28·31 |
| 28 | 5.28 a.m. | 49 55 N. | 2 03 W. | 42½ | 5·8 | 19·51 | 35·25 | 28·32 |
| 28 | 6.29 a.m. | 49 44 N. | 2 01 W. | 43 | 6·1 | 19·31 | 34·88 | 28·03 |
| 28 | 8.49 a.m. | 49 15 N. | 2 18½ W. | 44 | 6·7 | 19·45 | 35·14 | 28·24 |
| | | PLYMOUTH-ST. BRIEUC. | | | | | | |
| 21 | 11 p.m. | 48 55 N. | 2 25 W. | 46½ | 8·1 | 19·50 | 35·23 | 28·31 |
| 22 | 7 p.m. | 49 19 N. | 2 25 W. | 45½ | 7·5 | 19·38 | 35·01 | 28·14 |
| 23 | 2.30 a.m. | 49 31 N. | 2 30 W. | 44 | 6·7 | 19·55 | 35·32 | 28·38 |
| 23 | 5 a.m. | 49 43 N. | 2 55 W. | 45 | 7·2 | 19·70 | 35·59 | 28·60 |
| 23 | 7.30 a.m. | 49 52 N. | 3 15 W. | 46 | 7·8 | 19·58 | 35·37 | 28·43 |
| 23 | 9 a.m. | 50 08 N. | 3 49 W. | 44½ | 6·9 | 19·51 | 35·25 | 28·32 |
| | | PLYMOUTH-CORK. | | | | | | |
| 18 | 4.47 p.m. | 50 15 N. | 6 01 W. | 49¾ | 9·8 | 19·58 | 35·37 | 28·43 |
| 18 | 6.55 p.m. | 50 30 N. | 6 23 W. | 48 | 8·9 | 19·39 | 35·03 | 28·15 |
| 18 | 10.05 p.m. | 50 44 N. | 6 44 W. | 48½ | 9·2 | 19·48 | 35·19 | 28·28 |
| 19 | 1.05 a.m. | 50 59 N. | 7 06 W. | 48½ | 9·2 | 19·48 | 35·19 | 28·28 |
| 19 | 3.45 a.m. | 51 13 N. | 7 28 W. | 48 | 8·9 | 19·46 | 35·16 | 28·25 |
| 19 | 6 a.m. | 51 28 N. | 7 48 W. | 47¼ | 8·4 | 19·43 | 35·10 | 28·21 |
| | | MARCH, 1905. | | | | | | |
| | | NEWHAVEN-CAEN. | | | | | | |
| 1 | 9.35 p.m. | 50 35 N. | 0 02 E. | 45 | 7·2 | 19·50 | 35·23 | 28·31 |
| 1 | 10.42 p.m. | 50 23 N. | 0 01 W. | 46 | 7·8 | 19·51 | 35·25 | 28·32 |
| 1 | 11.50 p.m. | 50 12 N. | 0 03 W. | 46 | 7·8 | 19·29 | 34·85 | 28·00 |
| 2 | 1 a.m. | 49 59 N. | 0 06 W. | 46 | 7·8 | 19·41 | 35·07 | 28·18 |
| 2 | 2.15 a.m. | 49 47 N. | 0 09 W. | 45 | 7·2 | 19·39 | 35·03 | 28·15 |
| 2 | 3.30 a.m. | 49 35 N. | 0 11 W. | 43 | 6·1 | 17·08 | 30·86 | 24·79 |
| 16 | 5.10 p.m. | 50 35 N. | 0 01 E. | 46 | 7·8 | 19·36 | 34·97 | 28·11 |
| 16 | 6.35 p.m. | 50 23 N. | 0 00. | 47 | 8·3 | 19·47 | 35·17 | 28·27 |
| 16 | 8.10 p.m. | 50 11 N. | 0 03 W. | 48 | 8·9 | 19·47 | 37·17 | 28·27 |
| 16 | 9.45 p.m. | 49 59 N. | 0 05 W. | 48 | 8·9 | 19·40 | 35·05 | 28·16 |
| 16 | 11.30 p.m. | 49 47 N. | 0 07 W. | 47 | 8·3 | 19·18 | 34·65 | 27·84 |
| 29 | 7.30 p.m. | 50 35 N. | 0 02 E. | 48 | 8·9 | 19·47 | 37·17 | 28·27 |
| 29 | 8.55 p.m. | 50 23 N. | 0 01 W. | 48 | 8·9 | 19·55 | 35·32 | 28·38 |
| 29 | 10.10 p.m. | 50 12 N. | 0 03 W. | 49 | 9·4 | 19·55 | 35·32 | 28·38 |
| 29 | 11.30 p.m. | 49 59 N. | 0 06 W. | 48 | 8·9 | 19·44 | 35·12 | 28·22 |
| 30 | 1.56 a.m. | 49 47 N. | 0 09 W. | 48 | 8·9 | 19·08 | 34·47 | 27·70 |
| 30 | 2.10 a.m. | 49 38 N. | 0 11 W. | 47 | 8·3 | 18·27 | 33·01 | 26·52 |
| | | SOUTHAMPTON-HAVRE. | | | | | | |
| 14 | 0.45 a.m. | 49 34 N. | 0 04 W. | 46½ | 8·1 | 18·61 | 33·62 | 27·02 |
| 14 | 1.42 a.m. | 49 46 N. | 0 14 W. | 47 | 8·3 | 19·06 | 34·43 | 27·67 |
| 14 | 2.25 a.m. | 49 57 N. | 0 22 W. | 48 | 8·9 | 19·38 | 35·01 | 28·14 |
| 14 | 3.22 a.m. | 50 12 N. | 0 34 W. | 47½ | 8·6 | 19·48 | 35·19 | 28·28 |
| 14 | 4.20 p.m. | 50 24 N. | 0 44 W. | 45½ | 7·5 | 19·48 | 35·19 | 28·28 |
| 14 | 5.17 p.m. | 50 39 N. | 0 57 W. | 44½ | 6·9 | 19·31 | 34·88 | 28·03 |
| 31 | 1.40 a.m. | 50 34 N. | 0 52 W. | 46½ | 8·1 | 18·97 | 34·27 | 27·54 |
| 31 | 2.35 a.m. | 50 23 N. | 0 44 W. | 47 | 8·3 | 19·48 | 35·19 | 28·28 |
| 31 | 3.30 a.m. | 50 09 N. | 0 32 W. | 47 | 8·3 | 19·52 | 35·26 | 28·34 |
| | | MARCH, 1905—*continued.* | | | | | | |
| | | SOUTHAMPTON-HAVRE—*continued.* | | | | | | |
| 31 | 4.15 a.m. | 49 57 N. | 0 22 W. | 47½ | 8·6 | 19·52 | 35·26 | 28·34 |
| 31 | 5.10 a.m. | 49 46 N. | 0 14 W. | 46 | 7·8 | 19·03 | 34·38 | 27·63 |
| 31 | 6.05 a.m. | 49 33 N. | 0 03 W. | 46½ | 8·1 | 18·38 | 33·21 | 26·68 |
| | | SOUTHAMPTON-ST. MALO. | | | | | | |
| 16 | 2.14 a.m. | 49 15 N. | 2 18½ W. | 44½ | 6·9 | 19·35 | 34·96 | 28·09 |
| 16 | 4.25 a.m. | 49 44 N. | 2 01 W. | 45½ | 7·5 | 19·30 | 34·87 | 28·02 |
| 16 | 5.20 a.m. | 49 56 N. | 1 56½ W. | 46 | 7·8 | 19·44 | 35·12 | 28·22 |
| 16 | 6.15 a.m. | 50 07 N. | 1 51 W. | 45½ | 7·3 | 19·51 | 35·25 | 28·32 |
| 16 | 7.10 a.m. | 50 19 N. | 1 46 W. | 45 | 7·2 | 19·53 | 35·28 | 28·35 |
| 16 | 8.05 a.m. | 50 30 N. | 1 41 W. | 43½ | 6·4 | 19·42 | 35·08 | 28·19 |
| 28 | 0.24 a.m. | 50 28 N. | 1 43 W. | 45½ | 7·5 | 19·40 | 35·05 | 28·16 |
| 28 | 1.26 a.m. | 50 17 N. | 1 50 W. | 46½ | 8·1 | 19·46 | 35·16 | 28·25 |
| 28 | 2.28 a.m. | 50 06 N. | 1 57 W. | 47½ | 8·6 | 19·59 | 35·39 | 28·44 |
| 28 | 3.30 a.m. | 49 55 N. | 2 03 W. | 47½ | 8·6 | 19·61 | 35·43 | 28·47 |
| 28 | 4.30 a.m. | 49 44 N. | 2 01 W. | 47¼ | 8·4 | 19·51 | 35·25 | 28·32 |
| 28 | 6.50 a.m. | 49 15 N. | 2 18½ W. | 47 | 8·3 | 19·44 | 35·12 | 28·22 |
| | | PLYMOUTH-ST. BRIEUC. | | | | | | |
| 15 | 10 p.m. | 48 55 N. | 2 25 W. | 46½ | 8·1 | 19·42 | 35·08 | 28·19 |
| 15 | Midnight | 49 19 N. | 2 25 W. | 47½ | 8·6 | 19·51 | 35·25 | 28·32 |
| 16 | 8 a.m. | 49 31 N. | 2 30 W. | 47½ | 8·6 | 19·51 | 35·25 | 28·32 |
| 16 | 10.0 a.m. | 49 43 N. | 2 55 W. | 47½ | 8·6 | 19·51 | 35·25 | 28·32 |
| 16 | Noon | 49 52 N. | 3 15 W. | 48¾ | 9·3 | 19·64 | 35·48 | 28·51 |
| 16 | 2 p.m. | 50 08 N. | 3 49 W. | 48½ | 9·2 | 19·54 | 35·30 | 28·37 |
| 27 | Midnight | 48 53 N. | 2 25 W. | 47½ | 8·6 | 19·43 | 35·10 | 28·21 |
| 29 | 5 p.m. | 49 19 N. | 2 25 W. | 48¾ | 9·3 | 19·53 | 35·28 | 28·35 |
| 29 | 11 p.m. | 49 31 N. | 2 30 W. | 49 | 9·4 | 19·52 | 35·26 | 28·34 |
| 30 | 1 a.m. | 49 43 N. | 2 55 W. | 49 | 9·4 | 19·59 | 35·39 | 28·44 |
| 30 | 3 a.m. | 49 52 N. | 3 15 W. | 49 | 9·4 | 19·59 | 35·39 | 28·44 |
| 30 | 5 a.m. | 50 08 N. | 3 49 W. | 49 | 9·4 | 19·52 | 35·26 | 28·34 |
| | | APRIL, 1905. | | | | | | |
| | | NEWHAVEN-CAEN. | | | | | | |
| 13 | 3.40 a.m. | 50 35 N. | 0 02 E. | 48 | 8·9 | 19·48 | 35·19 | 28·28 |
| 13 | 4.55 a.m. | 50 23 N. | 0 01 W. | 49 | 9·4 | 19·54 | 35·30 | 28·37 |
| 13 | 6.15 a.m. | 50 12 N. | 0 03 W. | 49 | 9·4 | 19·55 | 35·32 | 28·38 |
| 13 | 7.30 a.m. | 49 59 N. | 0 06 W. | 49 | 9·4 | 19·47 | 35·17 | 28·27 |
| 13 | 9 a.m. | 49 47 N. | 0 09 W. | 49 | 9·4 | 19·16 | 34·61 | 27·82 |
| 13 | 10.20 a.m. | 49 36 N. | 0 11 W. | 48 | 8·9 | 18·20 | 32·88 | 26·42 |
| 27 | 5.10 a.m. | 50 35 N. | 0 02 E. | 48 | 8·9 | 19·40 | 35·05 | 28·16 |
| 27 | 6.25 a.m. | 50 23 N. | 0 00 | 48 | 8·9 | 19·53 | 35·28 | 28·35 |
| 27 | 7.45 a.m. | 50 11 N. | 0 02 W. | 49 | 9·4 | 19·54 | 35·30 | 28·37 |
| 27 | 9.10 a.m. | 49 59 N. | 0 04 W. | 49 | 9·4 | 19·51 | 35·25 | 28·32 |
| 27 | 10.40 a.m. | 49 47 N. | 0 07 W. | 49 | 9·4 | 19·43 | 35·10 | 28·21 |
| | | SOUTHAMPTON-HAVRE. | | | | | | |
| 12 | 1.50 a.m. | 50 36 N. | 0 54 W. | 47½ | 8·6 | 19·28 | 34·83 | 27·99 |
| 12 | 2.32 a.m. | 50 27 N. | 0 46 W. | 47 | 8·3 | 19·35 | 34·96 | 28·09 |
| 12 | 3.20 a.m. | 50 15 N. | 0 35 W. | 47½ | 8·6 | 19·47 | 35·17 | 28·27 |
| 12 | 4.15 a.m. | 50 01 N. | 0 26 W. | 48 | 8·9 | 19·51 | 35·25 | 28·32 |
| 12 | 5.05 a.m. | 49 49 N. | 0 16 W. | 47½ | 8·6 | 19·27 | 34·81 | 27·98 |
| 12 | 6.05 a.m. | 49 35 N. | 0 05 W. | 47½ | 8·6 | 18·65 | 33·69 | 27·07 |
| 27 | 1.26 a.m. | 49 38 N. | 0 01 W. | 48½ | 9·2 | 18·84 | 34·04 | 27·35 |
| 27 | 2.20 a.m. | 49 51 N. | 0 12 W. | 49 | 9·4 | 19·44 | 35·12 | 28·22 |

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl.‰ | S.‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | APRIL, 1905—*continued.* | | | | | | |
| | | SOUTHAMPTON-HAVRE—*continued.* | | | | | | |
| 27 | 3 08 a.m. | 50 05 N. | 0 23 W. | 48½ | 9·2 | 19·46 | 35·16 | 28·25 |
| 27 | 4.02 a.m. | 50 18½ N. | 0 34 W. | 50 | 10·0 | 19·56 | 35·34 | 28·40 |
| 27 | 4.55 a.m. | 50 34½ N. | 0 47 W. | 48½ | 9·2 | 19·38 | 35·01 | 28·14 |
| 27 | 5.50 a.m. | 50 41½ N. | 0 56 W. | 48⅛ | 9·2 | 19·20 | 34·69 | 27·87 |
| | | SOUTHAMPTON-ST. MALO. | | | | | | |
| 10 | 11.05 p.m. | 50 30 N. | 1 42 W. | 47½ | 8·6 | 19·33 | 34·92 | 28·06 |
| 10 | Midnight | 50 17 N. | 1 50 W. | 47½ | 8·6 | 19·48 | 35·19 | 28·28 |
| 11 | 0.55 a.m. | 50 06 N. | 1 57 W. | 47⅜ | 8·7 | 19·49 | 35·21 | 28·30 |
| 11 | 0 a.m. | 49 55 N. | 2 03 W. | 47⅜ | 8·7 | 19·53 | 35·28 | 28·35 |
| 11 | 2.46 a.m. | 49 44 N. | 2 01 W. | 47½ | 8·6 | 19·44 | 35·12 | 28·22 |
| 11 | 4.55 a.m. | 49 15 N. | 2 18 W. | 47⅜ | 8·7 | 19·47 | 35·17 | 28·27 |
| 25 | 0.28 a.m. | 50 28 N. | 1 41 W. | 48 | 8·9 | 19·34 | 34·94 | 28·08 |
| 25 | 1.23 a.m. | 50 17 N. | 1 47 W. | 47½ | 8·6 | 19·58 | 35·37 | 28·43 |
| 25 | 2.18 a.m. | 50 06 N. | 1 53 W. | 47 | 8·3 | 19·53 | 35·28 | 28·35 |
| 25 | 3.13 a.m. | 49 54 N. | 1 59 W. | 47 | 8·3 | 19·53 | 35·28 | 28·35 |
| 25 | 4.03 a.m. | 49 44 N. | 2 01 W. | 47 | 8·3 | 19·53 | 35·28 | 28·35 |
| 25 | 6.59 a.m. | 49 15 N. | 2 18 W. | 47½ | 8·6 | 19·42 | 35·08 | 28·19 |
| | | PLYMOUTH-ST. BRIEUC. | | | | | | |
| 11 | 10.40 a.m. | 48 55 N. | 2 25 W. | 49½ | 9·7 | 19·39 | 35·03 | 28·15 |
| 12 | 4.40 p.m. | 49 19 N. | 2 25 W. | 49½ | 9·7 | 19·50 | 35·23 | 28·31 |
| 12 | 10.40 p.m. | 49 31 N. | 2 30 W. | 50½ | 10·3 | 19·52 | 35·26 | 28·34 |
| 13 | 0.35 a.m. | 49 43 N. | 2 55 W. | 49½ | 9·7 | 19·57 | 35·35 | 28·41 |
| 13 | 2.30 a.m. | 49 52 N. | 3 15 W. | 50 | 10·0 | 19·63 | 35·46 | 28·50 |
| 13 | 4.30 a.m. | 50 08 N. | 3 49 W. | 50 | 10·0 | 19·55 | 35·32 | 28·38 |
| 25 | 11 a.m. | 48 55 N. | 2 25 W. | 50 | 10·0 | 19·47 | 35·17 | 28·27 |
| 26 | 5 p.m. | 49 19 N. | 2 25 W. | 50 | 10·0 | 19·50 | 35·23 | 28·31 |
| 26 | 10.30 p.m. | 49 31 N. | 2 30 W. | 50 | 10·0 | 19·54 | 35·30 | 28·37 |
| 27 | 0.20 a.m. | 49 43 N. | 2 55 W. | 49½ | 9·7 | 19·60 | 35·41 | 28·46 |
| 27 | 2.45 a.m. | 49 52 N. | 3 15 W. | 50 | 10·0 | 19·60 | 35·41 | 28·46 |
| 27 | 5 a.m. | 50 08 N. | 3 49 W. | 50 | 10·0 | 19·49 | 35·21 | 28·30 |
| | | MAY, 1905. | | | | | | |
| | | NEWHAVEN-CAEN. | | | | | | |
| 11 | 3.38 a.m. | 50 35 N. | 0 02 E. | 50 | 10·0 | 19·47 | 35·17 | 28·27 |
| 11 | 4.45 a.m. | 50 23 N. | 0 00 | 50 | 10·0 | 19·55 | 35·32 | 28·38 |
| 11 | 6.07 a.m. | 50 11 N. | 0 02 W. | 50 | 10·0 | 19·40 | 35·05 | 28·16 |
| 11 | 7.25 a.m. | 49 59 N. | 0 04 W. | 50 | 10·0 | 19·37 | 34·99 | 28·12 |
| 11 | 8.50 a.m. | 49 47 N. | 0 06 W. | 50 | 10·0 | 19·22 | 34·72 | 27·90 |
| 25 | 3.35 a.m. | 50 35 N. | 0 02 E. | 50 | 10·0 | 19·43 | 35·10 | 28·21 |
| 25 | 4.50 a.m. | 50 23 N. | 0 00 | 51 | 10·6 | 19·54 | 35·30 | 28·37 |
| 25 | 6.10 a.m. | 50 11 N. | 0 02 W. | 52 | 11·1 | 19·52 | 35·26 | 28·34 |
| 25 | 7.50 a.m. | 49 59 N. | 0 04 W. | 52 | 11·1 | 19·44 | 35·12 | 28·22 |
| 25 | 9.05 a.m. | 49 47 N. | 0 06 W. | 52 | 11·1 | 19·40 | 35·05 | 28·16 |
| | | SOUTHAMPTON-HAVRE. | | | | | | |
| 10 | 1.50 a.m. | 50 37 N. | 0 52 W. | 49 | 9·4 | 19·30 | 34·87 | 28·02 |
| 10 | 2.40 a.m. | 50 21 N. | 0 42 W. | 49½ | 9·6 | 19·48 | 35·19 | 28·28 |
| 10 | 3.30 a.m. | 50 11 N. | 0 34 W. | 49½ | 9·7 | 19·54 | 35·30 | 28·37 |
| 10 | 4.20 a.m. | 49 57 N. | 0 21 W. | 49 | 9·4 | 19·37 | 34·99 | 28·12 |
| 10 | 5.12 a.m. | 49 45 N. | 0 12 W. | 49½ | 9·7 | 19·26 | 34·79 | 27·96 |
| 10 | 6.05 a.m. | 49 38 N. | 0 01 W. | 50 | 10·0 | 18·81 | 33·98 | 27·31 |
| 20 | 1 a.m. | 49 33 N. | 0 03 W. | 52 | 11·1 | 18·89 | 34·13 | 27·42 |
| 20 | 1.49 a.m. | 49 46 N. | 0 14 W. | 51½ | 10·8 | 19·33 | 34·92 | 28·06 |
| | | MAY, 1905—*continued.* | | | | | | |
| | | SOUTHAMPTON-HAVRE—*continued.* | | | | | | |
| 20 | 2.45 a.m. | 50 00 N. | 0 24 W. | 51 | 10·6 | 19·39 | 35·03 | 28·15 |
| 20 | 3.33 a.m. | 50 13 N. | 0 35 W. | 51 | 10·6 | 19·54 | 35·30 | 28·37 |
| 20 | 4.20 a.m. | 50 24 N. | 0 44 W. | 50½ | 10·3 | 19·54 | 35·30 | 28·37 |
| 20 | 5.10 a.m. | 50 38 N. | 0 56 W. | 51½ | 10·8 | 19·44 | 35·12 | 28·22 |
| | | SOUTHAMPTON-ST. MALO. | | | | | | |
| 8 | 10.45 p.m. | 50 28 N. | 1 41 W. | 49½ | 9·7 | 19·48 | 35·19 | 28·28 |
| 8 | 11.40 p.m. | 50 17 N. | 1 47 W. | 49½ | 9·6 | 19·61 | 35·43 | 28·47 |
| 9 | 0.35 a.m. | 50 06 N. | 1 53 W. | 49¼ | 9·6 | 19·64 | 35·48 | 28·51 |
| 9 | 1.30 a.m. | 49 54 N. | 1 59 W. | 49¼ | 9·6 | 19·58 | 35·37 | 28·43 |
| 9 | 2.20 a.m. | 49 44 N. | 2 01 W. | 49⅜ | 9·8 | 19·45 | 35·14 | 28·24 |
| 9 | 4.20 a.m. | 49 15 N. | 2 18 W. | 49⅜ | 9·8 | 19·46 | 35·16 | 28·25 |
| 22 | 11.20 p.m. | 49 15 N. | 2 18 W. | 49 | 9·4 | 19·34 | 34·94 | 28·08 |
| 23 | 1.46 a.m. | 49 44 N. | 2 01 W. | 49 | 9·4 | 19·44 | 35·12 | 28·22 |
| 23 | 2.50 a.m. | 49 54 N. | 1 59 W. | 49⅜ | 9·8 | 19·56 | 35·34 | 28·40 |
| 23 | 3.54 a.m. | 50 06 N. | 1 53 W. | 49½ | 9·7 | 19·65 | 35·50 | 28·53 |
| 23 | 4.58 a.m. | 50 17 N. | 1 47 W. | 49½ | 9·7 | | Lost | |
| 23 | 5.02 a.m. | 50 28 N. | 1 41 W. | 49½ | 9·7 | 19·41 | 35·07 | 28·18 |
| | | PLYMOUTH-ST. BRIEUC. | | | | | | |
| 9 | 10 p.m. | 48 55 N. | 2 25 W. | 51 | 10·6 | 19·45 | 35·14 | 28·24 |
| 10 | 4.30 p.m. | 49 19 N. | 2 25 W. | 53½ | 11·9 | 19·47 | 35·17 | 28·27 |
| 10 | 10.30 p.m. | 49 31 N. | 2 30 W. | 51½ | 10·8 | 19·52 | 35·26 | 28·34 |
| 11 | 0.30 a.m. | 49 43 N. | 2 55 W. | 51 | 10·6 | 19·60 | 35·41 | 28·46 |
| 11 | 2.45 a.m. | 49 52 N. | 3 15 W. | 51 | 10·6 | 19·63 | 35·46 | 28·50 |
| 11 | 5 a.m. | 50 08 N. | 3 49 W. | 50 | 10·0 | 19·48 | 35·19 | 28·28 |
| 22 | 10.0 p.m. | 48 55 N. | 2 25 W. | 52 | 11·1 | 19·49 | 35·21 | 28·30 |
| 24 | 5 p.m. | 49 19 N. | 2 25 W. | 52⅜ | 11·5 | 19·51 | 35·25 | 28·32 |
| 24 | 10.30 p.m. | 49 31 N. | 2 30 W. | 51½ | 10·8 | 19·54 | 35·30 | 28·37 |
| 25 | 1 a.m. | 49 43 N. | 2 55 W. | 52 | 11·1 | 19·63 | 35·46 | 28·50 |
| 25 | 3 a.m. | 49 52 N. | 3 15 W. | 52 | 11·1 | 19·53 | 35·2 | 28·35 |
| 25 | 5 a.m. | 50 08 N. | 3 49 W. | 52 | 11·1 | 19·48 | 35·19 | 28·28 |
| | | PLYMOUTH-CORK. | | | | | | |
| 6 | 10 p.m. | 51 29 N. | 7 47 W. | 52 | 11·1 | 19·51 | 35·25 | 28·32 |
| 6 | 11.30 p.m. | 51 14 N. | 7 25 W. | 51¼ | 10·7 | 19·47 | 35·17 | 28·27 |
| 7 | 1.30 a.m. | 51 00 N. | 7 03 W. | 51 | 10·6 | 19·47 | 35·17 | 28·27 |
| 7 | 3.20 a.m. | 50 45 N. | 6 41 W. | 50⅞ | 10·4 | 19·47 | 35·17 | 28·27 |
| 7 | 5 a.m. | 50 31 N. | 6 21 W. | 50⅝ | 10·4 | 19·48 | 35·19 | 28·28 |
| 7 | 6.45 a.m. | 50 16 N. | 6 00 W. | 50 | 10·0 | 19·47 | 35·17 | 28·27 |
| 20 | 9.45 p.m. | 51 29 N. | 7 47 W. | 55 | 12·8 | 19·48 | 35·19 | 28·28 |
| 20 | 11.32 p.m. | 51 14 N. | 7 25 W. | 54½ | 12·5 | 19·44 | 35·12 | 28·22 |
| 21 | 1.25 a.m. | 51 00 N. | 7 03 W. | 54 | 12·2 | 19·43 | 35·10 | 28·21 |
| 21 | 5 a.m. | 50 31 N. | 6 21 W | 53 | 11·7 | 19·48 | 35·19 | 28·28 |
| 21 | 6.10 a.m. | 50 16 N. | 6 00 W. | 51½ | 10·8 | 19·47 | 35·17 | 28·27 |
| | | JUNE, 1905. | | | | | | |
| | | NEWHAVEN-CAEN. | | | | | | |
| 8 | 3.40 a.m. | 50 35 N. | 0 02 E. | 52 | 11·1 | 19·45 | 35·14 | 28·24 |
| 8 | 6.05 a.m. | 50 11 N. | 0 00 | 53 | 11·7 | 19·40 | 35·05 | 28·16 |
| 8 | 7.20 a.m. | 49 59 N. | 0 04 W. | 53 | 11·7 | 19·38 | 35·01 | 28·14 |
| 8 | 8.35 a.m. | 49 47 N. | 0 07 W. | 54 | 12·2 | 19·19 | 34·67 | 27·86 |
| 22 | 2.45 a.m. | 50 35 N. | 0 02 E. | 54 | 12·2 | 19·46 | 35·16 | 28·25 |
| 22 | 4 a.m. | 50 23 N. | 0 01 W. | 55 | 12·8 | 19·47 | 35·17 | 28·27 |
| 22 | 5.10 a.m. | 50 12 N. | 0 03 W. | 52 | 12·8 | 19·34 | 34·94 | 28·08 |

