

COMBINED NORTH SEA AND EASTERN CHANNEL  
COMMITTEE

1931.

By

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The extensive reports of the Chairmen of the two North Sea Committees, Prof. MIELCK and Dr. BOWMAN, show that both biological research and fishery work have been carried out in 1931 with great activity, in all parts of our seas. In fact the enormous amount of new information collected is really bewildering. It is now above human possibility, for an individual worker to keep "au courant" of the progress realised and to grasp the meaning and value of all the results obtained in all branches of the Exploration of the Sea. More than ever, specialisation and association are an absolute necessity.

An important part of the function of this Committee is to promote the formation of working associations of specialised pioneers engaged in definite research restricted to biologically and physically related districts of the sea.

I am not unaware of the extreme difficulty of the task, if it was to be applied at once to all groups of workers that might possibly be associated both for work and for immediate intercommunication of results. But that is no excuse for attempting nothing in a promising direction.

1. The first step to be attempted appears to be the organisation of meetings of experts, like the herring meeting held in 1930 at Lowestoft with such excellent results.

2. But, useful and even necessary as are these general meetings of experts, they leave room for particular working associations between men engaged in the study of definite problems in different parts of a region.

As an instance let us consider the case of the herring study in the intermediate region between the Southern North Sea and the Eastern Channel. We want to acquire exact data about the characteristics and life conditions of the two herring populations frequenting the two regions. They differ by certain characters not yet sufficiently defined, such as the mean number of vertebrae, time of spawning, rate of growth, etc. Are these two groups biological races or only varieties acquiring peculiar characters through the action of environment after a certain number of successive generations? What is the age-composition of their different shoals? How far do these shoals penetrate from the Channel into the North Sea, or conversely, from the North Sea into the Channel? Are these movements always connected with an inflow or a regression of Atlantic water? Many other

questions arise about intermixture, interfecundation, spawning times and grounds, concentration, dispersion, behaviour of spent herrings, fate of larvae under the action of currents prevailing at the time of hatching or of residual currents later on, etc. etc.

Extensive researches on this regional herring and the relevant hydrographical observations were carried on, this year, in the southern North Sea and in the Channel by Messrs. LE GALL, HODGSON and CARRUTHERS. As well as our own work on spent herring along the Westcoast<sup>1)</sup> they have shown that many problems can only be solved by combined efforts and simultaneous observations in different parts of the southern area. International co-operation is necessary and work should be divided between the Laboratories of Lowestoft, Boulogne, Ostend and Helder. A preliminary agreement could be discussed in this Committee, and a definite programme could be arranged at the meeting of herring experts proposed to be held at Boulogne early in 1933.

3. The same necessity of combined action has been felt by the workers of the Southern North Sea Committee, who, under direction of Prof. MIELCK, are carrying on continuous researches on the distribution and frequency of young flatfish in inshore waters.

Our particular work on littoral fishing has been carried on since the publication of the first part in 1928. The results obtained show that the amount of young fish and invertebrates destroyed has increased enormously since motors have been adopted by all of our fishermen, with a corresponding increase in size of the crafts engaged in shore fishery.

The increase of the alarming destruction is also connected with the development of the fish-meal industry.

Our results confirm the necessity of long series of observations to avoid errors connected with seasonal changes, gregarious habits of fish, and many other causes. They also show the desirability of associated co-operation and unification of work, if we want to accurately measure the damage caused by the important shore fishing and shrimping that is carried on all along the continental coast, from Belgium up to the North of Jutland.

4. I am also aware that several of the workers engaged in northern explorations are of opinion that associations for simultaneous work in various parts of a region are necessary.

5. As a preliminary basis for a general agreement for combined work, I would suggest the following items:

- 1) Frequent intercourse between the workers of the different laboratories in the region.
- 2) Division of work by mutual agreement in different parts of the area, according to means of work available in each of the countries interested: laboratories, ships, staff and personnel, financial means, landing statistics in fishing harbours, etc.
- 3) Admission of assistants in laboratories and on ships, with the view of unification of ways and methods.

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<sup>1)</sup> G. GILSON. Recherches sur la Biologie du Hareng "Guai" etc. Annales de l'Institut d'Etudes Maritimes d'Ostende. Mémoire 1, 1931.

- 4) Permission for the ships of the several countries, engaged in the work, to carry on research, even with fishing gear, in territorial waters, under the blue flag of the International Council.
- 5) Agreement as to the publication of particular parts of the results by one or more members of the group.

This scheme could be applied to many kinds of particular work in different regions, as for instance, researches on herring, sprat, pilchard, cod, haddock, mackerel, plaice, young fishes, hydrographical and planktonic problems etc.

