

SW

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1977 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 15

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF

Part A: S R Jones (NIC)
J W Read

Part B: R G Houghton (NIC)
T J Hulme
C N Humphreys
A Watson
P Witthames
P Large (Hull)

DURATION

Left Lowestoft 1145 h 1 December

Arrived Lowestoft 0430 h 19 December

LOCALITY

North Sea

AIMS

1. To service JONSIS and Spurn Head Dump site current meter stations (Part A).
2. To determine the distribution of pre-recruit gadoids in the west central North Sea.
3. To tag pre-recruit cod.
4. To collect material for studies on the ageing of fish.
5. To collect live spurdogs (Dr Satelle), Cambridge).

NARRATIVE

Part A: CLIONE left Lowestoft at 1150 h 1 December and, by way of JONSIS 1 which was sighted during the night, arrived at JONSIS 2. The change of meters was begun at 0830 h and completed at 1030 h. The top meter was missing and the sub-surface buoy showed signs of having been tampered with. The lifting bucket and pellet were missing. Course was set for JONSIS 1 where CLIONE arrived at 1430 h and completed the servicing at 1610 h. CLIONE steamed for the Spurn Dump Site station which she reached at 2100 h and she then anchored overnight. Lifting commenced at 0845 h 3 December and servicing was completed by 1045 h. The ship anchored in Grimsby roads at 1400 h.

Part B: The scientific staff were exchanged via the BRENDA FISHER at 1500 h 3 December but because of poor weather, CLIONE did not leave the Humber until 0900 h 5 December. The trawl survey was begun at 1130 h; work was badly disrupted by gale force winds each day until 12 December when calmer weather prevailed and allowed fishing to continue without a break until the end of the cruise. CLIONE went into the Tyne at 1500 h 9 December to take on fresh water and continued with the survey at 1400 h 10 December.

The survey was carried out with a Boris prawn trawl rigged with 15 inch rollers in the belly, 40 fathom bridles and a shrimp netting blinder inside the 50 mm mesh size codend. Hauls were of 30 min duration. The net was badly damaged on two occasions and some damage occurred at three other stations. All the fish caught were sorted, counted and weighed; cod, haddock and whiting were measured and otoliths were taken. Samples for studies on the ageing of fish were taken throughout the survey.

Although the planned survey grid was not completed, an attempt was made to catch 0-group cod for tagging on 17 December in the north-eastern part of the survey area where 0-group cod had been found to be abundant. The gurnard "bycatch" was spectacular on one occasion and prevented the codling from being caught in good enough condition for tagging. Two final survey stations were completed on 17 and 18 December and CLIONE sailed for Lowestoft at 1500 h 18 December and docked at 0430 h 19 December.

RESULTS

1. The current meter stations were successfully retrieved and re-laid.
2. Thirty survey stations were completed at the positions shown on the attached track chart. Three patches of 0-group codling (9 to 21 cm, mean 14 cm) were found; one was close inshore between Whitby and the Wash, a second was located along the south-western edge of the Dogger and a third was found to the north of the Dogger. On CLIONE 12/77 only a single patch was found close to the Yorkshire coast which perhaps indicates that spawnings other than that at Flamborough contribute to the recruitment of cod to the NE coast.

The distributions of the total catches of cod, haddock and whiting are shown on the attached charts. These were very similar to each other with concentrations along the Durham and Yorkshire coast out to 30 km and further concentrations in the area of the Northwest Rough and also to the south-east of the Dogger. The whiting in the latter area were feeding heavily on sandeels. The distribution of dabs, spurdogs and sprats are shown for comparison.

The Boris prawn-trawl is an inappropriate gear for this work since it is light and small-meshed. Even with the rollers in the belly of the groundrope, damage occurs quite frequently on comparatively smooth ground and spreads throughout the net. The small mesh seems to lead to reduced catches of larger fish and probably does not increase the catch of young gadoids to any useful extent. Flatfish are very poorly sampled. Equally good results would be obtained with a Granton trawl with the additional benefit of robustness and lack of selectivity. The 50 mm codend makes it difficult to obtain pre-recruit gadoids for tagging since the use of a cover instead of a blinder does not allow undamaged fish to be obtained. The 40 fathom bridles are clearly too long and a Granton with 5 fathom bridles would be equally effective.