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl.‰ | S.‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | JUNE, 1905—*continued.* | | | | | |
| | | | NEWHAVEN-CAEN—*continued.* | | | | | |
| 22 | 6.20 a.m. | 49° 59′ N. | 0° 06′ W. | 55 | 12·8 | 19·27 | 34·81 | 27·98 |
| 22 | 7.35 a.m. | 49 47 N. | 0 09 W. | 57 | 13·9 | 19·18 | 34·65 | 27·84 |
| 22 | 8.45 a.m. | 49 36 N. | 0 11 W. | 57 | 13·9 | 18·72 | 33·82 | 27·18 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 4 | 1.50 a.m. | 50 34 N. | 0 52 W. | 54 | 12·2 | 19·35 | 34·96 | 28·09 |
| 4 | 2.40 a.m. | 50 23 N. | 0 44 W. | 53½ | 11·9 | 19·51 | 35·25 | 28·32 |
| 4 | 3.30 a.m. | 50 11 N. | 0 33 W. | 53 | 11·7 | 19·54 | 35·30 | 28·37 |
| 4 | 4.20 a.m. | 49 59 N. | 0 24 W. | 52½ | 11·4 | 19·36 | 34·97 | 28·11 |
| 4 | 5.10 a.m. | 49 47 N. | 0 14 W. | 53¼ | 11·8 | 19·36 | 34·97 | 28 11 |
| 4 | 6.05 a.m. | Off Cape | La Heve | 55 | 12·8 | 18·78 | 33·93 | 27·26 |
| 18 | 1.54 a.m. | 50 36 N. | 0 54 W. | 57 | 13·9 | 19·38 | 35·01 | 28·14 |
| 18 | 2.40 a.m. | 50 26 N. | 0 45 W. | 55 | 12·8 | 19·43 | 35·10 | 28 21 |
| 18 | 3.35 a.m. | 50 14 N. | 0 36 W. | 54 | 12·2 | 19·50 | 35·23 | 28·31 |
| 18 | 4.25 a.m. | 50 02 N. | 0 26 W. | 54 | 12·2 | 19·30 | 34·87 | 28·02 |
| 18 | 5.20 a.m. | 49 49 N. | 0 16 W. | 55 | 12·8 | 19·15 | 34·60 | 27·80 |
| 18 | 6.20 a.m. | 49 35 N. | 0 05 W. | 56¼ | 13·4 | 18·86 | 34·07 | 27·38 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 4 | 9.49 p.m. | 50 28 N. | 1 41 W. | 52½ | 11·4 | 19·11 | 34·52 | 27·74 |
| 4 | 10.44 p.m. | 50 17 N. | 1 47 W. | 52 | 11·1 | 19·20 | 34·69 | 27·87 |
| 4 | 11.39 p.m. | 50 06 N. | 1 53 W. | 52 | 11·1 | 19·53 | 35·28 | 28·35 |
| 5 | 0.34 a.m. | 49 54 N. | 1 59 W. | 52 | 11·1 | 19·54 | 35·30 | 28·37 |
| 5 | 1.23 a.m. | 49 44 N. | 2 01 W. | 52½ | 11·4 | 18·90 | 34·14 | 27·44 |
| 5 | 3.21 a.m. | 49 15 N. | 2 18 W. | 53 | 11·7 | 19·42 | 35·08 | 28·19 |
| 20 | 0.50 a.m. | 49 15 N. | 2 18 W. | 55½ | 13·1 | 19·42 | 35·08 | 28·19 |
| 20 | 3.52 a.m. | 49 44 N | 2 01 W. | 54½ | 12·5 | 19·32 | 34·90 | 28·05 |
| 20 | 4.47 a.m. | 49 54 N. | 1 59 W. | 54 | 12·2 | 19·50 | 35·23 | 28·31 |
| 20 | 5.42 a.m. | 50 06 N. | 1 53 W. | 54 | 12·2 | 19·46 | 35·16 | 28·25 |
| 20 | 6.37 a.m. | 50 17 N. | 1 47 W. | 54½ | 12·5 | 19·58 | 35·37 | 28·43 |
| 20 | 7.32 a.m. | 50 28 N. | 1 41 W. | 55 | 12·8 | 19·33 | 34·92 | 28·06 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 5 | 8.30 p.m. | 48 55 N. | 2 25 W. | 56 | 13·3 | 19·49 | 35·21 | 28·30 |
| 7 | 8 p.m. | 49 19 N. | 2 25 W. | 52¾ | 11·5 | 19·52 | 35·26 | 28·34 |
| 7 | 11 p.m. | 49 31 N. | 2 30 W. | 53 | 11·7 | 19·54 | 35·30 | 28·37 |
| 8 | 1 a.m. | 49 43 N. | 2 55 W. | 53 | 11·7 | 19·58 | 35·37 | 28·43 |
| 8 | 3 a.m. | 49 52 N. | 3 15 W. | 53 | 11·7 | 19·58 | 35·37 | 28·43 |
| 8 | 5 a.m. | 50 08 N. | 3 49 W. | 52 | 11·1 | 19·55 | 35·32 | 28·38 |
| 20 | 8.30 p.m. | 48 55 N. | 2 25 W. | 57 | 13·9 | 19·44 | 35·12 | 28·22 |
| 21 | 8 p.m. | 49 19 N. | 2 25 W. | 59½ | 15·3 | 19·41 | 35·07 | 28·18 |
| 21 | 11 p.m. | 49 31 N. | 2 30 W. | 56 | 13·3 | 19·50 | 35·23 | 28·31 |
| 22 | 1 a.m. | 49 43 N. | 2 55 W. | 55 | 12·8 | 19·48 | 35·19 | 28·28 |
| 22 | 3 a.m. | 49 52 N. | 3 15 W. | 54½ | 12·5 | 19·57 | 35·35 | 28·41 |
| 22 | 5 a.m. | 50 08 N. | 3 49 W. | 56 | 13·3 | 19·60 | 35·41 | 28·46 |
| | | | JULY, 1905. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 6 | 1.05 a.m. | 50 35 N. | 0 02 E. | 56 | 13·3 | 19·39 | 35·03 | 28·15 |
| 6 | 2.15 a.m. | 50 23 N. | 0 00 | 56 | 13·3 | 19·48 | 35·19 | 28·28 |
| 6 | 3.35 a.m. | 50 11 N. | 0 02 W. | 57 | 13·9 | 19·34 | 34·94 | 28·08 |
| 6 | 5 a.m. | 49 59 N. | 0 05 W. | 57 | 13·9 | 19·24 | 34·76 | 27·93 |
| 6 | 6.15 a.m. | 49 47 N. | 0 07 W. | 57½ | 14·2 | 19·18 | 34·65 | 27·84 |
| 20 | 2.25 a.m. | 50 35 N. | 0 02 E. | 59 | 15·0 | 19·41 | 35·07 | 28·18 |
| 20 | 3.35 a.m. | 50 23 N. | 0 01 W. | 58 | 14·4 | 19·46 | 35·16 | 28·25 |
| | | | JULY, 1905—*continued.* | | | | | |
| | | | NEWHAVEN-CAEN—*continued.* | | | | | |
| 20 | 4.45 a.m. | 50° 12′ N. | 0° 03′ W. | 58 | 14·4 | 19·37 | 34·99 | 28·12 |
| 20 | 5.56 a.m. | 49 59 N. | 0 04 W. | 59 | 15·0 | 19·29 | 34·85 | 28·00 |
| 29 | 7.05 a.m. | 49 47 N. | 0 09 W. | 59 | 15·0 | 19·20 | 34·69 | 27·87 |
| 20 | 8.10 a.m. | 49 36 N. | 0 11 W. | 64 | 17·8 | 18·21 | 32·90 | 26·43 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 2 | 1.50 a.m. | 50 36 N. | 0 54 W. | 60½ | 15·8 | 19·34 | 34·94 | 28·08 |
| 2 | 2.37 a.m. | 50 25 N. | 0 45 W. | 57 | 13·9 | 19·49 | 35·21 | 28·30 |
| 2 | 3.30 a.m. | 50 10 N. | 0 33 W. | 56½ | 13·6 | 19·48 | 35·19 | 28·28 |
| 2 | 4.10 a.m. | 50 00 N. | 0 24 W. | 56 | 13·3 | 19·25 | 34·78 | 27·95 |
| 2 | 5.10 a.m. | 49 47 N. | 0 14 W. | 57¼ | 14·0 | 19·21 | 34·70 | 27·89 |
| 2 | 6.05 a.m. | 49 33 N. | 0 03 W. | 60¼ | 15·7 | 18·78 | 33·93 | 27·26 |
| 16 | 1.50 a.m. | 50 35 N. | 0 53 W. | 61 | 16·1 | 19·37 | 34·99 | 28·12 |
| 16 | 2.40 a.m. | 50 23 N. | 0 44 W. | 58½ | 14·7 | 19·48 | 35·19 | 28·28 |
| 16 | 3.35 a.m. | 50 11 N. | 0 33 W. | 58 | 14·4 | 19·38 | 35·01 | 28·14 |
| 16 | 4.15 a.m. | 50 00 N. | 0 24 W. | 57½ | 14·2 | 19·28 | 34·83 | 27·99 |
| 16 | 5.10 a.m. | 49 47 N. | 0 14 W. | 59 | 15·0 | 19·21 | 34·70 | 27·89 |
| 16 | 6.05 a.m. | 49 34 N. | 0 04 W. | 63 | 17·2 | 18·52 | 33·46 | 26·88 |
| 30 | 1.50 a.m. | 50 35 N. | 0 53 W. | 65 | 18·3 | 19·21 | 34·70 | 27·89 |
| 30 | 2.40 a.m. | 50 23 N. | 0 43 W. | 60 | 15·6 | 19·50 | 35·23 | 28·31 |
| 30 | 3.34 a.m. | 50 10 N. | 0 33 W. | 59½ | 15·3 | 19·34 | 34·94 | 28·08 |
| 30 | 4.20 a.m. | 49 58 N. | 0 22 W. | 60 | 15·6 | 19·23 | 34·74 | 27·92 |
| 30 | 5.10 a.m. | 49 46 N. | 0 12 W. | 62 | 16·7 | 19·15 | 34·60 | 27·80 |
| 30 | 6.04 a.m. | 49 32 N. | 0 01 W. | 66 | 18·9 | 18·40 | 33·24 | 26·71 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 2 | 5.18 a.m. | 50 28 N. | 1 41 W. | 58¾ | 14·8 | 18·95 | 34·23 | 27·51 |
| 2 | 6.19 a.m. | 50 17 N. | 1 47 W. | 57½ | 14·2 | 19·35 | 34·96 | 28·09 |
| 2 | 7.20 a.m. | 50 06 N. | 1 53 W. | 56 | 13·3 | 19·48 | 35·19 | 28·28 |
| 2 | 8.21 a.m. | 49 54 N. | 1 59 W. | 56 | 13·3 | 19·48 | 35·19 | 28·28 |
| 2 | 9.19 a.m. | 49 44 N. | 2 01 W. | 57½ | 14·2 | 19·39 | 35·03 | 28·15 |
| 2 | 0·22 p.m. | 49 15 N. | 2 18 W. | 58¾ | 14·8 | 19·46 | 35·16 | 28·25 |
| 15 | 10.42 p.m. | 49 15 N. | 2 18½ W. | 59½ | 15·3 | 19·21 | 34·70 | 27·89 |
| 16 | 1.43 a.m. | 49 44 N. | 2 01 W. | 57½ | 14·2 | 19·31 | 34·88 | 28·03 |
| 16 | 2.40 a.m. | 49 56 N. | 1 56 W. | 57 | 13·9 | 19·32 | 34·90 | 28·05 |
| 16 | 3.37 a.m. | 50 07 N. | 1 51 W. | 57 | 13·9 | 19·46 | 35·16 | 28·25 |
| 16 | 4.34 a.m. | 50 19 N. | 1 46 W. | 57 | 13·9 | 19·54 | 35·30 | 28·37 |
| 16 | 5.31 a.m. | 50 30 N. | 1 41 W. | 58½ | 14·7 | 19·38 | 35·01 | 28·14 |
| 31 | 8.43 p.m. | 50 28 N. | 1 41 W. | 62¾ | 17·1 | 19·38 | 35·01 | 28·14 |
| 31 | 9.37 p.m. | 50 16 N. | 1 46 W. | 58 | 14·4 | 19·53 | 35·28 | 28·35 |
| 31 | 10.31 p.m. | 50 04 N. | 1 51 W. | 58 | 14·4 | 19·48 | 35·19 | 28·28 |
| 31 | 11.25 p.m. | 49 53 N. | 1 56 W. | 58½ | 14·7 | 19·48 | 35·19 | 28·28 |
| | | | AUGUST, 1905. | | | | | |
| 1 | 0.17 a.m. | 49 43 N. | 2 00 W. | 59¾ | 15·4 | 19·39 | 35·03 | 28·15 |
| 1 | — | 49 14 N. | 2 18 W. | 62 | 16·7 | 19·43 | 35·10 | 28·21 |
| | | | JULY, 1905. | | | | | |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 4 | 7.30 p.m. | 48 55 N. | 2 25 W. | 57 | 13·9 | 19·45 | 35·14 | 28·24 |
| 5 | 7 p.m. | 49 19 N. | 2 25 W. | 59½ | 15·3 | 19·43 | 35·10 | 28·21 |
| 5 | 11 p.m. | 49 31 N. | 2 30 W. | 57½ | 14·2 | 19·49 | 35·21 | 28·30 |
| 6 | 1 a.m. | 49 43 N. | 2 55 W. | 57 | 13·9 | 19·53 | 35·28 | 28·35 |
| 6 | 3 a.m. | 49 52 N. | 3 15 W. | 57 | 13·9 | 19·55 | 35·32 | 28·38 |
| 6 | 5 a.m. | 50 08 N. | 3 49 W. | 56 | 13·3 | 19·55 | 35·32 | 28·38 |

