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EXTRAITS

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L'EXPLORATION DE LA MER

ADMINISTRATIVE REPORT

1937

AND

REPORTS AND RECOMMENDATIONS

MAY, 1938

COMBINED NORTH SEA AND EASTERN
CHANNEL COMMITTEE

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Vlaams Instituut voor de Zee
Flanders Marine Institute

COMBINED NORTH SEA AND EASTERN CHANNEL COMMITTEE

1937.

By

G. GILSON.

The region between the English Channel and North Sea has been actively studied in 1937, as in previous years, from research ships, trawlers, and lightships; some of the data obtained in the various investigations will be found in the Council's Reports or in papers published in the countries concerned. It is more than ever desirable that all kinds of physical and biological observations should be made periodically in the area by a number of scientific ships operating simultaneously along certain fixed lines; moreover, all observations should be rapidly worked out and the results made immediately available both for scientific computation and for supplying practical directions for the fishery in the region. Unfortunately, the fulfilment of this ideal involves greater difficulties than had been expected. The scientific staffs, ships and gear of the various laboratories can not always take part in collective work at fixed times and places, such as was done during the early years of international exploration, without interfering with individual work or local investigations. On the other hand, the exclusive employment of special ships and staff would involve so great an expenditure that a sufficient grant would scarcely be obtainable in any country at the present time. Nevertheless, we must not give up the hope that some day the completeness of the scheme will be appreciated and that the necessary means for action will be provided by the Governments, perhaps with the assistance of some of the patrons of Science. In the meanwhile it seems that the nearest approach to achievement of the plan would be made if by international arrangement all kinds of data collected in the intermediate region could be stored as material for future studies of the physical, biological, and meteorological conditions that have prevailed during certain periods in our waters. For

work of this kind, and even for charting observations in ordinary cruise work, the charts issued by the Brussels Museum, containing vertical sections, are again recommended.

The work carried out this year in the region may be described under the following headings:

Biology.

Herring. As before, the two groups of southern herring in the Channel, in the southernmost part of the Flemish Sea, and also in the English coastal waters have been studied during the fishing season mainly by the Station Aquicole, Boulogne, and the Fisheries Laboratory, Lowestoft. Material has been collected for the study of the relations of these two groups and also of more northern herrings with the very interesting concentration of pure spents that occurs every winter along the continental coast between Cape Grisnez and the Scheldt. This shoal of spent herrings has been constantly watched during the last eight years at the Ostend Laboratory. Knowledge of the exact localities where these spents have spawned is now urgently required but nothing can be done to obtain it without the use of a well-equipped ship that could be maintained at work in the region for sufficient time. No such ship is at present available at Ostend, the laboratory being in a state of complete renovation.

Attention has been paid to the influence of hydrographical and meteorological conditions on the movements of southern herrings, especially the seasonal migration of the spents to their annual resting ground off the French and Belgian coasts. Certain biological irregularities have appeared, for the first time, in the 1937—38 season just closed. The 3-year-old herrings, born in 1933, made their first appearance on

the coast, in 1937, in rather low proportion, 15 %. This year, 1937—38, in their second appearance, aged 4 years, the percentage, instead of going up, in conformity with the ordinary rule, has sunk to 12 %. The cause of this is probably to be found in a peculiar combination of physical conditions (see the paper by J. N. CARRUTHERS and W. C. HODGSON — Cons. Internat. Rapp. et Proc.-Verb. Vol. CV, 1936—37).

Other fish. Investigations on other fish, particularly **plaice** and **sprat**, started in previous years, have been continued throughout the short administrative period July 1937—February 1938, mainly in France, England, Holland and Belgium. All of them extended into the intermediate region and the Southern North Sea area. The results will be found in the report of the Southern North Sea Committee and in special publications. It may be mentioned that on the Belgian coast the sprat fishery was a complete failure. The shoals kept too far out for small craft and were sparse. Moreover, the fish were so small that they could very often not be marked and sometimes the fishermen preferred throwing their small catches overboard to sorting out the few really marketable fish. Nevertheless, the methodical analysis of one kilogramme out of the catch of each fishing day was continued as long as the fishing lasted.

Shrimp. The study of the local fishery was continued and laboratory work (including aquarium rearing) was done on the biology of *Crangon*. A motor boat with an experienced crew of shrimpers will be chartered for ethological and technical investigations.

Hydrography.

Observations have been made at various lightships, including the Varne, Sandettié, Smith's Knoll, and West Hinder. Research ships have contributed

temperatures and salinity samples at various depths on the sections Dunkerque—Dover, Boulogne—Newhaven, Ostend—Gravelines—Deal, with surface observations elsewhere. Numerous data, including the very important English ones, have been communicated to the Hydrographical Committee.

Plankton.

Huge quantities of plankton have, as usual, been taken from our waters, especially at the lightships Varne, Galloper, Sandettié and West Hinder, as well as by the research ships of France, England, Holland, Germany, and Belgium. The samples taken with the Hardy plankton indicator at the four stations on the section Deal—Gravelines were sent for analysis to Hull, where the principal species were identified and counted.

Fish-Eggs and Larvae.

Eggs and larvae were collected from the plankton samples obtained on all cruises and at lightships, and preserved for further study. Dr. BÜCKMANN mentions that on a cruise in March 1937 in the German Bight small larvae, very likely hatched in December or January, were predominant, the larger ones, apparently hatched in November 1936, being extremely rare, a fact that must be taken into account in the study of the movements of herring larvae hatched in the Flemish Sea as far south as the line Sandettié—East Goodwin, where they had been found by the same observer to be very abundant in December 1936.

Simultaneous cruises made periodically in various parts of the region Channel—North Sea would settle the question of the fate of young herrings hatched in the south and of the relations between Channel herrings and the northern communities.

Combined North Sea and Eastern Channel Committee.

Chairman: Prof. G. GILSON.

The Committee met at 11.00 a.m. on Thursday, May 26th, 1938.

I. Proceedings.

- 1) The Administrative Report was adopted.
- 2) Professor GILSON gave a lecture on "Variation of Year-Classes in an annual Concentration of Fish". (See this Vol., part III, App. 8). He laid special stress on the peculiar features in the "Oscillation" in this year's concentration of spent herrings as observed at Ostend, and on the questions of fluctuation and oscillation that are of more general interest.

Dr. BÜCKMANN, Dr. LE GALL, Dr. CARRUTHERS and Dr. TESCH took part in the discussion that ensued.

Dr. TESCH gave an abstract of his work on the herring population in the Flemish Bight and the eastern part of the Channel in the winter 1937—38. (See this Vol., part III, App. 4). A discussion followed in which Dr. BÜCKMANN and M. LE GALL took part.

3) Professor GILSON was re-elected Chairman for the ensuing year¹).