3. Only 13 0-group and 1-group codling were tagged even though six hauls were carried out in areas where they were abundant. The size range of the 0-groups (9-21 cm) meant that only half of the catch could be tagged (15 cm +) and most of these suffered severe scale damage. With care, it should be possible to tag this size of cod with the Howitt tag.

4. Tissue samples were obtained from a length range of haddock and of plaice. Hearts were obtained from a variety of species and atrial stretch preparations were made from cod.

5. Twenty live spurdogs were returned to Lowestoft.

S R Jones
R G Houghton
22 December 1977

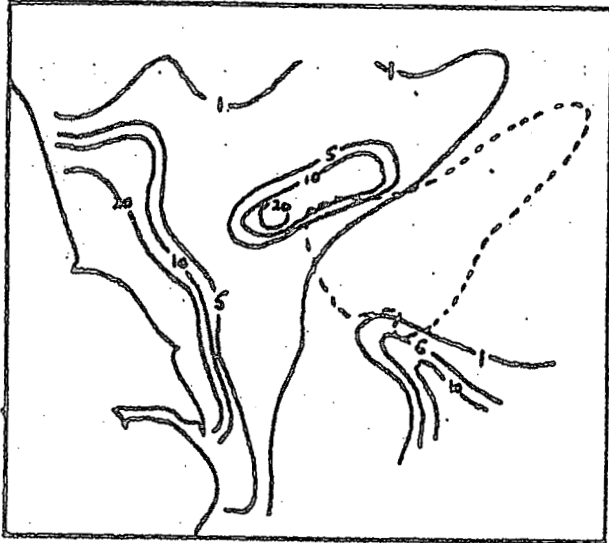
INITIALLED: AJL

SEEN IN DRAFT: GS, VH

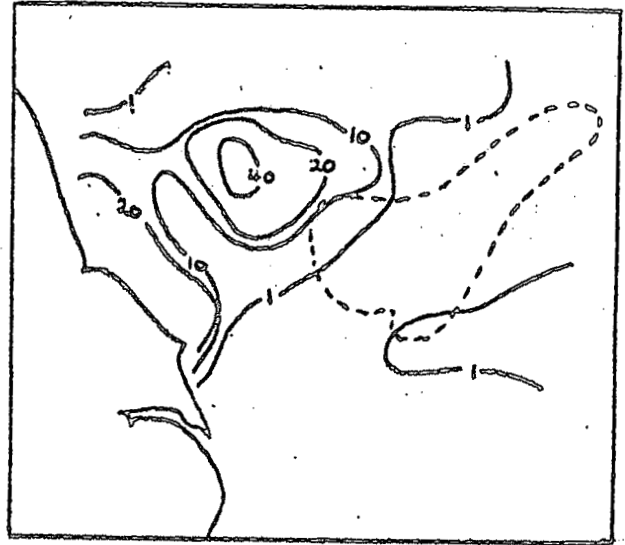
DISTRIBUTION:

Basic list
S R Jones
J W Read
R G Houghton
T J Hulme
C N Humphreys
A Watson
P Witthames
P Large
W Parnell