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | Cl.‰ | S.‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | JULY, 1905—*continued.* | | | | | |
| | | | PLYMOUTH-ST. BRIEUC—*continued.* | | | | | |
| 18 | 8 p.m. | 48° 55′ N. | 2° 25′ W. | 60¾ | 15·9 | 19·45 | 35·14 | 28·24 |
| 19 | 7 p.m. | 49° 19′ N. | 2° 25′ W. | 61¼ | 16·2 | 19·46 | 35·16 | 28·25 |
| 19 | 11 p.m. | 49° 31′ N. | 2° 30′ W. | 58½ | 14·7 | 19·50 | 35·23 | 28·31 |
| 20 | 1 a.m. | 49° 43′ N. | 2° 55′ W. | 57 | 13·9 | 19·53 | 35·28 | 28·35 |
| 20 | 3 a.m. | 49° 52′ N. | 3° 15′ W. | 57 | 13·9 | 19·57 | 35·35 | 28·41 |
| 20 | 5 a.m. | 50° 08′ N. | 3° 49′ W. | 59 | 15·0 | Lost. | | |
| | | | AUGUST, 1905. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 2 | 11.35 p.m. | 50° 35′ N. | 0° 02′ E. | 59 | 15·0 | 19·43 | 35·10 | 28·21 |
| 3 | 1.45 a.m. | 50° 23′ N. | 0° 00 | 60 | 15·6 | 19·45 | 35·14 | 28·24 |
| 3 | 2.10 a.m. | 50° 11′ N. | 0° 02′ W. | 60 | 15·6 | 19·31 | 34·88 | 28·03 |
| 3 | 3.40 a.m. | 49° 59′ N. | 0° 04′ W. | 60 | 15·6 | 19·24 | 34·76 | 27·93 |
| 3 | 4.55 a.m. | 49° 47′ N. | 0° 06′ W. | 62 | 16·7 | 19·20 | 34·69 | 27·87 |
| 17 | 0.30 a.m. | 50° 35′ N. | 0° 02′ E. | 61 | 16·1 | 19·44 | 35·12 | 28·22 |
| 17 | 1.45 a.m. | 50° 23′ N. | 0° 00 | 61 | 16·1 | 19·43 | 35·10 | 28·21 |
| 17 | 3 a.m. | 50° 11′ N. | 0° 02′ W. | 60 | 15·6 | 19·32 | 34·90 | 28·05 |
| 17 | 4.20 a.m. | 49° 59′ N. | 0° 05′ W. | 60 | 15·6 | 19·28 | 34·83 | 27·99 |
| 17 | 5.40 a.m. | 49° 47′ N. | 0° 07′ W. | 62 | 16·7 | 19·19 | 34·67 | 27·86 |
| 30 | 11 p.m. | 50° 35′ N. | 0° 01′ E. | 61 | 16·1 | 19·46 | 35·16 | 28·25 |
| 31 | 0.20 a.m. | 50° 23′ N. | 0° 01′ W. | 60 | 15·6 | 19·48 | 35·19 | 28·28 |
| 31 | 1.40 a.m. | 50° 11′ N. | 0° 03′ W. | 60 | 15·6 | 19·43 | 35·10 | 28·21 |
| 31 | 3.10 a.m. | 49° 59′ N. | 0° 05′ W. | 60 | 15·6 | 19·30 | 34·87 | 28·02 |
| 31 | 4.30 p.m. | 49° 47′ N. | 0° 07′ W. | 60 | 15·6 | 19·18 | 34·65 | 27·84 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 13 | 1.50 a.m. | 50° 35′ N. | 0° 52′ W. | 63 | 17·2 | 19·39 | 35·03 | 28·15 |
| 13 | 2 0 a.m. | 50° 25′ N. | 0° 45′ W. | 61 | 16·1 | 19·51 | 35·25 | 28·32 |
| 13 | 3.30 a.m. | 50° 11′ N. | 0° 32′ W. | 60 | 15·6 | 19·44 | 35·12 | 28·22 |
| 13 | 4.20 a.m. | 49° 58′ N. | 0° 22′ W. | 61 | 16·1 | 19·25 | 34·78 | 27·95 |
| 13 | 5.10 a.m. | 49° 45′ N. | 0° 12′ W. | 63 | 17·2 | 19·07 | 34·45 | 27·68 |
| 13 | 6 a.m. | 49° 34′ N. | 0° 02′ W. | 64½ | 18·1 | 18·46 | 33·35 | 26·80 |
| 30 | 1.50 a.m. | 50° 37′ N. | 0° 54′ W. | 62 | 16·7 | 19·35 | 34·96 | 28·09 |
| 30 | 2.40 a.m. | 50° 26′ N. | 0° 45′ W. | 61 | 16·1 | 19·52 | 35·26 | 28·34 |
| 30 | 3.30 a.m. | 50° 13′ N. | 0° 34′ W. | 60 | 15·6 | 19·51 | 35·25 | 28·32 |
| 30 | 4.20 a.m. | 49° 59′ N. | 0° 23′ W. | 61 | 16·1 | 19·38 | 35·01 | 28·14 |
| 30 | 5.10 a.m. | 49° 47′ N. | 0° 13′ W. | 61¼ | 16·2 | 19·16 | 34·61 | 27·82 |
| 30 | 6 a.m. | 49° 35′ N. | 0° 04′ W. | 63 | 17·2 | 18·85 | 34·05 | 27·36 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 12 | 4.14 a.m. | 50° 28′ N. | 1° 41′ W. | 60½ | 15·8 | 19·35 | 34·96 | 28·09 |
| 12 | 5 p.m. | 50° 17′ N. | 1° 46′ W. | 58½ | 14·7 | 19·35 | 34·96 | 28·09 |
| 12 | 6.04 a.m. | 50° 06′ N. | 1° 51′ W. | 58½ | 14·7 | 19·52 | 35·26 | 28·34 |
| 12 | 7 a.m. | 49° 54′ N. | 1° 56′ W. | 59½ | 15·3 | 19·46 | 35·16 | 28·25 |
| 12 | 8 a.m. | 49° 43′ N. | 2° 03′ W. | 60 | 15·6 | 19·39 | 35·03 | 28·15 |
| 12 | 10.10 a.m. | 49° 20′ N. | 2° 19′ W. | 63 | 17·2 | 19·46 | 35·16 | 28·25 |
| 26 | 3.55 a.m. | 50° 27′ N. | 1° 41′ W. | 61 | 16·1 | 19·46 | 35·16 | 28·25 |
| 26 | 4.45 a.m. | 50° 17′ N. | 1° 46′ W. | 60 | 15·6 | 19·54 | 35·30 | 28·37 |
| 26 | 5.35 a.m. | 50° 08′ N. | 1° 50′ W. | 58½ | 14·7 | 19·52 | 35·26 | 28·34 |
| 26 | 6.30 a.m. | 49° 58′ N. | 1° 54′ W. | 59 | 15·0 | 19·49 | 35·21 | 28·30 |
| 26 | 7.25 a.m. | 49° 47½′ N. | 1° 58′ W | 59½ | 15·3 | 19·46 | 35·16 | 28·25 |
| 26 | 9.53 a.m. | 49° 15′ N. | 2° 19′ W. | 60½ | 15·8 | 19·52 | 35·26 | 28·34 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 1 | 7 p.m. | 48° 55′ N. | 2° 25′ W. | 62 | 16·7 | 19·47 | 35·17 | 28·27 |
| 2 | 6 p.m. | 49° 19′ N. | 2° 25′ W. | 63¼ | 17·3 | 19·47 | 35·17 | 28·27 |
| | | | AUGUST, 1905—*continued.* | | | | | |
| | | | PLYMOUTH-ST. BRIEUC—*continued.* | | | | | |
| 2 | 11 p.m. | 49° 31′ N. | 2° 30′ W. | 61 | 16·1 | 19·49 | 35·21 | 28·30 |
| 3 | 1 a.m. | 49° 43′ N. | 2° 55′ W. | 60 | 15·6 | 19·55 | 35·32 | 28·38 |
| 3 | 3 a.m. | 49° 52′ N. | 3° 22′ W. | 59 | 15·0 | 19·54 | 35·30 | 28·37 |
| 3 | 5 a.m. | 50° 08′ N. | 3° 49′ W. | 58½ | 14·7 | 19·54 | 35·30 | 28·37 |
| 16 | 8 a.m. | 48° 55′ N. | 2° 25′ W. | 63 | 17·2 | 19·45 | 35·14 | 28·24 |
| 16 | 5 p.m. | 49° 19′ N. | 2° 25′ W. | 64 | 17·8 | 19·45 | 35·14 | 28·24 |
| 16 | 11 p.m. | 49° 31′ N. | 2° 30′ W. | 63 | 17·2 | 19·49 | 35·21 | 28·30 |
| 17 | 1 a.m. | 49° 43′ N. | 2° 55′ W. | 62 | 16·7 | 19·55 | 35·32 | 28·38 |
| 17 | 3 a.m. | 49° 52′ N. | 3° 22′ W. | 59 | 15·0 | 19·57 | 35·35 | 28·41 |
| 17 | 5 a.m. | 50° 08′ N. | 3° 49′ W. | 59 | 15·0 | 19·53 | 35·28 | 28·35 |
| 29 | 7.30 p.m. | 48° 55′ N. | 2° 25′ W. | 62 | 16·7 | 19·48 | 35·19 | 28·28 |
| 30 | 6.30 p.m. | 49° 19′ N. | 2° 25′ W. | 61½ | 16·4 | 19·46 | 35·16 | 28·25 |
| 31 | 1 a.m. | 49° 31′ N. | 2° 30′ W. | 60½ | 15·8 | 19·50 | 35·23 | 28·31 |
| 31 | 3 a.m. | 49° 43′ N. | 2° 55′ W. | 59 | 15·0 | 19·56 | 35·34 | 28·40 |
| 31 | 5 a.m. | 49° 52′ N. | 3° 22′ W. | 58 | 14·4 | 19·56 | 35·34 | 28·40 |
| 31 | 7 a.m. | 50° 08′ N. | 3° 49′ W. | 58 | 14·4 | 19·57 | 35·35 | 28·41 |
| | | | S.S. *Oithona*—OFF PLYMOUTH. | | | | | |
| 17 | Noon | 50° 16½′ N. | 4° 17¾′ W. | 61·2 | 16·2 | 19·56 | 35·34 | 28·40 |
| 23 | 1 p.m. | 50° 04′ N. | 4° 18¾′ W. | 58·9 | 14·9 | 19·55 | 35·32 | 28·38 |
| 30 | 4.30 p.m. | 50° 09′ N. | 4° 13¼′ W. | 59·1 | 15·1 | 19·56 | 35·34 | 28·40 |
| 31 | 3 p.m. | 50° 14′ N. | 4° 21′ W. | 59·5 | 15·3 | 19·56 | 35·34 | 28·40 |
| | | | PLYMOUTH-CORK. | | | | | |
| 26 | 9.45 p.m. | 51° 29′ N. | 7° 47′ W. | 60·4 | 15·8 | 19·36 | 34·97 | 28·11 |
| 26 | 11.55 p.m. | 51° 14′ N. | 7° 25′ W. | 60 | 15·6 | 19·36 | 34·97 | 28·11 |
| 27 | 2.05 a.m. | 51° 00′ N. | 7° 03′ W. | 60 | 15·6 | 19·36 | 34·97 | 28·11 |
| 27 | 4 a.m. | 50° 45′ N. | 6° 41′ W. | 59·5 | 15·3 | 19·36 | 34·97 | 28·11 |
| 27 | 6.20 a.m. | 50° 31′ N. | 6° 21′ W. | 58 | 14·4 | 19·57 | 35·35 | 28·41 |
| 27 | 8.12 a.m. | 50° 16′ N. | 6° 00′ W. | 58·2 | 14·6 | 19·55 | 35·32 | 28·38 |
| | | | SEPTEMBER, 1905. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 13 | 10.50 p.m. | 50° 35′ N. | 0° 02′ E. | 60 | 15·6 | 19·48 | 35·19 | 28·28 |
| 13 | Midnight. | 50° 23′ N. | 0° 00 | 60 | 15·6 | 19·49 | 35·21 | 28·30 |
| 14 | 1.20 a.m. | 50° 11′ N. | 0° 02′ W. | 60 | 15·6 | 19·44 | 35·12 | 28·22 |
| 14 | 2.45 a.m. | 49° 59′ N. | 0° 04′ W. | 60 | 15·6 | 19·35 | 34·96 | 28·09 |
| 14 | 4.05 a.m. | 49° 47′ N. | 0° 07′ W. | 60 | 15·6 | 19·21 | 34·70 | 27·89 |
| 27 | 11.25 p.m. | 50° 35′ N. | 0° 02′ E. | 60 | 15·6 | 19·43 | 35·10 | 28·21 |
| 28 | 0.40 a.m. | 50° 23′ N. | 0° 01′ W. | 61 | 16·1 | 19·49 | 35·21 | 28·30 |
| 28 | 1.50 a.m. | 50° 12′ N. | 0° 03′ W. | 61 | 16·1 | 19·47 | 35·17 | 28·27 |
| 28 | 3 a.m. | 49° 59′ N. | 0° 04′ W. | 61 | 16·1 | 19·43 | 35·10 | 28·21 |
| 28 | 4.20 a.m. | 49° 49′ N. | 0° 09′ W. | 61 | 16·1 | 19·29 | 34·85 | 28·00 |
| 28 | 5.30 a.m. | 49° 36′ N. | 0° 11′ W. | 61 | 16·1 | 18·96 | 34·25 | 27·52 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 13 | 1.50 a.m. | 50° 35′ N. | 0° 53′ W. | 61 | 16·1 | 19·35 | 34·96 | 28·09 |
| 13 | 2.40 a.m. | 50° 23′ N. | 0° 43′ W. | 61 | 16·1 | 19·55 | 35·32 | 28·38 |
| 13 | 3.30 a.m. | 50° 13′ N. | 0° 34′ W. | 60½ | 15·8 | 19·54 | 35·30 | 28·37 |
| 13 | 4.25 a.m. | 49° 58′ N. | 0° 22′ W. | 59½ | 15·3 | 19·43 | 35·10 | 28·21 |
| 13 | 5.13 a.m. | 49° 45′ N. | 0° 12′ W. | 60½ | 15·8 | 19·18 | 34·65 | 27·84 |
| 13 | 6.10 a.m. | 49° 33′ N. | 0° 02′ W. | 61 | 16·1 | 18·56 | 33·53 | 26·94 |
| 26 | 1.40 a.m. | 49° 32′ N. | 0° 08′ W. | 59 | 15·0 | 18·25 | 32·97 | 26·49 |
| 26 | 2.40 a.m. | 49° 49′ N. | 0° 17′ W. | 60 | 15·6 | 19·27 | 34·81 | 27·98 |
| 26 | 3.40 a.m. | 50° 02′ N. | 0° 27′ W. | 60 | 15·6 | 19·42 | 35·08 | 28·19 |

## TABLE III—*continued.*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | SEPTEMBER, 1905—*continued.* | | | | | |
| | | | SOUTHAMPTON-HAVRE—*continued.* | | | | | |
| 26 | 4.30 a.m. | 50 14 N. | 0 37 W. | 60 | 15·6 | 19·52 | 35·26 | 28·34 |
| 26 | 5.20 a.m. | 50 27 N. | 0 47 W. | 59½ | 15·3 | 19·54 | 35·30 | 28·37 |
| 26 | 6.20 a.m. | 50 39 N. | 0 55 W. | 60 | 15·6 | 19·52 | 35·26 | 28·34 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 9 | 4.10 a.m. | 50 30½ N. | 1 39 W. | 59·5 | 15·3 | 19·28 | 34·83 | 27·99 |
| 9 | 5.16 a.m. | 50 22 N. | 1 43 W. | 59·9 | 15·3 | 19·53 | 35·28 | 28·35 |
| 9 | 6.20 a.m. | 50 13 N. | 1 47 W. | 58·5 | 14·7 | 19·53 | 35·28 | 28·35 |
| 9 | 7.25 a.m. | 50 03 N. | 1 51 W. | 58·75 | 14·8 | 19·51 | 35·25 | 28·32 |
| 9 | 8.30 a.m. | 49 51½ N. | 1 57 W. | 59 | 15·0 | 19·50 | 35·23 | 28·31 |
| 9 | 9.36 a.m. | 49 40 N. | 2 04 W. | 59 | 15·0 | 19·53 | 35·28 | 28·35 |
| 24 | 2.50 a.m. | 49 15 N. | 2 19 W. | 58½ | 14·7 | 19·47 | 35·17 | 28·27 |
| 24 | 5.15 a.m. | 49 44 N. | 2 01 W. | 58½ | 14·7 | 19·44 | 35·12 | 28·22 |
| 24 | 6.25 a.m. | 49 56 N. | 1 52 W. | 58¼ | 14·6 | 19·50 | 35·23 | 28·31 |
| 24 | 7.35 a.m. | 50 07 N. | 1 48 W. | 58 | 14·4 | 19·53 | 35·28 | 28·35 |
| 24 | 8.45 a.m. | 50 18 N. | 1 45 W. | 58 | 14·4 | 19·51 | 35·25 | 28·32 |
| 24 | 9.55 a.m. | 50 31 N. | 1 40 W. | 58½ | 14·7 | 19·56 | 35·34 | 28·40 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 13 | 7.30 p.m. | 48 55 N. | 2 25 W. | 63 | 17·2 | 19·48 | 35·19 | 28·28 |
| 14 | 6 p.m. | 49 19 N. | 2 25 W. | 60 | 15·6 | 19·50 | 35·23 | 28·31 |
| 14 | 11 p.m. | 49 31 N. | 2 30 W. | 60 | 15·6 | 19·51 | 35·25 | 28·32 |
| 15 | 1 a.m. | 49 43 N. | 2 55 W. | 60 | 15·6 | 19·58 | 35·37 | 28·43 |
| 15 | 3 a.m. | 49 52 N. | 3 22 W. | 59 | 15·0 | 19·54 | 35·30 | 28·37 |
| 15 | 5 a.m. | 50 08 N. | 3 49 W. | 57 | 13·9 | 19·55 | 35·32 | 28·38 |
| 27 | 6.34 p.m. | 48 53 N. | 2 25 W. | 60½ | 15·8 | 19·50 | 35·23 | 28·31 |
| 28 | 5 p.m. | 49 19 N. | 2 25 W. | 59¾ | 15·4 | 19·50 | 35·23 | 28·31 |
| 28 | 11 p.m. | 49 31 N. | 2 30 W. | 59½ | 15·3 | 19·48 | 35·19 | 28·28 |
| 29 | 1 a.m. | 49 43 N. | 2 55 W. | 58 | 14·4 | 19·54 | 35·30 | 28·37 |
| 29 | 3 a.m. | 49 52 N. | 3 22 W. | 57 | 13·9 | 19·57 | 35·35 | 28·41 |
| 29 | 5 a.m. | 50 08 N. | 3 49 W. | 57½ | 14·2 | 19·58 | 35·37 | 28·43 |
| | | | S.S. *Oithona*—OFF PLYMOUTH. | | | | | |
| 1 | 2.30 p.m. | 50 14½ N. | 4 21½ W. | 59·1 | 15·1 | 19·53 | 35·23 | 28·35 |
| 1 | 3.40 p.m. | 50 14½ N. | 4 22 W. | 58·9 | 14·9 | 19·54 | 35·30 | 28·37 |
| 4 | 0.10 p.m. | 50 15 N. | 4 20 W. | 58·8 | 14·9 | 19·56 | 35·34 | 28·40 |
| 6 | 0.30 p.m. | 50 13 N. | 4 17⅜ W. | 59·4 | 15·2 | 19·50 | 35·23 | 28·31 |
| 18 | 1 p.m. | 50 12⅜ N. | 4 17½ W. | 58 | 14·4 | 19·57 | 35·35 | 28·41 |
| 19 | 0.10 p.m. | 50 13½ N. | 4 17½ W. | 58·1 | 14·5 | 19·56 | 35·34 | 28·40 |
| 22 | Noon. | 50 14¼ N. | 4 17 W. | 57·9 | 14·4 | 19·58 | 35·38 | 28·43 |
| 23 | 9.50 a.m. | 50 14 N. | 4 17 W. | 57·7 | 14·3 | 19·58 | 35·37 | 28·43 |
| | | | OCTOBER, 1905. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 11 | 11 p.m. | 50 35 N. | 0 02 E. | 57·3 | 14·1 | 19·47 | 35·17 | 28·27 |
| 12 | 0.10 a.m. | 50 23 N. | 0 01 W. | 58·0 | 14·4 | 19·50 | 35·23 | 28·31 |
| 12 | 1.15 a.m. | 50 12 N. | 0 03 W. | 58·0 | 14·4 | 19·49 | 35·21 | 28·30 |
| 12 | 2.20 a.m. | 49 59 N. | 0 06 W. | 58·0 | 14·4 | 19·47 | 35·17 | 28·27 |
| 12 | 3.37 a.m. | 49 47 N. | 0 09 W. | 57·5 | 14·2 | 19·42 | 35·08 | 28·19 |
| 12 | 4.50 a.m. | 49 36 N. | 0 11 W. | 57·5 | 14·2 | 19·07 | 34·45 | 27·68 |
| 25 | 9.25 p.m. | 50 35 N. | 0 02 E. | 55 | 12·8 | 19·49 | 35·21 | 28·30 |
| 25 | 10.40 p.m. | 50 23 N. | 0 00 | 55 | 12·8 | 19·49 | 35·21 | 28·30 |
| 25 | 11.50 p.m. | 50 11 N. | 0 02 W. | 55 | 12·8 | 19·48 | 35·19 | 28·28 |
| 25 | 1.15 a.m. | 49 59 N. | 0 05 W. | 55 | 12·8 | 19·48 | 35·19 | 28·28 |
| 26 | 2.30 a.m. | 49 47 N. | 0 07 W. | 55 | 12·8 | 19·39 | 35·03 | 28·15 |

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | ‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | OCTOBER, 1905—*continued.* | | | | | |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 11 | 1.52 a.m. | 50 37 N. | 0 55 W. | 57½ | 14·2 | 19·55 | 35·32 | 28·38 |
| 11 | 2.40 a.m. | 50 25 N. | 0 45 W. | 58 | 14·4 | 19·52 | 35·26 | 28·34 |
| 11 | 3.30 a.m. | 50 12 N | 0 35 W. | 58 | 14·4 | 19·52 | 35·26 | 28·34 |
| 11 | 4.20 a.m. | 49 59 N. | 0 25 W. | 58½ | 14·7 | 19·49 | 35·21 | 28·30 |
| 11 | 5.10 a.m. | 49 46 N. | 0 15 W. | 58 | 14·4 | 19·47 | 35·17 | 28·27 |
| 11 | 6.10 a.m. | 49 32 N. | 0 05 W. | 57½ | 14·2 | 19·14 | 34·58 | 27·79 |
| 24 | 1 a.m. | 49 35 N. | 0 08 W. | 52 | 11·1 | 18·50 | 33·42 | 26·86 |
| 24 | 1.50 a.m. | 49 49 N. | 0 17 W. | 55 | 12·8 | 19·47 | 35·17 | 28·27 |
| 24 | 2.40 a.m. | 50 03 N. | 0 27 W. | 55 | 12·8 | 19·55 | 35·32 | 28·38 |
| 24 | 3.30 a.m. | 50 16 N. | 0 38 W. | 55 | 12·8 | 19·56 | 35·34 | 28·40 |
| 24 | 4.25 a.m. | 50 29 N. | 0 48 W. | 54 | 12·2 | 19·57 | 35·35 | 28·41 |
| 24 | 5.20 a.m. | 50 42 N. | 0 58 W. | 53 | 11·7 | 19·56 | 35·34 | 28·40 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 9 | 7.02 p.m. | 50 29 N. | 1 42 W. | 57·25 | 14·0 | 19·39 | 35·03 | 28·15 |
| 9 | 7.54 p.m. | 50 18 N. | 1 47 W. | 57·0 | 13·9 | 19·53 | 35·28 | 28·35 |
| 9 | 8.46 p.m. | 50 06 N. | 1 55 W. | 57·0 | 13·9 | 19·50 | 35·23 | 28·31 |
| 9 | 9.38 p.m. | 49 55 N. | 2 01 W. | 57·0 | 13·9 | 19·46 | 35·16 | 28·25 |
| 9 | 10.28 p.m. | 49 44 N. | 2 01 W. | 57·25 | 14·0 | 19·36 | 34·97 | 28·11 |
| 10 | 0.28 a.m. | 49 15 N. | 2 19 W. | 57·25 | 14·0 | 19·25 | 34·78 | 27·95 |
| 20 | 11.44 p.m. | 49 15 N. | 2 19 W. | 54¼ | 12·3 | 19·41 | 35·07 | 28·18 |
| 21 | 1.56 a.m. | 49 44½ N. | 2 01 W. | 54¼ | 12·3 | 19·37 | 34·99 | 28·12 |
| 21 | 2.51 a.m. | 49 56 N. | 1 52 W. | 55 | 12·8 | 19·45 | 35·14 | 28·24 |
| 21 | 3.46 a.m. | 50 07 N. | 1 48 W. | 55 | 12·8 | 19·54 | 35·30 | 28·37 |
| 21 | 4.41 a.m. | 50 18 N. | 1 45 W. | 54 | 12·2 | 19·53 | 35·28 | 28·35 |
| 21 | 5.36 a.m. | 50 31 N. | 1 40 W. | 54 | 12·2 | 19·52 | 35·26 | 28·34 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 11 | 6.30 p.m. | 48 53 N. | 2 25 W. | 58½ | 14·7 | 19·53 | 35·28 | 28·35 |
| 12 | 5.30 p.m. | 49 19 N. | 2 25 W. | 56 | 13·3 | 19·53 | 35·28 | 28·35 |
| 12 | 11 p.m. | 49 31 N. | 2 30 W. | 58 | 14·4 | 19·54 | 35·30 | 28·37 |
| 13 | 1 a.m. | 49 43 N. | 2 55 W. | 57 | 13·9 | 19·59 | 35·39 | 28·44 |
| 13 | 3 a.m. | 49 52 N. | 3 22 W. | 57 | 13·9 | 19·60 | 35·41 | 28·46 |
| 13 | 5 a.m. | 50 08 N. | 3 49 W. | 57 | 13·9 | 19·55 | 35·32 | 28·38 |
| 26 | 4 a.m. | 48 53 N. | 2 25 W. | 55 | 12·8 | 19·56 | 35·34 | 28·40 |
| 26 | 5 p.m. | 49 19 N. | 2 25 W. | 55 | 12·8 | 19·57 | 35·35 | 28·41 |
| 26 | 11 p.m. | 49 31 N. | 2 30 W. | 56 | 13·3 | 19·59 | 35·39 | 28·44 |
| 27 | 1.30 a.m. | 49 43 N. | 2 55 W. | 56 | 13·3 | 19·63 | 35·46 | 28·50 |
| 27 | 4 a.m. | 49 52 N. | 3 22 W. | 56 | 13·3 | 19·63 | 35·46 | 28·50 |
| 27 | 6.30 a.m. | 50 08 N. | 3 49 W. | 56 | 13·3 | 19·60 | 35·41 | 28·46 |
| | | | NOVEMBER, 1905. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 8 | 9.25 p.m. | 50 35 N. | 0 02 E. | 55 | 12·8 | 19·52 | 35·26 | 28·34 |
| 8 | 10.30 p.m. | 50 23 N. | 0 00 | 55 | 12·8 | 19·55 | 35·32 | 28·38 |
| 8 | 11.45 p.m. | 50 11 N. | 0 02 W. | 55 | 12·8 | 19·52 | 35·26 | 28·34 |
| 9 | 0.35 a.m. | 49 59 N. | 0 04 W. | 55 | 12·8 | 19·35 | 34·96 | 28·09 |
| 9 | 2.10 a.m. | 49 47 N. | 0 06 W. | 55 | 12·8 | 19·33 | 34·92 | 28·06 |
| 24 | 8.05 p.m. | 49 36 N. | 0 11 W. | 49½ | 9·7 | 18·85 | 34·05 | 27·36 |
| 24 | 9.30 p.m. | 49 47 N. | 0 09 W. | 51 | 10·6 | 19·26 | 34·79 | 27·96 |
| 24 | 10.40 p.m. | 49 59 N. | 0 06 W. | 52½ | 11·4 | 19·55 | 35·32 | 28·38 |
| 24 | 11.55 p.m. | 50 12 N. | 0 03 W. | 52½ | 11·4 | 19·45 | 35·14 | 28·24 |
| 25 | 1.10 a.m. | 50 25 N. | 0 01 W. | 52 | 11·1 | 19·44 | 35·12 | 28·22 |
| 25 | 2.35 a.m. | 50 35 N. | 0 02 E. | 51½ | 10·8 | 19·52 | 35·26 | 28·34 |

