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Pelagic Fish (Northern) Committee
Institut für Seefischerforschung
Hamburg

Report on the International Trawling Survey for
Immature Herring in the North Sea, 1968.



by
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1. Introduction

During the meeting of the Pelagic Fish (Northern) Committee of ICES in 1967 in Hamburg a report on "The International Trawling Survey for Immature Herring in the North Sea in 1967" was presented by A. Saville. In this report the results of the survey in 1967 by the research vessels: "Anton Dohrn", "Scotia", "Clione" and "Willem Beukelsz", were given. As the results of this combined effort looked promising and useful, it was decided by the Pelagic Fish (Northern) Committee to continue this survey in 1968, if possible with the same participating countries and the same objectives as the 1967 survey.

2. Planning and Procedure

The planning of the 1968 survey was done by the IJmuiden Laboratory by correspondence. It was decided to follow largely the procedure of the 1967 survey.

The cruise schedule of the participating ships was as follows:-

"Scotia"	14/2	-	7/3
"Clione"	23/2	-	12/3
"Anton Dohrn"	7/3	-	29/3
"Willem Beukelsz"	26/2	-	22/3

With some minor alternations caused by engine troubles for "Clione" and difficulties with rudder and propeller for "Willem Beukelsz" the programme was carried out to the schedule under excellent weather conditions during the first part of the survey period. The area worked by the vessels covered the whole North Sea between 52° 30' N and 57° 30' N, with some additional squares in the Skagerrak, the Moray Firth squares were omitted.

Due to the favourable weather conditions the whole survey area could be covered, however, the comparative fishing experiments had to be omitted due to the large spread in cruising period of the different ships and the adversal weather conditions during the second part of the survey period. In view of the fact that weather conditions during January and February tend to be better than in March it was proposed to shift the cruising period for future surveys to the months January and February.

3. Results

As already mentioned the cruises in the beginning of the survey period were favoured by good weather conditions, consequently a large area was already covered when the weather deteriorated in the first week of March and some of the squares had to be omitted.

Catches and Distribution of Year-class 1966

The distribution of year-class 1966 of autumn-spawning herring is shown in Figure 1, as numbers caught per-one-hour fishing at the different trawling positions. The data are not corrected for differences in the fishing power of the participating ships.

The greatest abundance of the I-group fish (year-class 1966) was found between the Middle Rough and the Gut, off the Longstone, the Farne Deep and to the south of the Dogger Bank in the Silver Pit. The distribution of the I-group herring in spring differed somewhat from the distribution of the I-group herring in spring 1967, the area of the greatest abundance being shifted more to the west, but still in the north of the area surveyed (Fig.1). East of the Dogger no concentration of any importance of year-class 1966 was apparent.

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Over the whole surveyed area the mean length of the I-group fish (year-class 1966) was the same as from the year-class 1965 in spring 1967, 17.0 cm (Table 1). The overall mean vertebrae count was somewhat lower as for the year-class 1965 but higher as for the year-class 1959 as I-group herring. The rather high mean length of the I-group herring in spring 1968 indicates that a high proportion of these herring belongs to the recruits of the spawning populations in the central and northern North Sea.

According to the results of the trawling survey in spring 1968 the overall abundance of year-class 1966 of autumn-spawning herring in the North Sea seems to be very low. As can be seen from the data in Table 1 the mean catch per hour per statistical rectangle in the area surveyed is the lowest of the years the spring surveys were held. In the whole surveyed area the catches were very poor except for a small region where the catches were comparatively good.

On the basis of these data one can expect that year-class 1966 will be weak, even poorer than year-classes 1959 and 1965.

Table 1. Parameters of 1958, 1959, 1964, 1965 and 1966 year-classes as I-ringed fish in spring in the central North Sea.