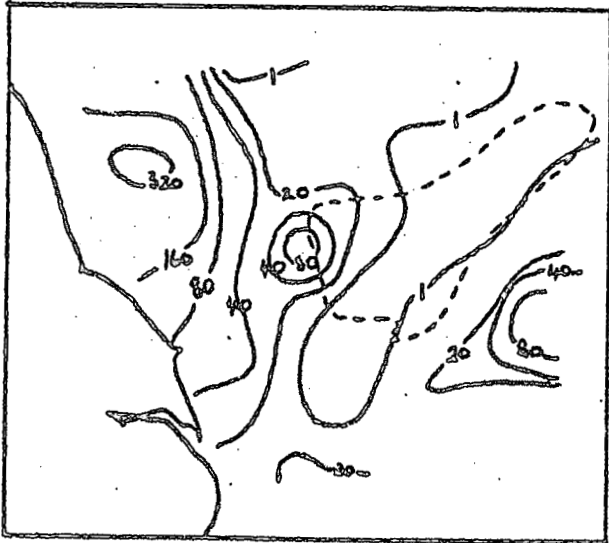
CLIONE 15/77 , December



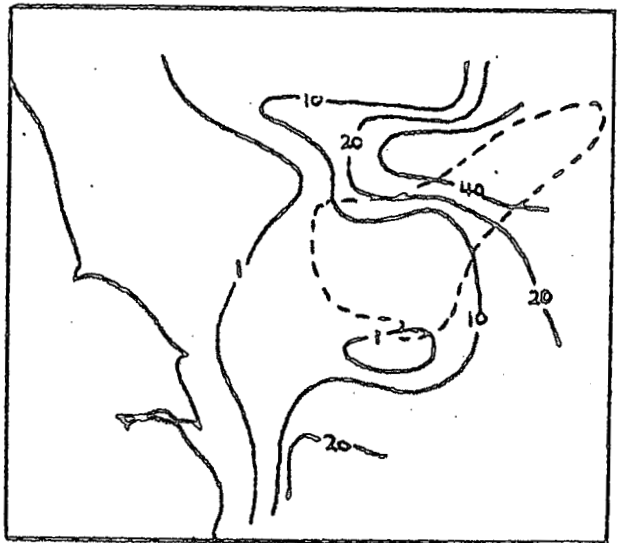
COD, Kg/haul



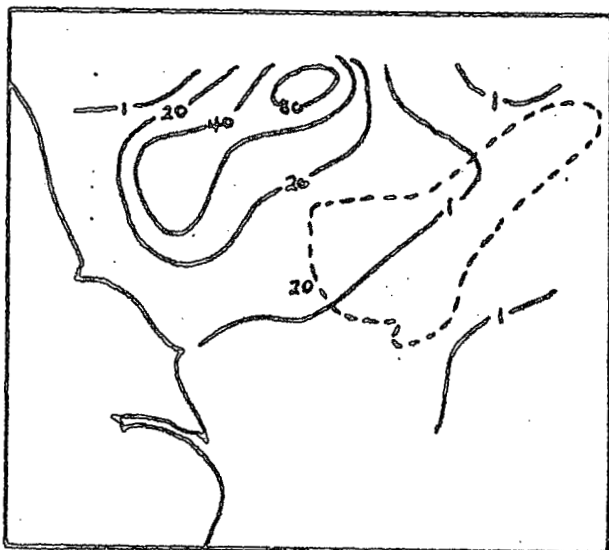
HADDOCK, Kg/haul



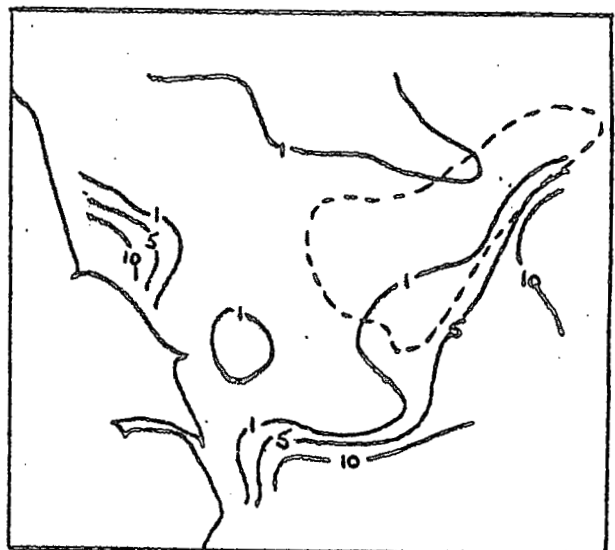
WHITING, Kg/haul



DABS, Kg/haul



SPUR DOGS, Kg/haul



SPRATS, Kg/haul