It would need neither creation of new Committees nor any other administrative complication or expense except certain travelling expenses for which suitable subsidies should be granted by the Council on application by the Chairmen of existing Committees. Co-operation would certainly lead to sparing of efforts, time and money and to the undelayed obtaining of safer conclusions.

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There is another matter of co-operative aspect that we all have heard of in fishery countries: it is the question of supplying practical information to the fishing industry.

It is scarcely necessary to remind the fishing public that the International Council is a progressive Institution whose aim and function are the advancement of the science of the sea and sea productions, with the view of supplying the Governments with positive data for effective protection of fishing grounds and for rational direction of fisheries. We are not expected to simply act as pointers and to direct individual ships or fleets to places where big hauls are likely to be obtained. The detection of dense shoals is a part of the fisherman's craft, and our research ships and laboratories have other destinations, more useful to the generality of the industry and to the people at large.

However, we are by no means opposed to intense fishing, as long as it remains within the limits of rational utilisation of natural products of the sea. We are even disposed to supply the intelligent ship-owner and fisherman with general directions to help him in his search for economical obtaining of large quantities of fish which he wants to sell at the highest possible price.

6. The setting up of an international prediction service for herring and haddock in certain localities is even contemplated, as a bold attempt in a co-operative direction.

7. Publication of tracts by associated writers, both biologists and fishery-men would be very useful, if kept up to date by frequent reprinting of new editions.

8. Some of us have tried to go even further than that in the way of a rational direction of fishing and informations by helping progressive ship-owners to discover able men and to train them to do useful work on board of their ships, observing depth, temperature, salinity or density and currents, taking scales of herrings, measuring thousands of fishes, and writing down lots of notes and figures. The results of the work of these men might be made use of for scientific research, if agreed by the director of a laboratory engaged in the study of the particular region, and transmitted to others for co-operative work. Some of the observations made by these men might even supply to an intelligent skipper

directions for actual fishing, as, for instance: depth, nature and configuration of the bottom in the region, temperature and density at different depths, colour and quantity of plankton (HARDY), etc. The only objection is that in the hands of men imperfectly acquainted with the innumerable causes of errors met with in biological work, scientific information is a double edged weapon: inadequate calculations and incorrect conclusions may lead to dangerous deceptions and draw the fishing in the wrong direction.

9. Finally there is an other idea, less risky and more in the line of co-operation for actually helping the fishing in action: that of the setting up of a rapid international intelligence Service, through which all kinds of practical information could be communicated to fishery centres and, from these, even to ships actually fishing at sea. Abundance or scarcity of fish, success or failure of fishing at the time in certain localities, age-composition of shoals from scales, presence or absence of attractive or repulsive plankton, changes of salinity or temperature on certain lines, prediction or probabilities from continuous laboratory observations, etc., etc., could be announced by telephone, when very urgent, and a flying bulletin could be printed and circulated.

Information collected in large fishing harbours and fishery laboratories should be centralised in an important place with ample connections — let us say London — from where they should be telephoned and printed leaflets sent out to all important fishing places bordering the North Sea or even outside of its limits. A staff of trained men would be necessary for collecting data: one fishery expert and one clerk, each possibly occupied at other work besides, would be sufficient and could be found in all important places like Lowestoft, Yarmouth, Grimsby, Hamburg, Ymuiden, Ostend, Boulogne. Two agents also would be needed to do the work in the central office, consisting in reception, printing and distribution of all kinds of information.

Some money, of course, must be found to face all the necessities of the service, and it seems that the International Council could not be begged to support alone the whole weight of the expense. Subscriptions for the reception of the leaflets and other information would go far towards the completion of necessary resources.

Obviously this is only a preliminary sketch of organisation; I do not consider the setting up of such a service as a simple and easy task. Difficulties of various kind must be overcome, among which rivalry and a dislike towards helping the foreigner will be foremost, in all countries, among the lowest ranks of the profession. In fact, it seems likely that only large trawlers and drifters fishing in distant parts of the sea would get advantage out of information from headquarters of the intelligence service. Small crafts would obtain very little benefit out of an international organisation.

However, I have shown elsewhere that very effective local information could easily be supplied to them during certain seasonal fishings in the littoral zone: the spent herring and the sprat fishing<sup>1)</sup>. Research ships could weekly explore coastal waters and point out the localities of maximum concentration of the shoals to the fleet of small motorboats, without much interruption of their own work.

An international intelligence service is desired in fishing circles of several countries. Combination of efforts is the method of the future.

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<sup>1)</sup> G. GILSON. *Loc. cit.* p. 63.