TABLE III—*continued*

| Date. | Time. | Latitude. | Longitude. | Temperature. F. | Temperature. C. | *Cl.*‰ | *S*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | NOVEMBER, 1905—*continued.* | | | | | |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 7 | 1 a.m. | 49° 38′ N. | 0° 09′ W. | 53 | 11·7 | 19·19 | 34·67 | 27·86 |
| 7 | 1.50 a.m. | 49 52 N. | 0 20 W. | 54½ | 12·5 | 19·19 | 34·67 | 27·86 |
| 7 | 2.40 a.m. | 50 05 N. | 0 30 W. | 54½ | 12·5 | 19·42 | 35·08 | 28·19 |
| 7 | 3.30 a.m. | 50 19 N. | 0 41 W. | 55 | 12·8 | 19·57 | 35·35 | 28·41 |
| 7 | 4.30 a.m. | 50 31 N. | 0 49 W. | 53½ | 11·9 | 19·56 | 35·34 | 28·40 |
| 7 | 5.25 a.m. | 50 38 N. | 0 55 W. | 52 | 11·1 | 19·52 | 35·26 | 28·34 |
| 21 | 0.45 a.m. | 49 35 N. | 0 07 W. | 47 | 8·3 | 18·55 | 33·51 | 26·93 |
| 21 | 1.40 a.m. | 49 50 N. | 0 17 W. | 50 | 10·0 | | Lost. | |
| 21 | 2.30 a.m. | 50 03 N. | 0 28 W. | 52 | 11·1 | 19·46 | 35·16 | 28·25 |
| 21 | 3.20 a.m. | 50 16 N. | 0 38 W. | 51½ | 10·8 | 19·48 | 35·19 | 28·28 |
| 21 | 4.10 a.m. | 50 29 N. | 0 48 W. | 51 | 10·6 | 19·55 | 35·32 | 28·38 |
| 21 | 5.10 a.m. | 50 42 N. | 0 58 W. | 49½ | 9·7 | 19·51 | 35·25 | 28·32 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 4 | 0.24 a.m. | 49 15 N. | 2 19 W. | 52½ | 11·4 | 19·34 | 34·94 | 28·08 |
| 4 | 2.33 a.m. | 49 44 N. | 2 01 W. | 53½ | 11·9 | 19·37 | 34·99 | 28·12 |
| 4 | 3.28 a.m. | 49 56 N. | 1 52 W. | 52½ | 11·4 | 19·41 | 35·07 | 28·18 |
| 4 | 4.23 a.m. | 50 07 N. | 1 48 W. | 52½ | 11·4 | 19·52 | 35·26 | 28·34 |
| 4 | 5.18 a.m. | 50 18 N. | 1 45 W. | 53 | 11·7 | 19·55 | 35·32 | 28·38 |
| 4 | 6.13 a.m. | 50 31 N. | 1 40 W. | 53 | 11·7 | 19·54 | 35·30 | 28·37 |
| 17 | 11.16 p.m. | 49 15 N. | 2 19 W. | 49 | 9·4 | 19·29 | 34·85 | 28·00 |
| 18 | 1.30 a.m. | 49 44 N. | 2 01 W. | 51 | 10·6 | 19·43 | 35·10 | 28·21 |
| 18 | 2.30 a.m. | 49 56 N. | 1 52 W. | 52 | 11·1 | 19·53 | 35·28 | 28·35 |
| 18 | 3.30 a.m. | 50 07 N. | 1 48 W. | 52 | 11·1 | 19·57 | 35·35 | 28·41 |
| 18 | 4.30 a.m. | 50 18 N. | 1 45 W. | 51 | 10·6 | 19·58 | 35·37 | 28·43 |
| 18 | 5.30 a.m. | 50 31 N. | 1 40 W. | 50 | 10·0 | 19·58 | 35·37 | 28·43 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 9 | 4.30 a.m. | 48 53 N. | 2 25 W. | 54¾ | 12·7 | 19·52 | 35·26 | 28·34 |
| 9 | 5.30 p.m. | 49 19 N. | 2 25 W. | 54½ | 12·5 | 19·53 | 35 28 | 28·35 |
| 9 | 11 p.m. | 49 31 N. | 2 30 W. | 55 | 12·8 | 19·53 | 35·28 | 28·35 |
| 10 | 1 a.m. | 49 43 N. | 2 55 W. | 55 | 12·8 | 19·55 | 35·32 | 28·38 |
| 10 | 3 a.m. | 49 52 N. | 3 22 W. | 55 | 12·8 | 19·57 | 35·35 | 28·41 |
| 10 | 5 a.m. | 50 08 N. | 3 49 W. | 55 | 12·8 | 19·59 | 35·39 | 28·44 |
| 23 | 3.45 p.m. | 48 53 N. | 2 25 W. | 52¾ | 11·5 | 19·45 | 35·14 | 28·24 |
| 24 | 3.20 a.m. | 49 19 N. | 2 25 W. | 53¾ | 12·1 | 19·54 | 35·30 | 28·37 |
| 24 | 9 a.m. | 49 31 N. | 2 30 W. | 53 | 11·7 | 19·52 | 35·26 | 28·34 |
| 24 | 11 a.m. | 49 43 N. | 2 55 W. | 53¼ | 11·8 | 19·56 | 35·34 | 28·40 |
| 24 | 1 p.m. | 49 52 N. | 3 22 W. | 53 | 11·7 | 19·59 | 35·39 | 28·44 |
| 24 | 3 p.m. | 50 08 N. | 3 49 W. | 52½ | 11·4 | 19·59 | 35·39 | 28·44 |
| | | | PLYMOUTH-CORK. | | | | | |
| 4 | 7.45 p.m. | 50 24 N. | 6 12 W. | 44½ | 6·9 | 19·57 | 35·35 | 28·41 |
| 4 | 9.40 p.m. | 50 38 N. | 6 33 W. | 44½ | 6·9 | 19·53 | 35·28 | 28·35 |
| 4 | 11.35 p.m. | 50 53 N. | 6 54 W. | 43½ | 6·4 | 19·49 | 35·21 | 28·30 |
| 5 | 1.35 a.m. | 51 08 N. | 7 16 W. | 44 | 6·7 | 19·46 | 35·16 | 28·25 |
| 5 | 3.30 a.m. | 51 23 N. | 7 37 W. | 44 | 6·7 | 19·44 | 35·12 | 28·22 |
| 5 | 5.30 a.m. | 51 39 N. | 8 01 W. | 44½ | 6·9 | 19·39 | 35·03 | 28·15 |
| | | | DECEMBER, 1905. | | | | | |
| | | | NEWHAVEN-CAEN. | | | | | |
| 6 | 7.55 p.m. | 50 35 N. | 0 02 E. | 51 | 10·6 | 19·50 | 35·23 | 28·31 |
| 6 | 9.05 p.m. | 50 23 N. | 0 01 W. | 52 | 11·1 | 19·48 | 35·19 | 28·28 |
| 6 | 10.30 p.m. | 50 12 N. | 0 03 W. | 52 | 11·1 | 19·52 | 35·26 | 28·34 |
| 6 | 11.45 p.m. | 49 59 N. | 0 04 W. | 52 | 11·1 | 19·49 | 35·21 | 28·30 |

| Date. | Time. | Latitude. | Longitude | Temperature F. | Temperature C. | *Cl.*‰ | *S*‰ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|
| | | | DECEMBER, 1905—*continued.* | | | | | |
| | | | NEWHAVEN-CAEN—*continued.* | | | | | |
| 7 | 1 a.m. | 49° 47′ N. | 0° 09′ W. | 52 | 11·1 | 19·48 | 35·19 | 28·28 |
| 7 | 2.20 a.m. | 49 36 N. | 0 10 W. | 50 | 10·0 | 18·73 | 33·84 | 27·19 |
| 20 | 5.45 p.m | 50 35 N. | 0 02 E. | 49 | 9·4 | 19·48 | 35·19 | 28·28 |
| 20 | 7.10 p.m | 50 23 N. | 0 00 | 50 | 10·0 | 19·54 | 35·30 | 28·37 |
| 20 | 8.45 p.m. | 50 11 N. | 0 02 W. | 50 | 10·0 | 19·53 | 35·28 | 28·35 |
| 20 | 10·05 p.m | 49 59 N. | 0 04 W. | 50 | 10·0 | 19·52 | 35·26 | 28·34 |
| 20 | 11.40 p.m. | 49 47 N. | 0 06 W. | 49 | 9·4 | 19·22 | 34·72 | 27·90 |
| | | | SOUTHAMPTON-HAVRE. | | | | | |
| 3 | 1.50 a.m. | 50 37 N. | 0 55 W. | 47 | 8·3 | 19·23 | 34·74 | 27·92 |
| 3 | 2.40 a.m. | 50 25 N. | 0 45 W. | 48 | 8·9 | 19·49 | 35·21 | 28·30 |
| 3 | 3.30 a.m. | 50 11 N. | 0 35 W. | 50 | 10·0 | 19·54 | 35·30 | 28·37 |
| 3 | 4.20 a.m. | 49 59 N. | 0 25 W. | 51 | 10·6 | 19·54 | 35·30 | 28·37 |
| 3 | 5.12 a.m. | 49 47 N. | 0 15 W. | 50 | 10·0 | 19·42 | 35·08 | 28·19 |
| 3 | 6.10 a.m. | 49 33 N. | 0 06 W. | 46 | 7·8 | 11·61 | 20·99 | 16·86 |
| 20 | 1.50 a.m. | 50 35 N. | 0 52 W. | 46½ | 8·1 | 19·36 | 34·97 | 28·11 |
| 20 | 2.40 a.m. | 50 24 N. | 0 42 W. | 48½ | 9·2 | 19·55 | 35·32 | 28·38 |
| 20 | 3.30 a.m. | 50 12 N. | 0 32 W. | 50 | 10·0 | 19·57 | 35·35 | 28·41 |
| 20 | 4.20 a.m. | 49 58 N. | 0 20 W. | 50 | 10·0 | 19·52 | 35·26 | 28·34 |
| 20 | 5.12 a.m. | 49 44 N. | 0 07 W. | 49 | 9·4 | 19·31 | 34·88 | 28·03 |
| 20 | 6 a.m. | 49 33 N. | 0 00 | 47½ | 8·6 | 19·36 | 34·97 | 28·11 |
| | | | SOUTHAMPTON-ST. MALO. | | | | | |
| 5 | 2.11 a.m. | 50 29 N. | 1 42 W. | 50 | 10·0 | 19·42 | 35·08 | 28·19 |
| 5 | 3.08 a.m. | 50 18 N. | 1 48 W | 51 | 10·6 | 19·56 | 35·34 | 28·40 |
| 5 | 4.05 a.m. | 50 08 N. | 1 55 W | 52 | 11·1 | 19·54 | 35·30 | 28·37 |
| 5 | 5.02 a.m. | 49 56 N. | 2 01 W | 52 | 11·1 | 19·53 | 35·28 | 28·35 |
| 5 | 5.57 a.m. | 49 44 N. | 2 01 W. | 49 | 9·4 | 19·52 | 35·26 | 28·34 |
| 5 | 8.20 a.m. | 49 15 N. | 2 19 W. | 51 | 10·6 | 19·54 | 35·30 | 28·37 |
| 16 | 11.17 p.m. | 49 15 N. | 2 19 W. | 51 | 10·6 | 19·34 | 34·94 | 28·08 |
| 17 | 1.25 a.m. | 49 44 N. | 2 01 W. | 51 | 10·6 | 19·51 | 35·25 | 28·32 |
| 17 | 2.25 a.m. | 49 56 N. | 1 55 W. | 51 | 10·6 | 19·54 | 35·30 | 28·37 |
| 17 | 3.25 a.m. | 50 03 N. | 1 50 W. | 51·5 | 10·8 | 19·54 | 35·30 | 28·37 |
| 17 | 4.25 a.m. | 50 19 N. | 1 45 W. | 51 | 10·6 | 19·57 | 35·35 | 28·41 |
| 17 | 5.25 a.m. | 50 30 N. | 1 39 W. | 48 | 8·9 | 19·56 | 35·34 | 28·40 |
| 29 | 11.10 p.m. | 49 15 N. | 2 19 W. | 49·5 | 9·7 | 19·28 | 34·83 | 27·99 |
| 30 | 1.26 a.m. | 49 44 N. | 2 01 W. | 49·5 | 9·7 | 19·40 | 35·05 | 28·16 |
| 30 | 2.26 a.m. | 49 56 N. | 1 55 W. | 51·0 | 10·6 | 19·53 | 35·28 | 28·35 |
| 30 | 3.26 a.m. | 50 08 N. | 1 50 W. | 51·0 | 10·6 | 19·52 | 35·26 | 28·34 |
| 30 | 4.26 a.m. | 50 19 N. | 1 45 W. | 50·5 | 10·3 | 19·55 | 35·32 | 28·38 |
| 30 | 5.26 a.m. | 50 30 N. | 1 39 W. | 49·0 | 9·4 | 19·54 | 35·30 | 28·37 |
| | | | PLYMOUTH-ST. BRIEUC. | | | | | |
| 7 | 4 a.m. | 48 53 N. | 2 25 W. | 51½ | 10·8 | 19·50 | 35·23 | 28·31 |
| 7 | 5 p.m. | 49 19 N. | 2 25 W. | 53 | 11·7 | 19·53 | 35·28 | 28·35 |
| 7 | 11 p.m. | 49 31 N. | 2 30 W. | 53 | 11·7 | 19·55 | 35·32 | 28·38 |
| 8 | 1.30 a.m. | 49 43 N. | 2 55 W. | 53 | 11·7 | 19·57 | 35·35 | 28·41 |
| 8 | 4.30 a.m. | 49 52 N. | 3 22 W. | 52¾ | 11·6 | 19·60 | 35·41 | 28·46 |
| 8 | 6.30 a.m. | 50 08 N. | 3 49 W. | 53 | 11·7 | 19·57 | 35·35 | 28·41 |
| 21 | 2 a.m. | 48 53 N. | 2 25 W. | 50½ | 10·3 | 19·47 | 35·18 | 28·27 |
| 21 | 5 p.m. | 49 19 N. | 2 25 W. | 51¼ | 10·7 | 19·53 | 35·28 | 28·35 |
| 21 | 11 p.m. | 49 31 N. | 2 30 W. | 51 | 10·6 | 19·56 | 35·34 | 28·40 |
| 22 | 1 a.m. | 49 43 N. | 2 55 W. | 51 | 10·6 | 19·59 | 35·40 | 28·45 |
| 22 | 3 a.m. | 49 52 N. | 3 22 W. | 51 | 10·6 | 19·59 | 35·40 | 28·45 |
| 22 | 5 a.m. | 50 08 N. | 3 49 W. | 51 | 10·6 | 19·59 | 35·40 | 28·45 |

