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

1978 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 11

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

STAFF:

R J Wood  
B C Bedford  
S Warnes  
Mrs T E Benford  
T Maxwell (Ulster College)  
B C Mumford (1-6 September)

DURATION:

Left Lowestoft 0810 h, 1 September

Arrived Lowestoft 0540 h, 14 September

All times are Greenwich Mean Time

LOCALITY:

Central North Sea

AIMS:

1. To carry out a survey for herring larvae in the western half of the Central North Sea, as part of an international survey of the abundance and distribution of autumn-spawned herring larvae in the North Sea and adjacent waters.
2. To collect samples of spawning herring from the Longstone, Whitby and Dowsing areas in order to obtain information on the age composition of the Bank herring stock in the absence of a commercial fishery.
3. To collect herring ovaries for fecundity studies in accordance with the recommendation of the ICES Herring Assessment Working Group.
4. To transfer at sea, and then conduct a biological examination of samples of herring obtained from the inshore spawning grounds by RV NOCELLIA.

NARRATIVE

CLIONE sailed from Lowestoft at 0810 h, 1 September and carried out engine trials in Yarmouth Roads. Course was set northwards at 1030 h to a position 2 miles SE of the Haisborough Light Vessel where a MAPP Buoy had been reported adrift a few days earlier. A short search was made but no buoy was sighted. CLIONE then steamed towards the Sole Pit in order to calibrate the 20 inch high-speed sampler, but with the wind increasing to force 6-7 from a northerly direction and deteriorating sea conditions it was decided to leave this until later in the cruise and passage was made to the Outer Silver Pit. Two practice hauls with the French 36/47 GOV Herring Trawl were carried out in this locality the following morning, 2 September, and after a number of handling problems had been rectified a further haul was made in Skate Hole. Fishing was continued during the following three days, hauls being made on Barmade Bank, in Baymans Hole, off Scarborough and in the vicinity of the Faxe

Deeps. The high-speed plankton sampler was also calibrated in free-flow in preparation for the herring larval survey. CLIONE put into Blyth at 2020 h, 5 September in order to have faults with the ship's radio, the telephone system and weather chart recorder rectified. The Master Superintendent, Captain T Sellers, joined the vessel in Blyth in order to observe the performance of the main engine whilst trawling. CLIONE sailed from Blyth at 0513 h, 6 September and after further fishing had been carried out in the Farne Deeps and to the north of the Farne Islands, the herring larval survey was commenced at 1848 h that evening off Berwick. A short break in the survey was made next morning in order to put Captain Sellers ashore at Eyemouth, and the survey was then continued until 1800 h, 9 September when a westerly gale forced CLIONE to seek shelter in Filey Bay. The gale continued next day but a short moderation during the following day, 11 September, enabled a further 7 larval stations to be completed before CLIONE again returned to the shelter of Filey Bay at 1900 h. The wind finally moderated during the early hours of 12 September and anchor was weighed at 0615 h. The herring larval grid was recommenced at 1000 h and plankton sampling continued until 1850 h, 13 September when course was set for Lowestoft. After an overnight passage CLIONE docked in Lowestoft at 0540 h next day, 14 September.

## RESULTS

Aim 1. A survey grid comprising 70 stations, covering all the important herring spawning grounds off the English northeast coast, was completed between 6-13 September using the 20 inch high-speed plankton sampler. A number of more easterly stations around the Dogger Bank were not worked owing to adverse weather conditions during the latter part of the cruise. Small recently hatched herring larvae were taken in considerable numbers at several of the coastal stations both to the south of the Farne Islands and off Whitby and Scarborough.

Aims 2 and 3. A total of only  $7\frac{1}{2}$  baskets of herring was caught in the 16 hauls which were made with the French 36/47 GOV Herring Trawl, and a high proportion of the fish consisted of 1 ring immatures. Small samples of immature, and all mature herring were examined for age, sex and maturity and the number of vertebrae counted. Ovaries were preserved from approximately 40 mature females for fecundity studies.

Aim 4. No samples of herring were obtained for examination from RV NUCELLA, mainly because weather conditions for driftnet fishing were generally unsuitable during the period of this cruise.

Miscellaneous. 0-group herring were taken in two of the trawl hauls together with sprat. In Baymans Hole the herring "by-catch" constituted approximately 8% but to the north of the Farne Islands it was about 50%.

During the cruise the current meter stations off Flamborough Head together with those off the Tyne and Tees were inspected and all were found to be safely in position.

A few samples of small gadoids were preserved for fish feeding purposes.

A sample of mackerel was deep frozen for Dr Lockwood.

A sample of live plankton was collected for Mrs Thompson.

R J Wood  
21 September 1978

SEEN IN DRAFT: GRO  
RC

INITIALLED: AJL

DISTRIBUTION: overleaf

DISTRIBUTION:

Basic List

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B C Bedford

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