Year-class	Mean catch per hour per stat. rectangle	Mean V.S.	Mean length cm
1958	1730	56.42	16.05
1959	442	56.45	16.86
1964	305		
1965	552	56.56	17.05
1966	295	56.50	17.00

References

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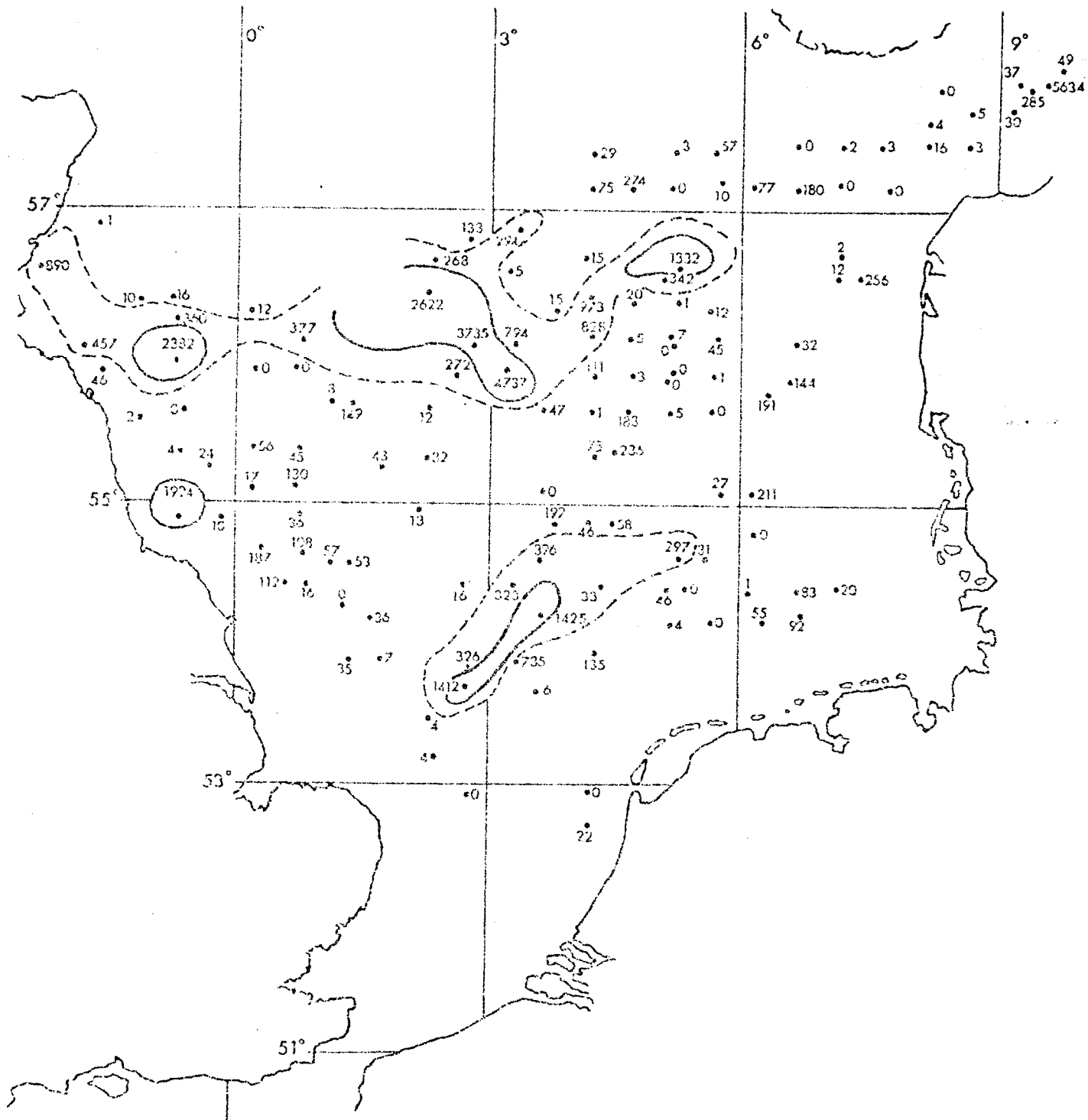


fig 1: YOUNG HERRING SURVEY / SPRING 1968 / ——— 1000 PER HOUR FISHING
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