## TABLE IV.

## Surface Salinities at Lightships.

| Date. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|
| **1. East Goodwin Lightship.** | | | |
| 1904. | | | |
| Jan. 18 | 19·24 | 34·76 | 27·93 |
| „ 27 | 19·45 | 35·14 | 28·24 |
| Feb. 3 | 19·61 | 35·43 | 28·47 |
| „ 10 | 19·39 | 35·03 | 28·15 |
| „ 17 | 19·53 | 35·28 | 28·35 |
| „ 26 | 19·43 | 35·10 | 28·21 |
| Mar. 4 | 19·17 | 34·63 | 27·83 |
| „ 10 | 18·93 | 34·20 | 27·48 |
| „ 18 | 19·17 | 34·63 | 27·83 |
| „ 27 | 18·87 | 34·09 | 27·39 |
| Apr. 1 | 19·36 | 34·97 | 28·11 |
| „ 10 | 19·20 | 34·69 | 27·87 |
| „ 17 | 19·33 | 34·92 | 28·06 |
| May 1 | 19·36 | 34·97 | 28·11 |
| „ 16 | 19·20 | 34·69 | 27·87 |
| „ 24 | 19·34 | 34·94 | 28·08 |
| „ 30 | 19·30 | 34·87 | 28·02 |
| June 7 | 19·20 | 34·69 | 27·87 |
| „ 15 | 19·15 | 34·60 | 27·80 |
| „ 21 | 19·21 | 34·70 | 27·89 |
| „ 28 | 18·59 | 33·58 | 26·99 |
| July 6 | 19·31 | 34·88 | 28·03 |
| „ 15 | 19·17 | 34·63 | 27·83 |
| „ 21 | 19·16 | 34·61 | 27·82 |
| „ 28 | 19·29 | 34·85 | 28·00 |
| Aug. 6 | 19·36 | 34·97 | 28·11 |
| „ 13 | 19·34 | 34·94 | 28·08 |
| „ 19 | 19·40 | 35·05 | 28·16 |
| „ 27 | 19·36 | 34·97 | 28·11 |
| Sept. 4 | 19·31 | 34·88 | 28·03 |
| „ 16 | 19·34 | 34·94 | 28·08 |
| „ 19 | 19·28 | 34·83 | 27·99 |
| „ 26 | 19·36 | 34·97 | 28·11 |
| Oct. 4 | 19·31 | 34·88 | 28·03 |
| „ 11 | 19·29 | 34·85 | 28·00 |
| „ 18 | 19·42 | 35·08 | 28·19 |
| „ 25 | 19·33 | 34·92 | 28·06 |
| Nov. 1 | 19·35 | 34·96 | 28·09 |
| „ 8 | 19·41 | 35·07 | 28·18 |
| „ 17 | 19·31 | 34·88 | 28·03 |
| „ 24 | 19·36 | 34·97 | 28·11 |
| Dec. 2 | 19·32 | 34·90 | 28·05 |
| „ 9 | 19·44 | 35·12 | 28·22 |
| „ 22 | 19·27 | 34·81 | 27·98 |
| **2. Varne Lightship.** | | | |
| 1904. | | | |
| Jan. 19 | 19·55 | 35·32 | 28·38 |
| „ 26 | 19·60 | 35·42 | 28·46 |
| Feb. 1 | 19·29 | 34·85 | 28·00 |
| „ 2 | 19·38 | 35·01 | 28·14 |
| „ 8 | 19·56 | 35·34 | 28·40 |
| „ 16 | 19·64 | 35·48 | 28·51 |
| „ 24 | 19·59 | 35·40 | 28·45 |
| Mar. 2 | 19·55 | 35·33 | 28·39 |
| „ 9 | 19·58 | 35·38 | 28·43 |
| „ 17 | 19·45 | 35·14 | 28·24 |
| „ 25 | 19·17 | 34·63 | 27·83 |
| Apr. 2 | 19·48 | 35·19 | 28·28 |
| „ 8 | 19·48 | 35·19 | 28·28 |
| „ 15 | 19·45 | 35·14 | 28·24 |
| „ 23 | 19·54 | 35·30 | 28·37 |
| „ 30 | 19·45 | 35·14 | 28·24 |
| **2. Varne Lightship—*cont.*** | | | |
| 1904. | | | |
| May 7 | 19·44 | 35·12 | 28·22 |
| „ 16 | 19·44 | 35·12 | 28·22 |
| „ 29 | 19·50 | 35·23 | 28·31 |
| „ 31 | 19·44 | 35·12 | 28·22 |
| June 8 | 19·25 | 34·78 | 27·95 |
| „ 14 | 19·21 | 34·70 | 27·89 |
| „ 20 | 19·36 | 34·97 | 28·11 |
| „ 27 | 19·35 | 34·96 | 28·09 |
| July 5 | 19·35 | 34·96 | 28·09 |
| „ 13 | 19·31 | 34·88 | 28·03 |
| „ 24 | 19·40 | 35·05 | 28·16 |
| „ 29 | 19·49 | 35·21 | 28·30 |
| Aug. 6 | 19·45 | 35·14 | 28·24 |
| „ 11 | 19·41 | 35·07 | 28·18 |
| „ 18 | 19·41 | 35·07 | 28·18 |
| „ 26 | 19·40 | 35·05 | 28·16 |
| Sept. 3 | 19·39 | 35·03 | 28·15 |
| „ 9 | 19·38 | 35·01 | 28·14 |
| „ 18 | 19·39 | 35·03 | 28·15 |
| „ 26 | 19·40 | 35·05 | 28·16 |
| Oct. 4 | 19·39 | 35·03 | 28·15 |
| „ 11 | 19·32 | 34·90 | 28·05 |
| „ 18 | 19·40 | 35·05 | 28·16 |
| „ 24 | 19·40 | 35·05 | 28·16 |
| Nov. 1 | 19·39 | 35·03 | 28·15 |
| „ 7 | 19·38 | 35·01 | 28·14 |
| „ 15 | 19·41 | 35·07 | 28·18 |
| „ 25 | 19·46 | 35·16 | 28·25 |
| Dec. 2 | 19·45 | 35·14 | 28·24 |
| „ 9 | 19·42 | 35·08 | 28·19 |
| „ 15 | 19·38 | 35·01 | 28·14 |
| „ 22 | 19·42 | 35·09 | 28·20 |
| „ 29 | 19·42 | 35·09 | 28·20 |
| **3. Royal Sovereign Lightship.** | | | |
| 1904. | | | |
| Jan. 20 | 19·55 | 35·32 | 28·38 |
| „ 26 | 19·54 | 35·30 | 28·37 |
| Feb. 9 | 19·42 | 35·09 | 28·20 |
| „ 16 | 19·27 | 34·81 | 27·98 |
| „ 25 | 19·15 | 34·60 | 27·80 |
| Mar. 3 | 19·40 | 35·05 | 28·16 |
| „ 10 | 19·37 | 34·99 | 28·12 |
| „ 17 | 19·40 | 35·05 | 28·16 |
| „ 25 | 19·38 | 35·01 | 28·14 |
| Apr. 1 | 19·28 | 34·83 | 27·99 |
| „ 8 | 19·40 | 35·05 | 28·16 |
| „ 16 | 19·28 | 34·83 | 27·99 |
| „ 24 | 19·34 | 34·94 | 28·08 |
| May 1 | 19·29 | 34·85 | 28·00 |
| „ 8 | 19·29 | 34·85 | 28·00 |
| „ 16 | 19·31 | 34·88 | 28·03 |
| „ 23 | 19·30 | 34·87 | 28·02 |
| „ 31 | 19·31 | 34·88 | 28·03 |
| June 7 | 19·34 | 34·94 | 28·08 |
| „ 15 | 19·34 | 34·94 | 28·08 |
| „ 22 | 19·33 | 34·92 | 28·06 |
| „ 29 | 19·36 | 34·97 | 28·11 |
| July 6 | 19·31 | 34·88 | 28·03 |
| „ 13 | 19·37 | 34·99 | 28·12 |
| „ 21 | 19·38 | 35·01 | 28·14 |
| „ 29 | 19·37 | 34·99 | 28·12 |
| Aug. 6 | 19·37 | 34·99 | 28·12 |
| **3. Royal Sovereign Lightship—*cont.*** | | | |
| 1904. | | | |
| Aug. 13 | 19·37 | 34·99 | 28·12 |
| „ 20 | 19·39 | 35·03 | 28·15 |
| „ 28 | 19·38 | 35·01 | 28·14 |
| Sept. 5 | 19·39 | 35·03 | 28·15 |
| „ 12 | 19·38 | 35·01 | 28·14 |
| „ 19 | 19·39 | 35·03 | 28·15 |
| „ 27 | 19·40 | 35·05 | 28·16 |
| Nov. 25 | 19·43 | 35·10 | 28·21 |
| Dec. 2 | 19·43 | 35·10 | 28·21 |
| „ 9 | 19·43 | 35·10 | 28·21 |
| „ 24 | 19·43 | 35·10 | 28·21 |
| „ 31 | 19·42 | 35·08 | 28·19 |
| **4. Owers Lightship.** | | | |
| 1904. | | | |
| Jan. 16 | 19·48 | 35·19 | 28·28 |
| „ 19 | 19·32 | 34·90 | 28·05 |
| „ 25 | 19·32 | 34·90 | 28·05 |
| Feb. 1 | 19·16 | 34·61 | 27·82 |
| „ 8 | 19·37 | 34·99 | 28·12 |
| „ 15 | 19·02 | 34·36 | 27·61 |
| „ 24 | 19·20 | 34·69 | 27·87 |
| Mar. 2 | 19·24 | 34·76 | 27·93 |
| „ 9 | 19·33 | 34·92 | 28·06 |
| „ 18 | 19·33 | 34·92 | 28·06 |
| „ 25 | 19·33 | 34·92 | 28·06 |
| Apr. 2 | 19·28 | 34·83 | 27·99 |
| „ 8 | 19·27 | 34·81 | 27·98 |
| „ 16 | 19·26 | 34·79 | 27·96 |
| „ 25 | 19·32 | 34·90 | 28·05 |
| „ 27 | 19·25 | 34·78 | 27·95 |
| May 7 | 19·27 | 34·81 | 27·98 |
| „ 14 | 19·27 | 34·81 | 27·98 |
| „ 22 | 19·28 | 34·83 | 27·99 |
| „ 29 | 19·30 | 34·87 | 28·02 |
| June 6 | 19·30 | 34·87 | 28·02 |
| „ 16 | 19·34 | 34·94 | 28·08 |
| „ 20 | 19·35 | 34·96 | 28·09 |
| „ 27 | 19·34 | 34·94 | 28·08 |
| July 4 | 19·32 | 34·90 | 28·05 |
| „ 13 | 19·33 | 34·92 | 28·06 |
| „ 19 | 19·37 | 34·99 | 28·12 |
| „ 28 | 19·37 | 34·99 | 28·12 |
| Aug. 4 | 19·35 | 34·96 | 28·09 |
| „ 11 | 19·36 | 34·97 | 28·11 |
| „ 18 | 19·34 | 34·94 | 28·08 |
| „ 25 | 19·35 | 34·96 | 28·09 |
| Sept. 2 | 19·32 | 34·90 | 28·05 |
| „ 16 | 19·27 | 34·81 | 27·98 |
| „ 23 | 19·39 | 35·03 | 28·15 |
| „ 25 | 19·43 | 35·10 | 28·21 |
| „ 29 | 19·33 | 34·92 | 28·06 |
| Oct. 2 | 19·40 | 35·05 | 28·16 |
| „ 9 | 19·38 | 35·01 | 28·14 |
| „ 16 | 19·47 | 35·17 | 28·27 |
| „ 24 | 19·37 | 34·99 | 28·12 |
| „ 31 | 19·41 | 35·07 | 28·18 |
| Nov. 9 | 19·39 | 35·03 | 28·15 |
| „ 14 | 19·40 | 35·05 | 28·16 |
| „ 23 | 19·42 | 35·08 | 28·19 |
| „ 30 | 19·44 | 35·12 | 28·22 |
| Dec. 7 | 19·41 | 35·07 | 28·18 |
| „ 22 | 19·39 | 35·03 | 28·15 |
| „ 29 | 19·39 | 35·03 | 28·15 |

TABLE IV—*continued.*

| Date. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|
| **5. SHAMBLES LIGHTSHIP.** | | | |
| 1904. | | | |
| Jan. 19 | 19·44 | 35·12 | 28·22 |
| „ 25 | 19·46 | 35·16 | 28·25 |
| „ 27 | 19·44 | 35·12 | 28·22 |
| Feb. 3 | 19·49 | 35·21 | 28·30 |
| „ 10 | 19·35 | 34·96 | 28·09 |
| „ 15 | 19·23 | 34·74 | 27·92 |
| „ 19 | 19·33 | 34·92 | 28·06 |
| „ 21 | 19·33 | 34·92 | 28·06 |
| „ 26 | 19·35 | 34·96 | 28·09 |
| „ 27 | 19·36 | 34·97 | 28·11 |
| Mar. 3 | 19·40 | 35·05 | 28·16 |
| „ 13 | 19·37 | 34·99 | 28·12 |
| „ 18 | 19·36 | 34·97 | 28·11 |
| „ 23 | 19·37 | 34·99 | 28·12 |
| „ 26 | 19·33 | 34·92 | 28·06 |
| Apr. 2 | 19·37 | 34·99 | 28·12 |
| „ 9 | 19·39 | 35·03 | 28·15 |
| „ 15 | 19·27 | 34·81 | 27·98 |
| „ 18 | 19·37 | 34·99 | 28·12 |
| „ 19 | 19·26 | 34·79 | 27·96 |
| „ 24 | 19·38 | 35·01 | 28·14 |
| „ 26 | 19·40 | 35·05 | 28·16 |
| May 1 | 19·40 | 35·05 | 28·16 |
| „ 14 | 19·40 | 35·05 | 28·16 |
| „ 19 | 19·44 | 35·12 | 28·22 |
| „ 30 | 19·40 | 35·05 | 28·16 |
| June 2 | 19·39 | 35·03 | 28·15 |
| „ 7 | 19·35 | 34·96 | 28·09 |
| „ 13 | 19·41 | 35·07 | 28·18 |
| „ 14 | 19·42 | 35·08 | 28·19 |
| „ 18 | 19·42 | 35·08 | 28·19 |
| „ 23 | 19·42 | 35·08 | 28·19 |
| „ 24 | 19·42 | 35·08 | 28·19 |
| „ 30 | 19·42 | 35·08 | 28·19 |
| July 7 | 19·42 | 35·08 | 28·19 |
| „ 15 | 19·42 | 35·08 | 28·19 |
| „ 21 | 19·41 | 35·07 | 28·18 |
| „ 27 | 19·39 | 35·03 | 28·15 |
| Aug. 3 | 19·40 | 35·05 | 28·16 |
| „ 11 | 19·51 | 35·25 | 28·32 |
| „ 17 | 19·30 | 34·87 | 38·02 |
| „ 28 | 19·40 | 35·05 | 28·16 |
| Sept. 20 | 19·42 | 35·08 | 28·19 |
| „ 26 | 19·43 | 35·10 | 28·21 |
| Oct. 4 | 19·42 | 35·08 | 28·19 |
| „ 10 | 19·43 | 35·10 | 28·21 |
| „ 24 | 19·42 | 35·08 | 28·19 |
| „ 28 | 19·42 | 35·08 | 28·19 |
| Nov. 24 | 19·48 | 35·19 | 28·28 |
| „ 30 | 19·48 | 35·19 | 28·28 |
| Dec. 8 | 19·47 | 35·17 | 28·27 |
| „ 14 | 19·45 | 35·14 | 28·24 |
| „ 16 | 19·44 | 35·12 | 28·22 |
| „ 29 | 19·43 | 35·10 | 28·21 |
| **6. SEVEN STONES LIGHTSHIP.** | | | |
| 1904. | | | |
| Jan. 19 | 19·54 | 35·31 | 28·37 |
| „ 26 | 19·55 | 35·33 | 28·39 |
| Feb. 3 | 19·54 | 35·30 | 28·37 |
| „ 10 | 19·53 | 35·28 | 28·35 |
| „ 17 | 19·54 | 35·30 | 28·37 |
| „ 26 | 19·52 | 35·26 | 28·34 |
| Mar. 3 | 19·52 | 35·26 | 28·34 |
| „ 11 | 19·50 | 35·23 | 28·31 |
| „ 18 | 19·50 | 35·23 | 28·31 |
| „ 25 | 19·52 | 35·26 | 28·34 |
| **6. SEVEN STONES LIGHTSHIP—*cont.*** | | | |
| 1904. | | | |
| Apr. 16 | 19·53 | 35·28 | 28·35 |
| „ 24 | 19·53 | 35·28 | 28·35 |
| May 2 | 19·53 | 35·28 | 28·35 |
| „ 9 | 19·52 | 35·26 | 28·34 |
| „ 16 | 19·49 | 35·21 | 28·30 |
| „ 23 | 19·51 | 35·25 | 28·32 |
| „ 30 | 19·51 | 35·25 | 28·32 |
| June 7 | 19·51 | 35·25 | 28·32 |
| „ 15 | 19·54 | 35·30 | 28·37 |
| July 8 | 19·49 | 35·21 | 28·30 |
| „ 20 | 19·55 | 35·32 | 28·38 |
| „ 28 | 19·51 | 35·25 | 28·32 |
| Aug. 5 | 19·47 | 35·17 | 28·27 |
| „ 12 | 19·49 | 35·21 | 28·30 |
| „ 30 | 19·47 | 35·17 | 28·27 |
| Sept. 6 | 19·49 | 35·21 | 28·30 |
| „ 13 | 19·50 | 35·23 | 28·31 |
| „ 19 | 19·51 | 35·25 | 28·32 |
| „ 26 | 19·56 | 35·34 | 28·40 |
| Oct. 18 | 19·57 | 35·35 | 28·41 |
| „ 27 | 19·60 | 35·41 | 28·46 |
| Nov. 3 | 19·57 | 35·35 | 28·41 |
| „ 11 | 19·53 | 35·28 | 28·35 |
| „ 17 | 19·55 | 35·32 | 28·38 |
| „ 24 | 19·59 | 35·39 | 28·44 |
| Dec. 1 | 19·62 | 35·44 | 28·48 |
| „ 8 | 19·60 | 35·41 | 28·46 |
| „ 15 | 19·56 | 35·34 | 28·40 |
| „ 23 | 19·57 | 35·35 | 28·41 |
| „ 31 | 19·57 | 35·35 | 28·41 |
| **7. CARDIGAN BAY LIGHTSHIP.** | | | |
| 1904. | | | |
| Jan. 25 | 19·29 | 34·85 | 28·00 |
| Feb. 1 | 19·35 | 34·96 | 28·09 |
| „ 8 | 19·31 | 34·88 | 28·03 |
| „ 16 | 19·28 | 34·83 | 27·99 |
| „ 25 | 19·26 | 34·79 | 27·96 |
| Mar. 2 | 19·26 | 34·79 | 27·96 |
| „ 9 | 19·19 | 34·68 | 27·86 |
| „ 17 | 19·13 | 34·57 | 27·78 |
| „ 24 | 19·13 | 34·56 | 27·77 |
| Apr. 1 | 19·09 | 34·49 | 27·71 |
| „ 8 | 19·11 | 34·52 | 27·74 |
| „ 16 | 19·15 | 34·60 | 27·80 |
| „ 25 | 19·16 | 34·61 | 27·82 |
| „ 30 | 19·13 | 34·56 | 27·77 |
| May 7 | 19·15 | 34·60 | 27·80 |
| „ 16 | 19·14 | 34·58 | 27·79 |
| „ 22 | 19·14 | 34·58 | 27·79 |
| „ 30 | 19·11 | 34·52 | 27·74 |
| June 7 | 19·11 | 34·52 | 27·74 |
| „ 14 | 19·13 | 34·56 | 27·77 |
| „ 20 | 19·07 | 34·45 | 27·68 |
| „ 27 | 19·05 | 34·42 | 27·65 |
| July 5 | 19·15 | 34·60 | 27·80 |
| „ 13 | 19·11 | 34·52 | 27·74 |
| „ 19 | 19·11 | 34·52 | 27·74 |
| „ 27 | 19·13 | 34·56 | 27·77 |
| Aug. 4 | 19·17 | 34·63 | 27·83 |
| „ 12 | 19·20 | 34·69 | 27·87 |
| „ 26 | 19·15 | 34·60 | 27·80 |
| Sept. 3 | 19·14 | 34·58 | 27·79 |
| „ 9 | 19·16 | 34·61 | 27·82 |
| „ 16 | 19·14 | 34·58 | 27·79 |
| „ 25 | 19·17 | 34·63 | 27·83 |
| **7. CARDIGAN BAY LIGHTSHIP—*cont.*** | | | |
| 1904. | | | |
| Oct. 10 | 19·18 | 34·65 | 27·84 |
| „ 25 | 19·16 | 34·61 | 27·82 |
| Nov. 1 | 19·10 | 34·51 | 27·73 |
| „ 7 | 19·12 | 34·54 | 27·76 |
| „ 15 | 19·11 | 34·52 | 27·74 |
| „ 24 | 19·15 | 34·60 | 27·80 |
| „ 30 | 19·14 | 34·58 | 27·79 |
| Dec. 8 | 19·12 | 34·54 | 27·76 |
| „ 14 | 19·10 | 34·51 | 27·73 |
| „ 24 | 19·13 | 34·56 | 27·77 |
| „ 31 | 19·11 | 34·52 | 27·74 |
| **8. BAHAMA BANK LIGHTSHIP.** | | | |
| 1904. | | | |
| Jan. 29 | 19·44 | 35·12 | 28·22 |
| Feb. 3 | 18·82 | 34·00 | 27·32 |
| „ 10 | 18·46 | 33·36 | 26·80 |
| „ 18 | 18·88 | 34·11 | 27·41 |
| „ 26 | 18·78 | 33·93 | 27·26 |
| Mar. 4 | 18·86 | 34·07 | 27·38 |
| „ 10 | 18·31 | 33·08 | 26·58 |
| „ 18 | 18·53 | 33·48 | 26·90 |
| „ 26 | 18·64 | 33·68 | 27·06 |
| Apr. 2 | 18·73 | 33·84 | 27·19 |
| „ 9 | 18·92 | 34·18 | 27·47 |
| „ 16 | 18·65 | 33·69 | 27·07 |
| „ 25 | 18·73 | 33·84 | 27·19 |
| „ 30 | 18·75 | 33·87 | 27·22 |
| May 9 | 18·67 | 33·73 | 27·10 |
| „ 16 | 18·87 | 34·09 | 27·39 |
| „ 23 | 18·69 | 33·77 | 27·13 |
| „ 30 | 18·66 | 33·71 | 27·09 |
| June 22 | 18·73 | 33·84 | 27·19 |
| „ 29 | 18·77 | 33·91 | 27·25 |
| July 4 | 18·76 | 33·89 | 27·23 |
| „ 14 | 18·77 | 33·91 | 27·25 |
| „ 21 | 18·70 | 33·78 | 27·15 |
| „ 27 | 18·80 | 33·96 | 27·29 |
| Aug. 8 | 18·80 | 33·96 | 27·29 |
| „ 13 | 18·84 | 34·04 | 27·35 |
| „ 20 | 18·82 | 34·00 | 27·32 |
| „ 27 | 18·80 | 33·96 | 27·29 |
| Sept. 4 | 18·87 | 34·09 | 27·39 |
| „ 10 | 18·67 | 33·73 | 27·10 |
| „ 18 | 18·84 | 34·04 | 27·35 |
| „ 26 | 18·77 | 33·91 | 27·25 |
| Oct. 2 | 18·66 | 33·71 | 27·09 |
| „ 10 | 18·85 | 34·05 | 27·36 |
| „ 25 | 18·95 | 34·23 | 27·51 |
| Nov. 2 | 18·96 | 34·25 | 27·52 |
| „ 10 | 18·88 | 34·11 | 27·41 |
| „ 16 | 18·68 | 33·75 | 27·12 |
| „ 24 | 18·92 | 34·18 | 27·47 |
| Dec. 8 | 18·88 | 34·11 | 27·41 |
| „ 16 | 18·68 | 33·75 | 27·12 |
| „ 24 | 18·91 | 34·16 | 27·45 |
| „ 31 | 18·86 | 34·07 | 27·38 |
| **1. EAST GOODWIN LIGHTSHIP.** | | | |
| 1905. | | | |
| Jan. 5 | 19·40 | 35·05 | 28·16 |
| „ 17 | 19·43 | 35·10 | 28·21 |
| „ 23 | 19·44 | 35·12 | 28·22 |
| „ 30 | 19·44 | 35·12 | 28·22 |
| Feb. 6 | 19·31 | 34·88 | 28·03 |
| „ 14 | 19·32 | 34·90 | 28·05 |
| „ 20 | 19·28 | 34·83 | 27·99 |

TABLE IV—*continued.*

| Date. | *Cl.*‰ | *S.*‰ | $\sigma_0$ |
|---|---|---|---|
| **1. East Goodwin Lightship—*cont.*** | | | |
| 1905. | | | |
| Mar. 17 | 19·39 | 35·03 | 28·15 |
| „ 24 | 19·39 | 35·03 | 28·15 |
| „ 29 | 19·45 | 35·14 | 28·24 |
| Apr. 5 | 19·44 | 35·12 | 28·22 |
| „ 19 | 19·46 | 35·16 | 28·25 |
| „ 26 | 19·45 | 35·14 | 28·24 |
| May 4 | 19·37 | 34·99 | 28·12 |
| „ 11 | 19·36 | 34·97 | 28·11 |
| „ 19 | 19·34 | 34·94 | 28·08 |
| June 4 | 19·35 | 34·96 | 28·09 |
| „ 12 | 19·13 | 34·56 | 27·77 |
| „ 17 | 19·27 | 34·81 | 27·98 |
| „ 24 | 19·13 | 34·56 | 27·77 |
| July 3 | 19·30 | 34·87 | 28·02 |
| „ 10 | 19·19 | 34·67 | 27·86 |
| „ 17 | 19·26 | 34·79 | 27·96 |
| „ 25 | 19·25 | 34·78 | 27·95 |
| Aug. 2 | — | — | — |
| „ 9 | 19·46 | 35·16 | 28·25 |
| „ 23 | 19·46 | 35·16 | 28·25 |
| „ 30 | 19·45 | 35·14 | 28·24 |
| Sept. 6 | 19·47 | 35·17 | 28·27 |
| „ 13 | 19·44 | 35·12 | 28·22 |
| „ 23 | 19·48 | 35·19 | 28·28 |
| „ 30 | 19·48 | 35·19 | 28·28 |
| Oct. 7 | 19·50 | 35·23 | 28·31 |
| „ 10 | 19·49 | 35·21 | 28·30 |
| „ 15 | 19·43 | 35·10 | 28·21 |
| „ 20 | 19·37 | 34·99 | 28·12 |
| „ 26 | 19·26 | 34·79 | 27·96 |
| Nov. 5 | 19·52 | 35·26 | 28·34 |
| „ 21 | 19·48 | 35·19 | 28·28 |
| „ 27 | 19·53 | 35·28 | 28·35 |
| Dec. 4 | 19·43 | 35·10 | 28·21 |
| „ 12 | 19·48 | 35·19 | 28·28 |
| **2. Varne Lightship.** | | | |
| 1905. | | | |
| Jan. 4 | 19·43 | 35·10 | 28·21 |
| „ 13 | 19·42 | 35·08 | 28·19 |
| „ 21 | 19·45 | 35·14 | 28·24 |
| „ 28 | 19·48 | 35·19 | 28·28 |
| Feb. 5 | 19·43 | 35·10 | 28·21 |
| „ 12 | 19·36 | 34·97 | 28·11 |
| „ 18 | 19·35 | 34·96 | 28·09 |
| „ 25 | 19·31 | 34·88 | 28·03 |
| Mar. 6 | 19·47 | 35·17 | 28·27 |
| „ 14 | 19·46 | 35·16 | 28·25 |
| „ 21 | 19·47 | 35·17 | 28·27 |
| „ 27 | 19·52 | 35·26 | 28·34 |
| Apr. 5 | 19·54 | 35·30 | 28·37 |
| „ 12 | 19·52 | 35·26 | 28·34 |
| „ 19 | 19·55 | 35·32 | 28·38 |
| „ 26 | 19·55 | 35·32 | 28·38 |
| May 5 | 19·48 | 35·19 | 28·28 |
| „ 12 | 19·46 | 35·16 | 28·25 |
| „ 18 | 19·41 | 35·07 | 28·18 |
| „ 26 | 19·42 | 35·08 | 28·19 |
| June 3 | 19·45 | 35·14 | 28·24 |
| „ 10 | 19·39 | 35·03 | 28·15 |
| „ 17 | 19·41 | 35·07 | 28·18 |
| July 3 | 19·45 | 35·14 | 28·24 |
| „ 10 | 19·47 | 35·17 | 28·27 |
| „ 17 | 19·47 | 35·17 | 28·27 |
| „ 24 | 19·45 | 35·14 | 28·24 |
| Aug. 9 | 19·45 | 35·14 | 28·24 |
| „ 23 | 19·46 | 35·16 | 28·25 |
| **2. Varne Lightship—*cont.*** | | | |
| 1905. | | | |
| Aug. 30 | 19·46 | 35·16 | 28·25 |
| Sept. 6 | 19·44 | 35·12 | 28·22 |
| „ 14 | 19·45 | 35·14 | 28·24 |
| „ 21 | 19·49 | 35·21 | 28·30 |
| „ 28 | 19·43 | 35·10 | 28·21 |
| Oct. 5 | 19·44 | 35·12 | 28·22 |
| „ 13 | 19·48 | 35·19 | 28·28 |
| „ 21 | 19·36 | 34·97 | 28·11 |
| „ 28 | 19·40 | 35·05 | 28·16 |
| Nov. 4 | 19·50 | 35·23 | 28·31 |
| „ 14 | 19·50 | 35·23 | 28·31 |
| „ 21 | 19·36 | 34·97 | 28·11 |
| „ 27 | 19·56 | 35·34 | 28·40 |
| Dec. 4 | 19·54 | 35·30 | 28·37 |
| „ 12 | 19·53 | 35·28 | 28·35 |
| „ 20 | 19·54 | 35·30 | 28·37 |
| „ 26 | 19·54 | 35·30 | 28·37 |
| **4. Ower's Lightship.** | | | |
| 1905. | | | |
| Jan. 5 | 19·42 | 35·08 | 28·19 |
| „ 13 | 19·42 | 35·08 | 28·19 |
| „ 21 | 19·42 | 35·08 | 28·19 |
| „ 28 | 19·50 | 35·23 | 28·31 |
| Feb. 4 | 19·45 | 35·14 | 28·24 |
| „ 12 | 19·44 | 35·12 | 28·22 |
| **5. Shambles Lightship.** | | | |
| 1905. | | | |
| Jan. 3 | 19·43 | 35·10 | 28·21 |
| „ 29 | 19·46 | 35·16 | 28·25 |
| Feb. 14 | 19·48 | 35·19 | 28·28 |
| **6. Seven Stones Lightship.** | | | |
| 1905. | | | |
| Jan. 3 | 19·55 | 35·32 | 28·38 |
| „ 30 | 19·58 | 35·37 | 28·43 |
| Feb. 6 | 19·57 | 35·35 | 28·41 |
| „ 15 | 19·58 | 35·37 | 28·43 |
| „ 21 | 19·58 | 35·37 | 28·43 |
| „ 28 | 19·59 | 35·39 | 28·44 |
| Mar. 7 | 19·54 | 35·30 | 28·37 |
| „ 16 | 19·44 | 35·12 | 28·22 |
| „ 23 | 19·46 | 35·16 | 28·25 |
| „ 30 | 19·42 | 35·08 | 28·19 |
| Apr. 6 | 19·48 | 35·19 | 28·28 |
| „ 13 | 19·45 | 35·14 | 28·24 |
| „ 20 | 19·50 | 35·23 | 28·31 |
| „ 28 | 19·46 | 35·16 | 28·25 |
| May 6 | 19·50 | 35·23 | 28·31 |
| „ 14 | 19·47 | 35·17 | 28·27 |
| „ 19 | 19·45 | 35·14 | 28·24 |
| „ 27 | 19·50 | 35·23 | 28·31 |
| June 3 | 19·50 | 35·23 | 28·31 |
| „ 10 | 19·51 | 35·25 | 28·32 |
| „ 19 | 19·51 | 35·25 | 28·32 |
| „ 28 | 19·54 | 35·30 | 28·37 |
| July 4 | 19·50 | 35·23 | 28·31 |
| „ 12 | 19·52 | 35·26 | 28·34 |
| „ 18 | 19·52 | 35·26 | 28·34 |
| „ 26 | 19·48 | 35·19 | 28·28 |
| Aug. 3 | 19·54 | 35·30 | 28·37 |
| „ 10 | 19·53 | 35·28 | 28·35 |
| „ 26 | 19·55 | 35·32 | 28·38 |
| Sept. 1 | 19·53 | 35·28 | 28·35 |
| „ 9 | 19·49 | 35·21 | 28·30 |
| „ 16 | 19·56 | 35·34 | 28·40 |
| **6. Seven Stones Lightship—*cont.*** | | | |
| 1905. | | | |
| Sept. 24 | 19·56 | 35·34 | 28·40 |
| „ 30 | 19·56 | 35·34 | 28·40 |
| Oct. 7 | 19·60 | 35·41 | 28·46 |
| „ 14 | 19·61 | 35·43 | 28·47 |
| „ 23 | 19·59 | 35·39 | 28·44 |
| „ 30 | 19·64 | 35·48 | 28·51 |
| Nov. 6 | 19·57 | 35·35 | 28·41 |
| „ 14 | 19·55 | 35·32 | 28·38 |
| „ 20 | 19·55 | 35·32 | 28·38 |
| „ 28 | 19·57 | 35·35 | 28·41 |
| Dec. 5 | 19·56 | 35·34 | 28·40 |
| „ 13 | 19·55 | 35·32 | 28·38 |
| „ 22 | 19·53 | 35·28 | 28·35 |
| „ 27 | 19·51 | 35·25 | 28·32 |
| **7. Cardigan Bay Lightship.** | | | |
| 1905. | | | |
| Jan. 6 | 19·07 | 34·45 | 27·68 |
| „ 16 | 19·32 | 34·90 | 28·05 |
| „ 24 | 19·15 | 34·60 | 27·80 |
| „ 30 | 19·25 | 34·78 | 27·95 |
| Feb. 7 | 19·14 | 34·58 | 27·79 |
| „ 13 | 19·14 | 34·58 | 27·79 |
| „ 21 | 19·08 | 34·47 | 27·70 |
| „ 26 | 19·05 | 34·42 | 27·65 |
| Mar. 7 | 19·04 | 34·40 | 27·64 |
| „ 14 | 19·05 | 34·42 | 27·65 |
| „ 19 | 19·14 | 34·58 | 27·79 |
| „ 25 | 19·06 | 34·43 | 27·67 |
| „ 30 | 19·05 | 34·42 | 27·65 |
| Apr. 6 | 19·18 | 34·65 | 27·84 |
| „ 14 | 19·13 | 34·56 | 27·77 |
| „ 21 | 19·17 | 34·63 | 27·83 |
| „ 28 | 19·10 | 34·51 | 27·73 |
| May 6 | 19·14 | 34·58 | 27·79 |
| „ 13 | 19·05 | 34·42 | 27·65 |
| „ 27 | 19·13 | 34·56 | 27·77 |
| June 4 | 19·14 | 34·58 | 27·79 |
| „ 18 | 19·18 | 34·65 | 27·84 |
| „ 24 | 19·19 | 34·67 | 27·86 |
| July 2 | 19·18 | 34·65 | 27·84 |
| „ 9 | 19·11 | 34·52 | 27·74 |
| „ 17 | 19·20 | 34·69 | 27·87 |
| „ 24 | 19·20 | 34·69 | 27·87 |
| Sept. 1 | 19·17 | 34·63 | 27·83 |
| „ 8 | 19·24 | 34·76 | 27·93 |
| „ 14 | 19·18 | 34·65 | 27·84 |
| „ 22 | 19·18 | 34·65 | 27·84 |
| „ 29 | 19·21 | 34·70 | 27·89 |
| Oct. 5 | 19·15 | 34·60 | 27·80 |
| „ 14 | 19·12 | 34·54 | 27·76 |
| „ 22 | 19·10 | 34·51 | 27·73 |
| „ 30 | 19·05 | 34·42 | 27·65 |
| Nov. 5 | 19·09 | 34·49 | 27·71 |
| „ 12 | 19·15 | 34·60 | 27·80 |
| „ 20 | 19·13 | 34·56 | 27·77 |
| „ 27 | 19·10 | 34·51 | 27·73 |
| Dec. 4 | 19·12 | 34·54 | 27·76 |
| „ 12 | 19·19 | 34·67 | 27·86 |
| **8. Bahama Bank Lightship.** | | | |
| 1905. | | | |
| Jan. 7 | 18·67 | 33·73 | 27·10 |
| „ 14 | 18·86 | 34·07 | 27·38 |
| „ 21 | 18·96 | 34·25 | 27·52 |
| „ 28 | 18·72 | 33·82 | 27·18 |
| Feb. 4 | 18·84 | 34·04 | 27·35 |

TABLE IV—*continued.*

| Date. | $Cl.^{\circ}/_{\circ\circ}$ | $S.^{\circ}/_{\circ\circ}$ | $\sigma_0$ | Date. | $Cl.^{\circ}/_{\circ\circ}$ | $S.^{\circ}/_{\circ\circ}$ | $\sigma_0$ | Date. | $Cl.^{\circ}/_{\circ\circ}$ | $S.^{\circ}/_{\circ\circ}$ | $\sigma_0$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8. BAHAMA BANK LIGHT-SHIP—*cont.* | | | | 8. BAHAMA BANK LIGHT-SHIP—*cont.* | | | | 8. BAHAMA BANK LIGHT-SHIP—*cont.* | | | |
| 1905. | | | | 1905. | | | | 1905. | | | |
| Feb. 13 | 18·96 | 34·25 | 27·52 | May 27 | 18·74 | 33·86 | 27·20 | Sept. 8 | 18·81 | 33·98 | 27·31 |
| „ 20 | 18·90 | 34·14 | 27·44 | June 5 | 18·66 | 33·71 | 27·09 | „ 15 | 18·72 | 33·82 | 27·18 |
| „ 27 | 18·81 | 33·98 | 27·31 | „ 11 | 18·54 | 33·49 | 26·91 | „ 23 | 18·80 | 33·96 | 27·29 |
| Mar. 7 | 18·64 | 33·68 | 27·06 | „ 19 | 18·61 | 33·62 | 27·02 | „ 30 | 18·69 | 33·77 | 27·13 |
| „ 15 | 18·97 | 34·27 | 27·54 | „ 22 | 18·63 | 33·66 | 27·04 | Oct. 7 | 18·75 | 33·87 | 27·22 |
| „ 22 | 18·91 | 34·16 | 27·45 | July 5 | 18·80 | 33·96 | 27·29 | „ 14 | 18·79 | 33·95 | 27·28 |
| „ 29 | 18·69 | 33·77 | 27·13 | „ 11 | 18·84 | 34·04 | 27·35 | „ 23 | 18·84 | 34·04 | 27·35 |
| Apr. 6 | 18·79 | 33·95 | 27·28 | „ 19 | 18·79 | 33·95 | 27·28 | „ 31 | 18·87 | 34·09 | 27·39 |
| „ 15 | 18·39 | 33·22 | 26·70 | „ 26 | 18·82 | 34·00 | 27·32 | Nov. 6 | 18·87 | 34·09 | 27·39 |
| „ 22 | 18·72 | 33·82 | 27·18 | Aug. 2 | 18·82 | 34·00 | 27·32 | „ 20 | 18·76 | 33·89 | 27·23 |
| „ 29 | 18·69 | 33·77 | 27·13 | „ 9 | 18·80 | 33·96 | 27·29 | „ 28 | 18·92 | 34·18 | 27·47 |
| May 6 | 18·69 | 33·77 | 27·13 | „ 16 | 18·81 | 33·98 | 27·31 | Dec. 5 | 18·91 | 34·16 | 27·45 |
| „ 13 | 18·83 | 34·02 | 27·34 | „ 24 | 18·81 | 33·98 | 27·31 | „ 19 | 18·73 | 33·84 | 27·19 |
| „ 19 | 18·50 | 33·42 | 26·86 | „ 31 | 18·64 | 33·68 | 27·06 | „ 28 | 18·96 | 34·25 | 27·52 |

TABLE V.—COMMANDERS and OBSERVERS on Cross-Channel Steamers, &c., on which Surface Water Samples have been collected during 1904 and 1905.

| Vessel or Route. | Commanders and Observers. |
|---|---|
| Newhaven to Caen ... ... | N. G. Phillips, A. E. Hemmings, F. Banks, H. Proctor, J. Ellis, C. Cook, Commanders. |
| Southampton to Havre ... ... | R. Carter, E. T. Smith, Commanders. |
| Southampton to St. Malo .. | H. Forester, W. Gregory, A. H. Steide, Commanders. |
| Plymouth to St. Brieuc ... ... | E. T. Enwoldsen, Commander. |
| Plymouth to Cork ... ... | F. Ridge, H. Blanchard, R. Murray, Mates. |
| S.S. 'Eastfield" ... ... ... | F. B. Allen, Chief Engineer. |
| S.S. "Tagus" ... .. ... | J. E. P. Matthews, 2nd Officer. |
| S.S. "Philadephian" ... ... | S. Brookes. |
| S.S. "Port Morant" ... ... | E. W. Harvey. |
| S.S. "Philadelphia" ... ... | C. P. Lilley, 2nd Officer. |
| S.S. "Arundel Castle" ... ... | J. G. B. Harrison. |
| S.S. "Briton" ... ... ... | H. P. B. Smith, 3rd Officer. |
| S S. "Port Royal" ... ... | J. D. Ashworth, 2nd Officer. |
| S.S. "Thames" ... ... ... | B. Shillitoe, 3rd Officer. |
| S.S. "North Point" ... ... | T. H. Wheaton, 3rd Officer. |
| S.S. "Minnehaha" ... ... | G. H. W. Guddery, 1st Officer. |
| S.S. "Minneapolis" ... ... | T. F. Gates, Commander; F. H. Claret, 1st Officer. |
| S.S. "Cambrian"... ... ... | E. B. Lee. |
| S.S. "Hungarian" ... ... | W. Wallace, Commander. |
| S.S. "Macedonia" ... ... | C. D. Bennett, Commander. |
| S.S. "Germanic" ... .. ... | A. Moffat, 3rd Officer. |
| S.S. "Goorkha" ... ... .. | F. D. McArthur, 2nd Officer. |
| East Goodwin Lightship... ... | J. Leman, Master; J. Soal, G. Tracey, Mates. |
| Varne Lightship ... ... ... | J. Leaman, J. Lewis, A. G. Griggs, Masters; R. Couzins, Mate; W. Thomas, Lamplighter. |
| Royal Sovereign Lightship ... | D. K. Wright, Master; S. A. Jocelyn, Mate. |
| Owers Lightship ... ... ... | J. Burry, Master; T. H. Hutchings, R. Pillar, Mates. |
| Shambles Lightship ... ... | W. E. Norris, Master; J. Hicks, F. Webb, Mates. |
| Seven Stones Lightship ... ... | J. Clay, Master; J. Griffiths, Mate; R. Hall, Lamplighter. |
| Cardigan Bay Lightship ... ... | B. Davies, J. Rees, Masters; R. M. Hall, B. Tony, J. Hutchings, D. Quayle, Mates. |
| Bahama Bank Lightship ... ... | D. Quayle, W. Emmerson, Masters; R. Murphy, R. Pritchard, Mates; R. D. Pritchard, Lamplighter. |

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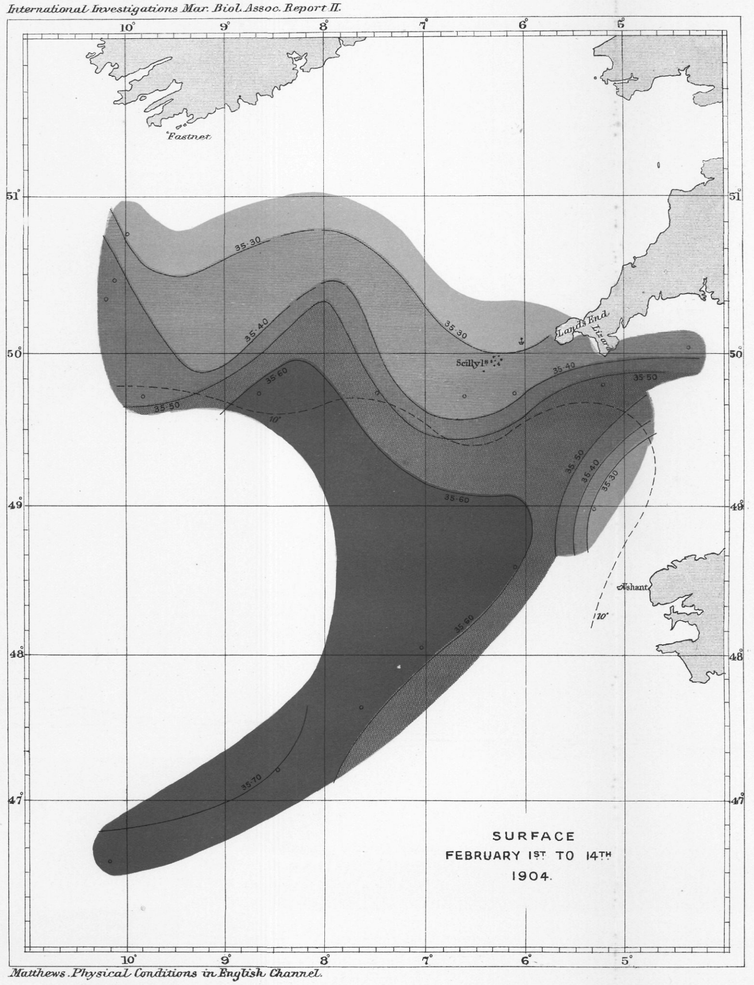
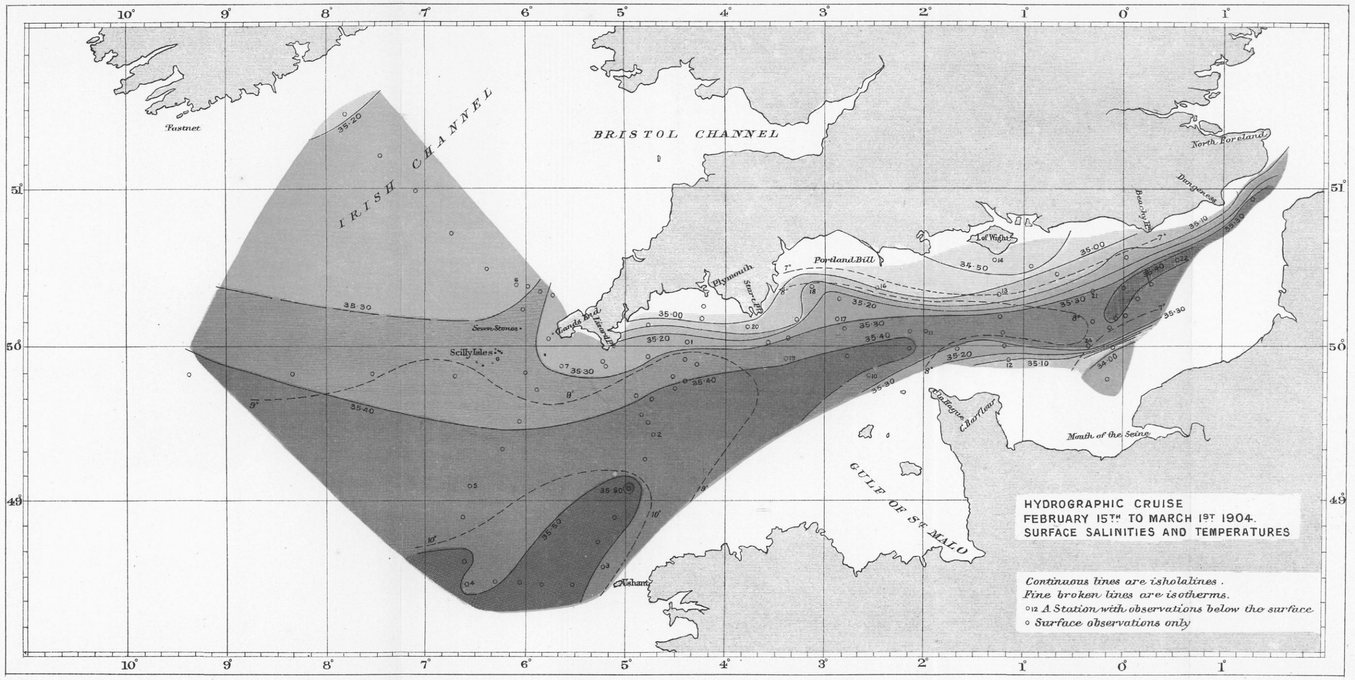
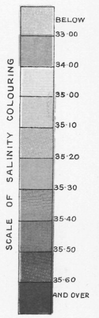
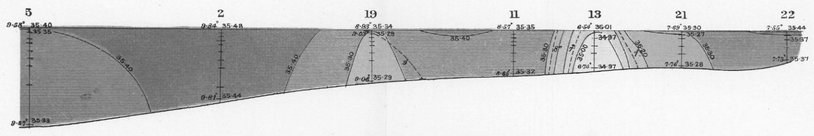
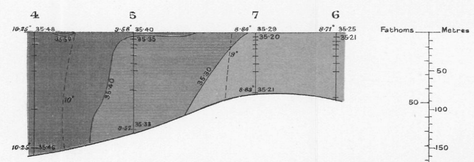


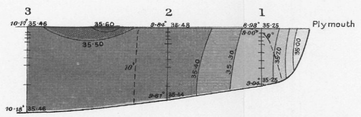

*Matthews. Physical Conditions in English Channel.*







SECTIONS. FEB. 15TH TO MARCH 1ST 1904.

*Stations are shown by vertical lines with the number of station above.*
*Observations below the surface are shown by short horizontal lines crossing the station lines*
*Isohalines are shown by continuous lines.*
*Isotherms are shown by broken lines.*

*The Horizontal Scale is that of the Charts.*

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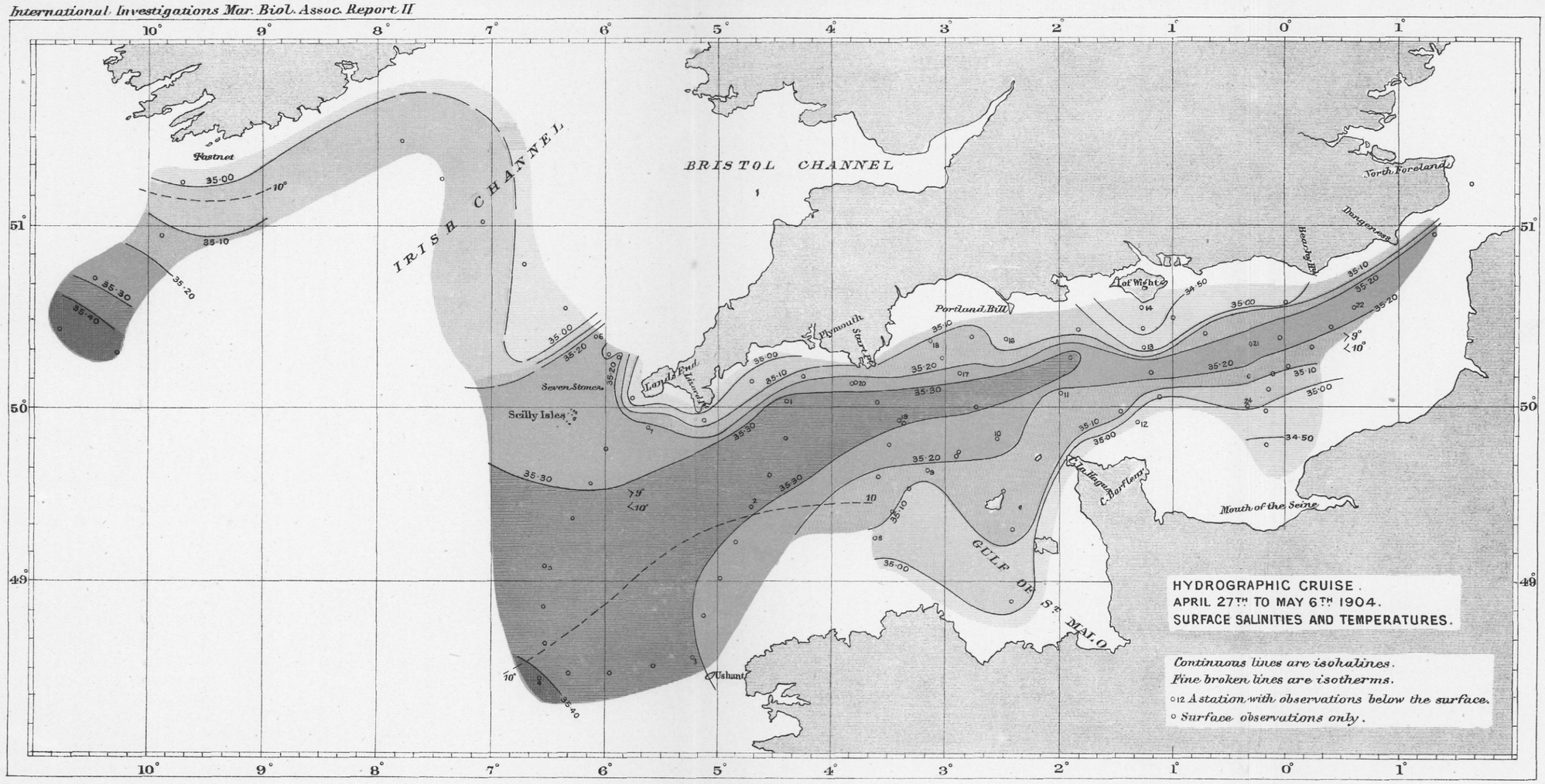


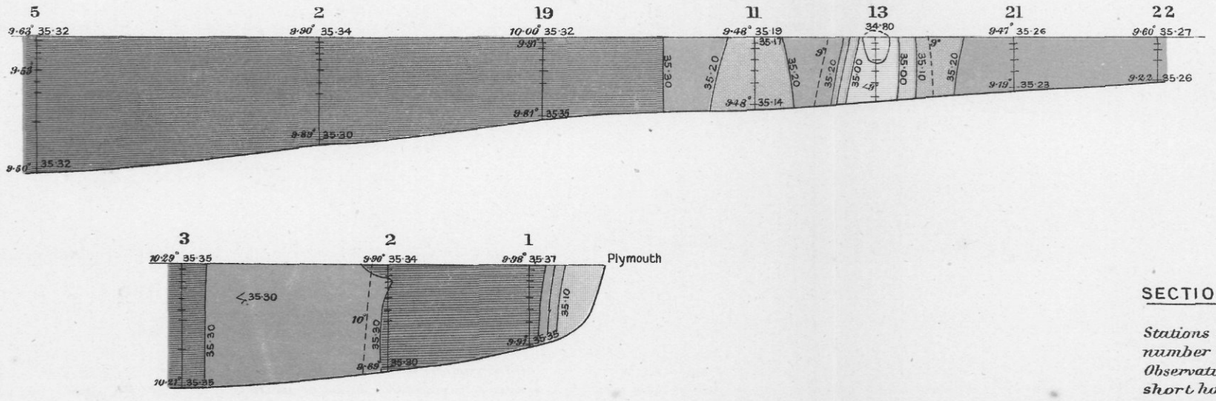


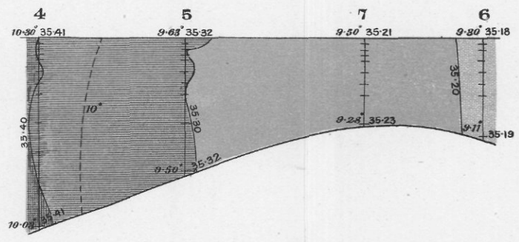


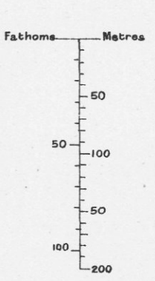


## SECTIONS. APRIL 27TH TO MAY 8TH 1904.

*Stations are shown by vertical lines with the number of station above.*
*Observations below the surface are shown by short horizontal lines crossing the station lines.*
*Isohalines are shown by continuous lines.*
*Isotherms are shown by broken lines.*

*The horizontal scale is that of the Charts.*

*Matthews Physical Conditions in English Channel.*

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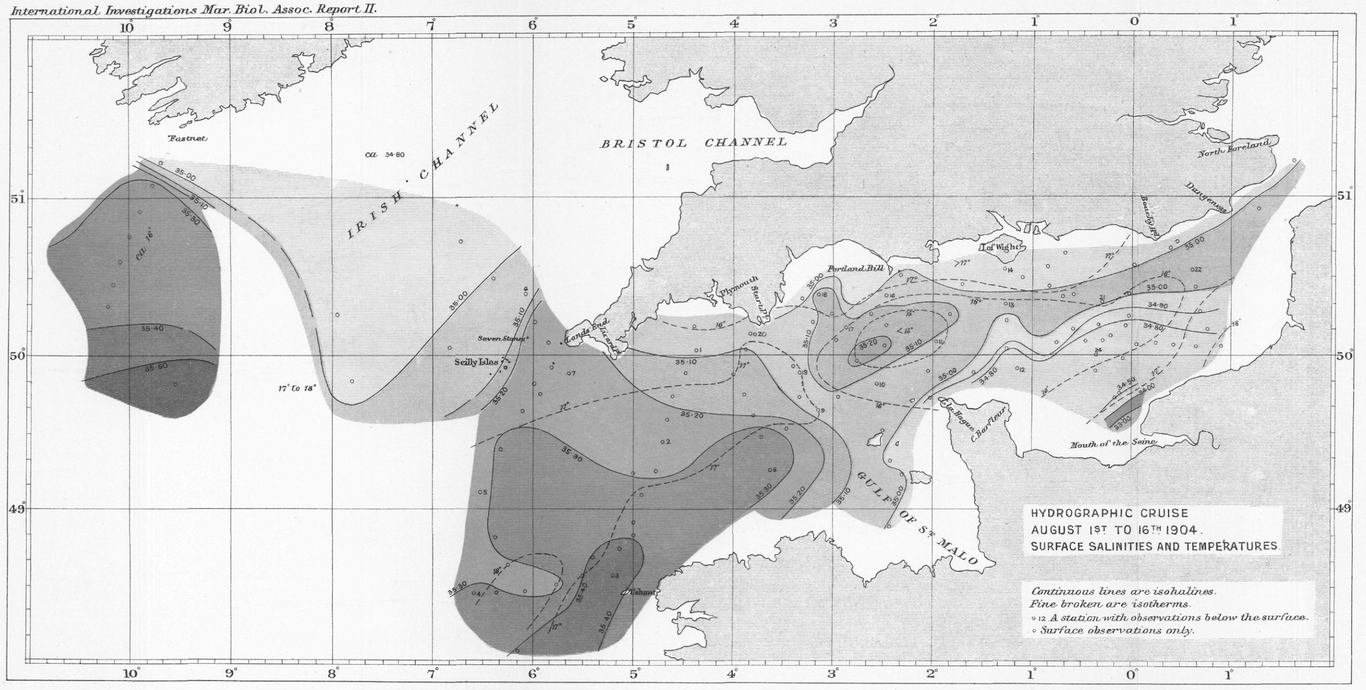


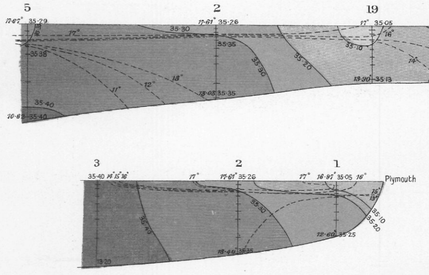


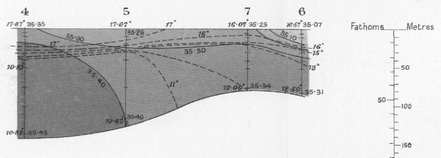

Fathoms Metres
0 50
50 100
100 150
150 200

SECTIONS. AUGUST 1ST TO 16TH 1904.

*Stations are shown by vertical lines with the number of station above.*
*Observations below the surface are shown by short horizontal lines crossing the station lines*
*Isohalines are shown by continuous lines.*
*Isotherms are shown by broken lines.*

*The horizontal scale is that of the charts.*

*Matthews Physical Conditions in English Channel.*

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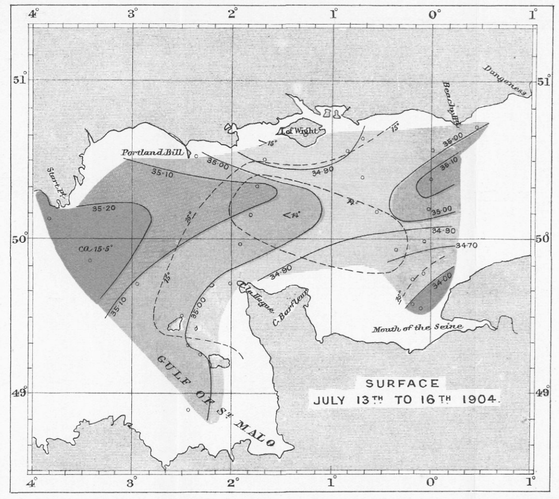


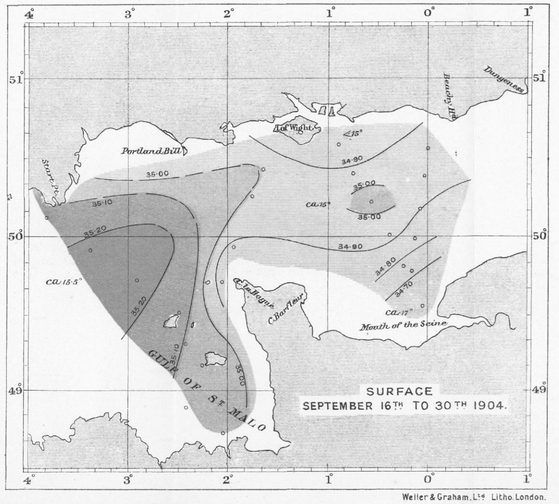


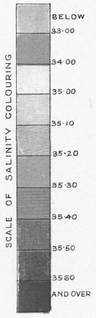


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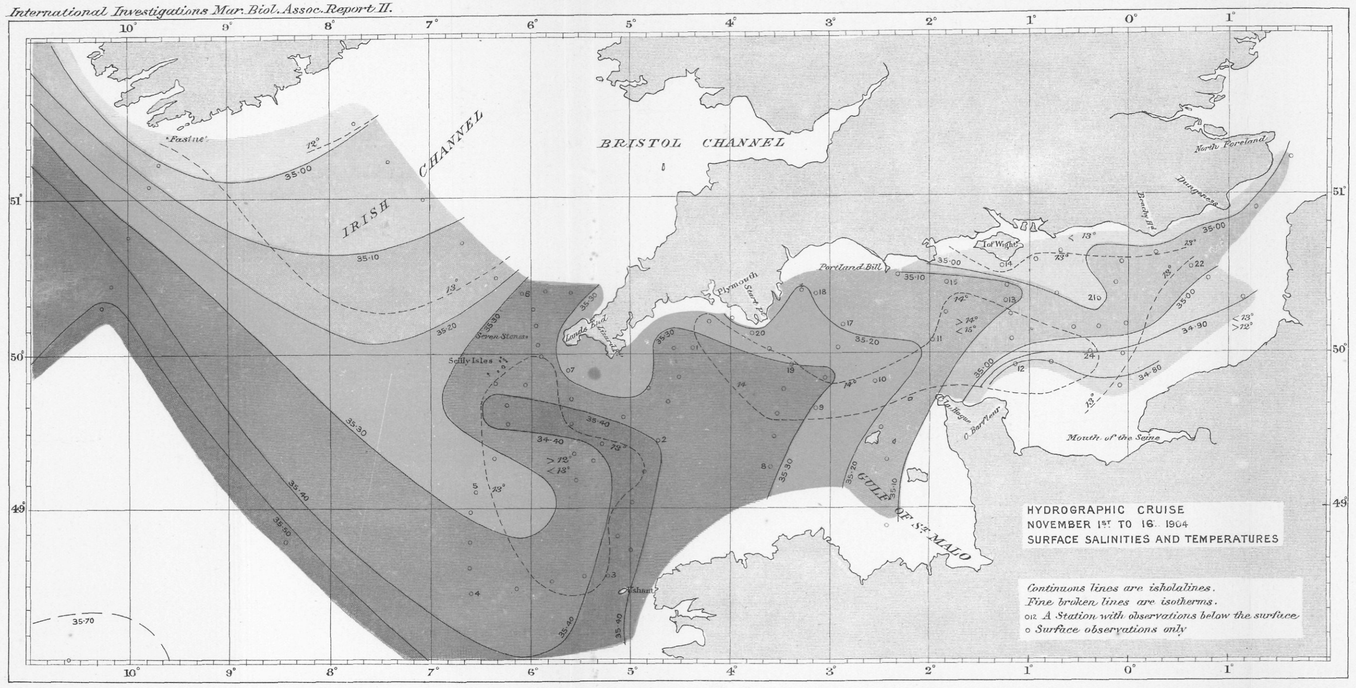


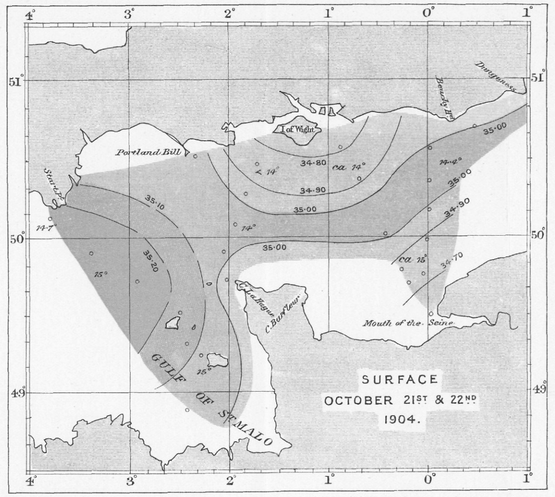


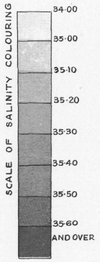


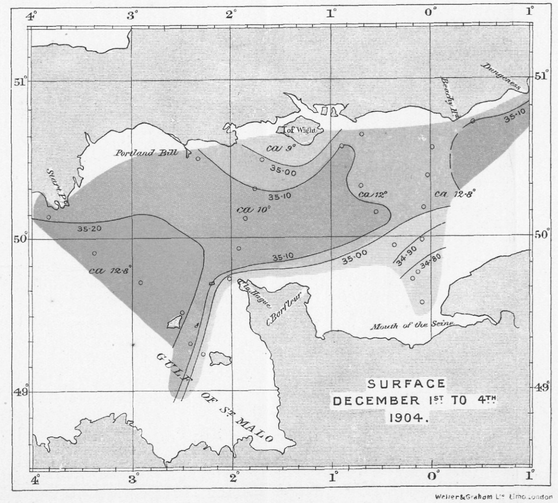


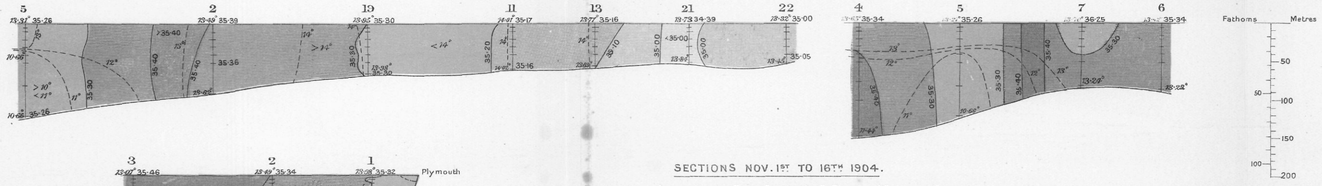


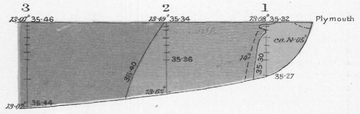


SECTIONS NOV. 1ST TO 16TH 1904.

*Stations are shown by vertical lines with the number of station above.*
*Observations below the surface are shown by short horizontal lines crossing the station lines*
*Isohalines are shown by continuous lines.*
*Isotherms are shown by broken lines.*

*The Horizontal Scale is that of the Chart.*

*Matthews Physical Conditions in English Channel.*

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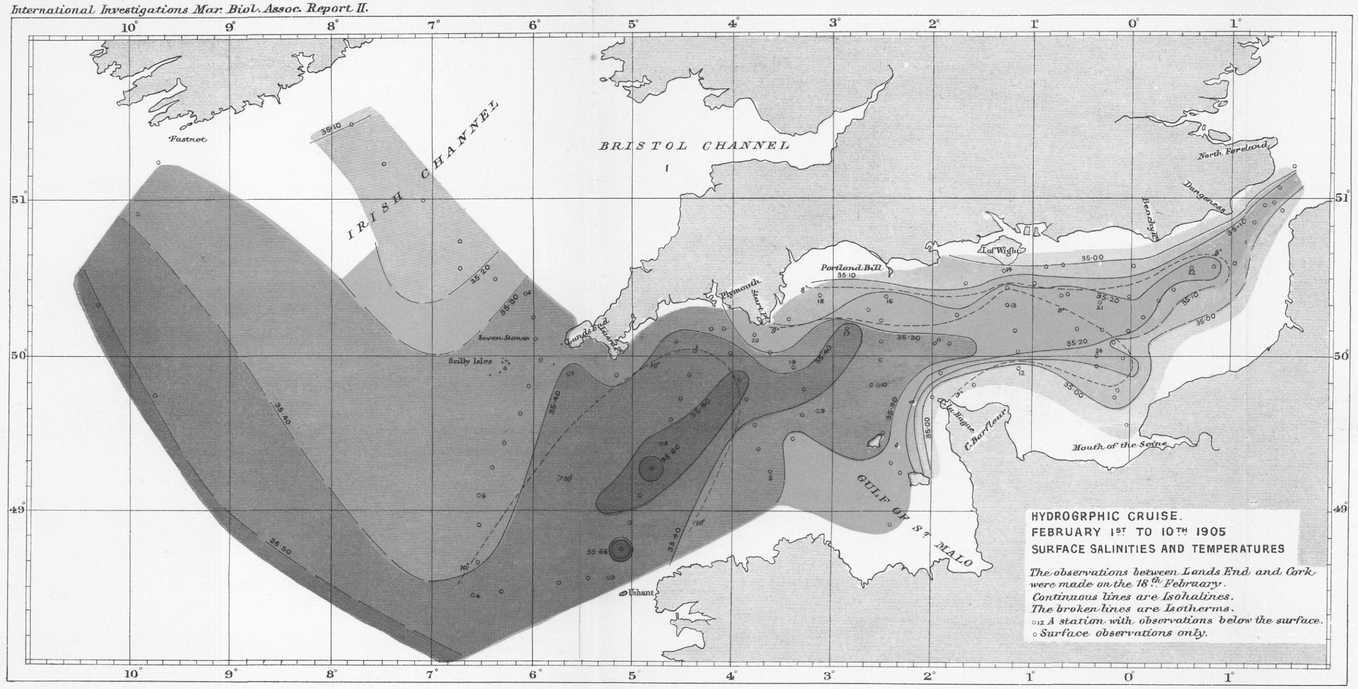
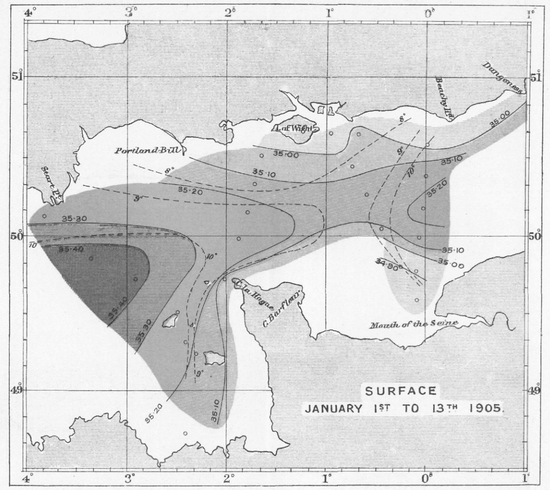
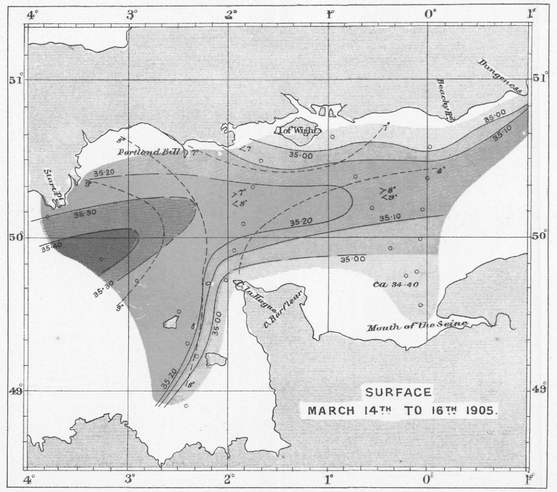
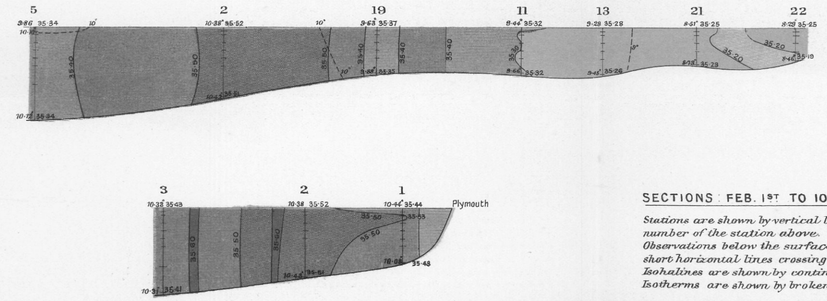



SCALE OF SALINITY COLORING

34·00
35·00
35·10
35·20
35·30
35·40
35·50
35·60
AND OVER




SECTIONS FEB. 1ST TO 10TH 1905.

Stations are shown by vertical lines with the number of the station above.
Observations below the surface are shown by short horizontal lines crossing the station lines
Isohalines are shown by continuous lines
Isotherms are shown by broken lines

The horizontal scale is that of the charts.

Matthews Physical Conditions in English Channel.

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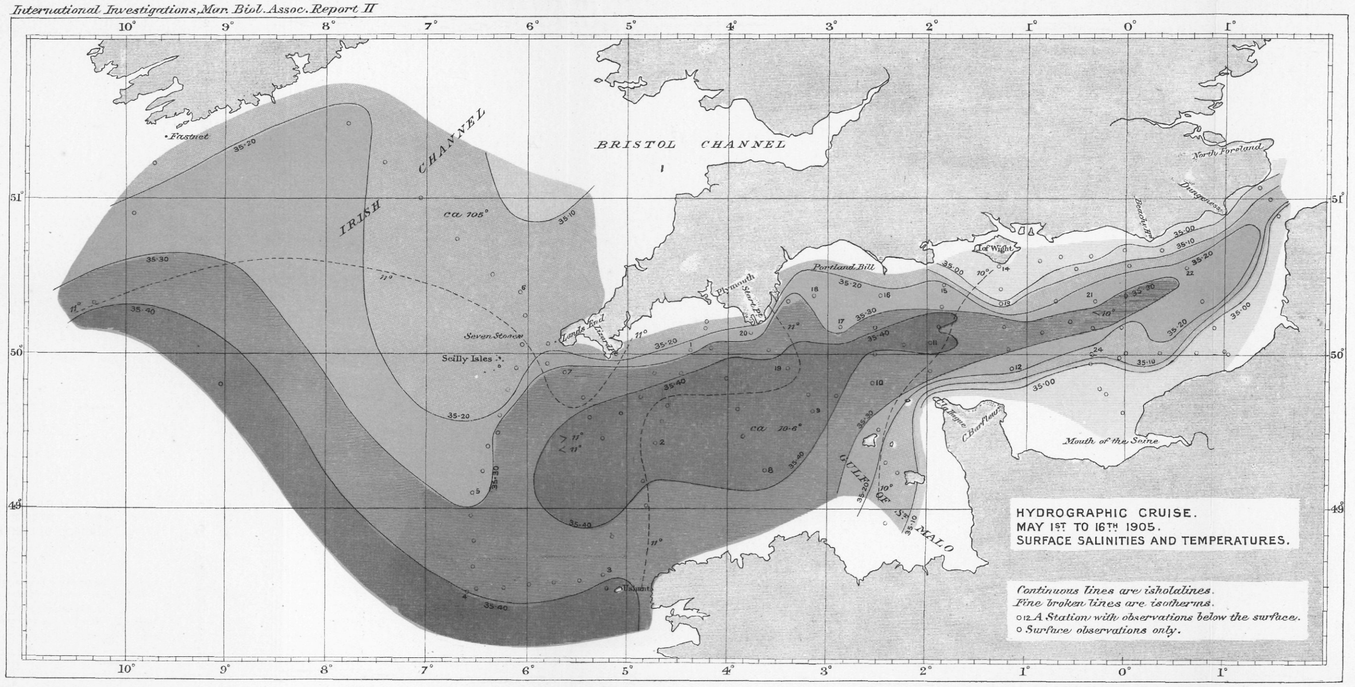


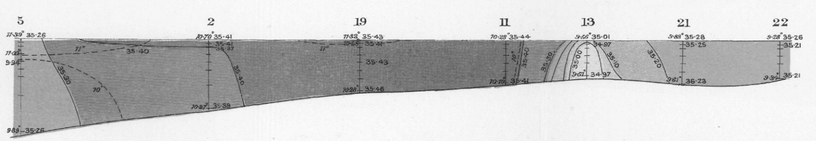


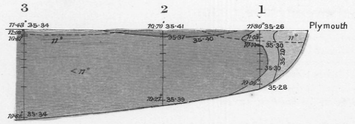


**SECTIONS MAY 1ST TO 16TH 1905.**

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*Isotherms are shown by broken lines.*

*The Horizontal Scale is that of the Charts.*

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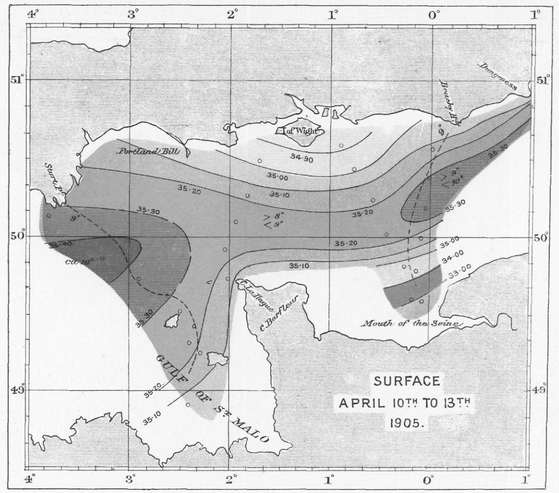


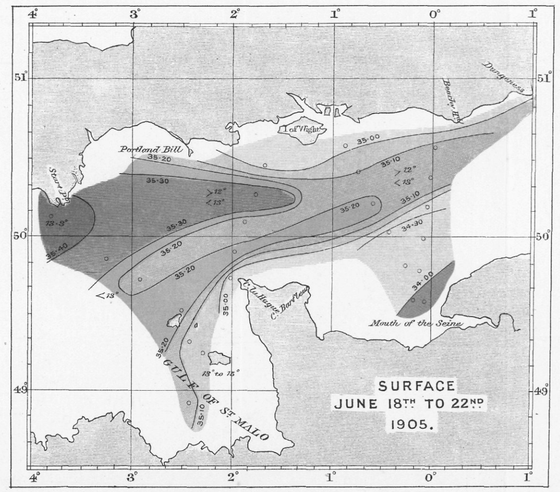


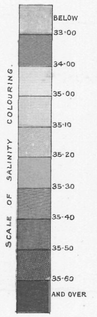


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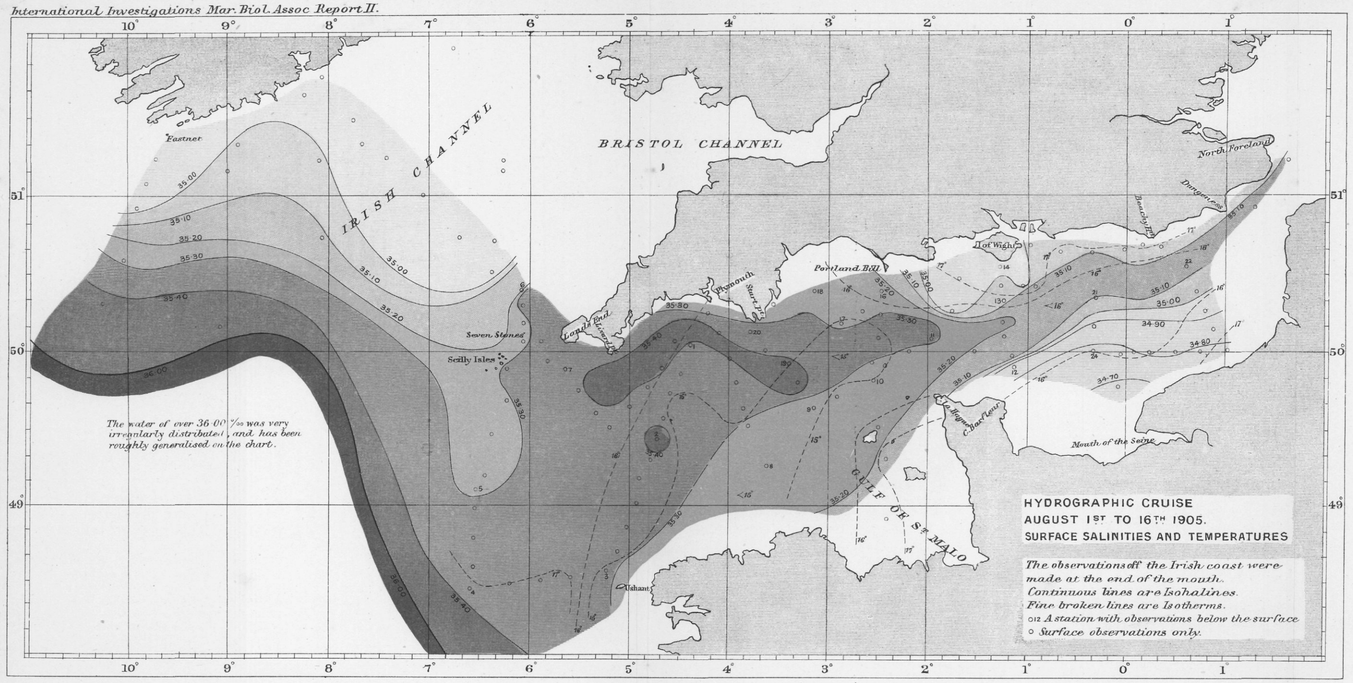


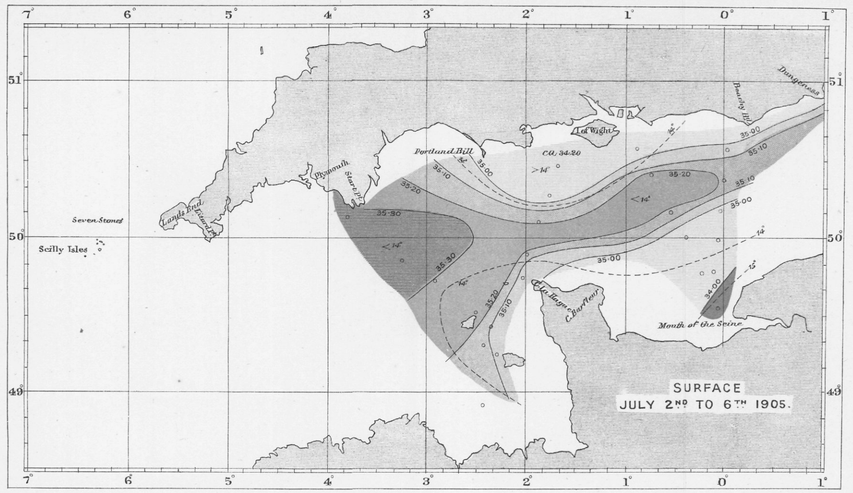


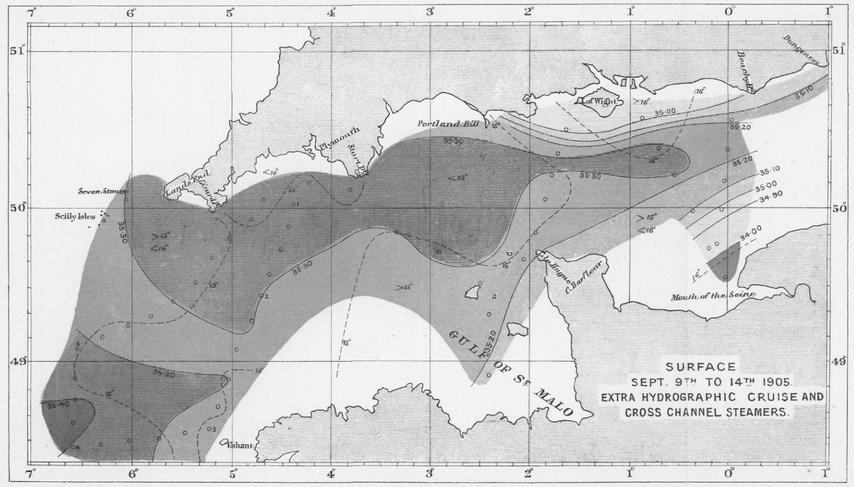


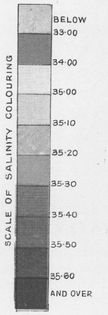


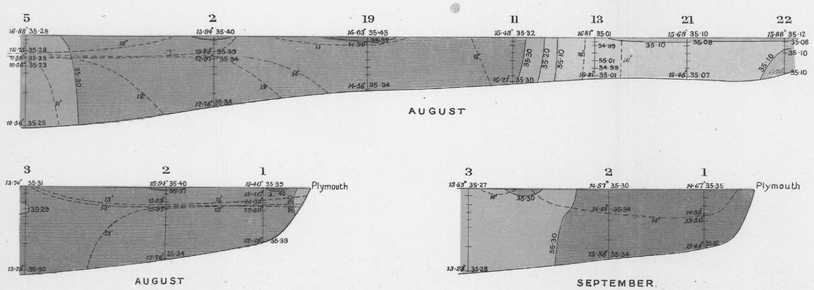


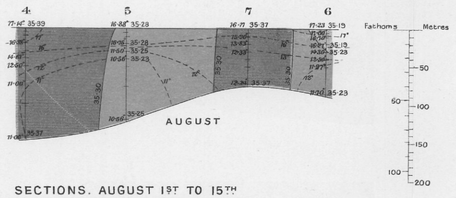


SECTIONS. AUGUST 1ST TO 15TH AND SEPTEMBER 9TH TO 14TH 1905.

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*Observations below the surface are shown by short horizontal lines crossing the station lines.*
*Isohalines are shown by continuous lines.*
*Isotherms are shown by broken lines.*

*The horizontal scale is that of the charts*

*Matthews. Physical Conditions in English Channel.*

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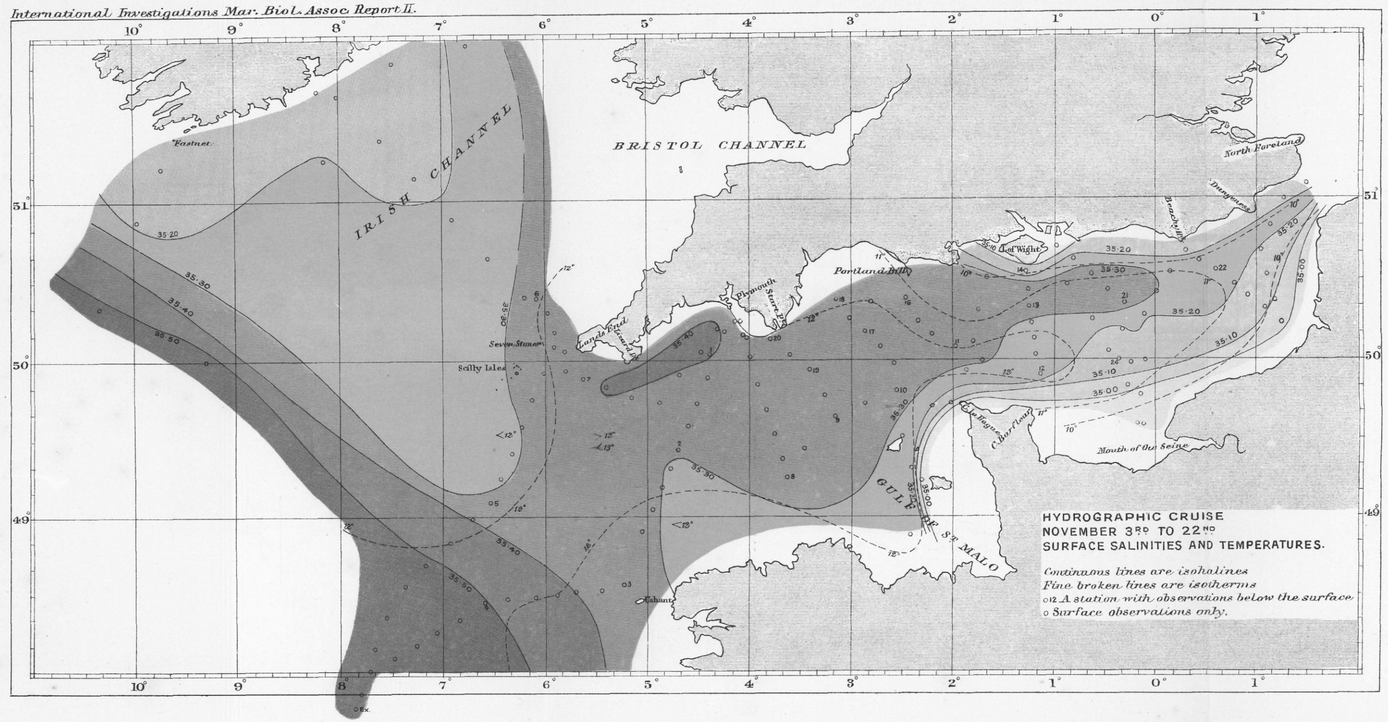
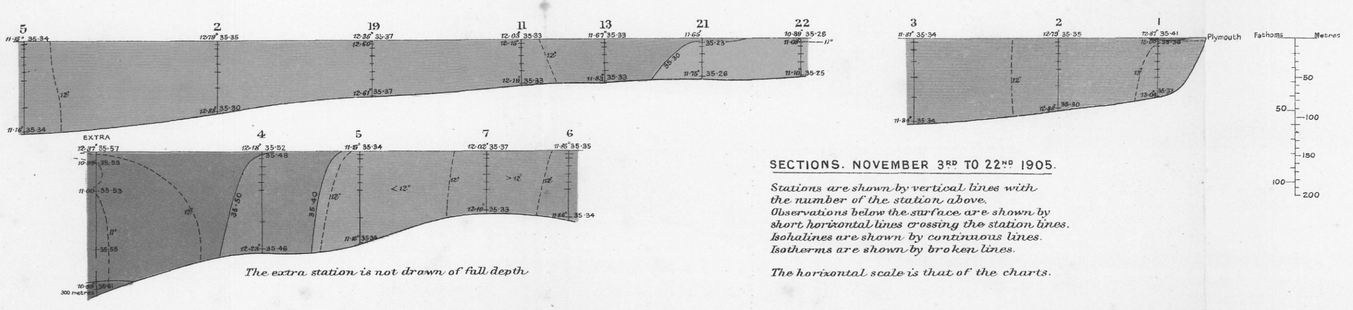


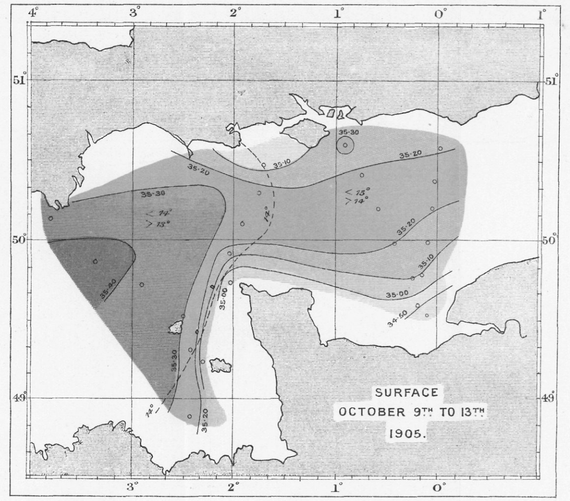



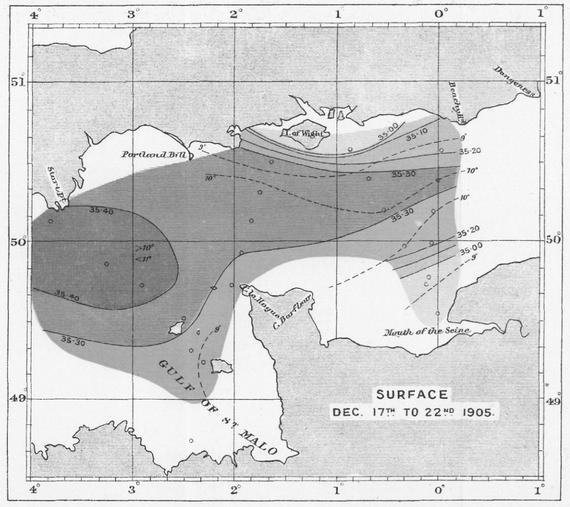

SECTIONS. NOVEMBER 3RD TO 22ND 1905.

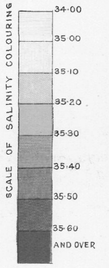
*Stations are shown by vertical lines with the number of the station above.*
*Observations below the surface are shown by short horizontal lines crossing the station lines.*
*Isohalines are shown by continuous lines.*
*Isotherms are shown by broken lines.*

*The horizontal scale is that of the charts.*

*The extra station is not drawn of full depth*

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