

Miss HOWARD

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

1971 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 14

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

STAFF

R J Wood
G J Howlett
L Emerson
J C Rigg (Fleetwood)
G H Hall (Sandwich student)

DURATION

Left Lowestoft 1655 hours 1 September

Arrived Lowestoft 0710 hours 16 September

All times are Greenwich Mean Time

LOCALITY

Orkney and Shetland Islands and Northwest coast of Scotland

AIMS

1. To carry out a tin tow net survey for herring larvae in the vicinity of the Orkney and Shetland Islands as part of the ICES survey of the abundance and distribution of autumn-spawned herring larvae in the North Sea.
2. To make observations of bottom temperature and collect salinity samples in the larval survey area.
3. If time permits, to obtain samples of spawning herring from various North Sea grounds.

NARRATIVE

CORELLA sailed from Lowestoft at 1655 hours 1 September and set course northwards. "Free flow" calibrations were carried out next day in the Farne Deeps from 1245-1553 hours using a 20 inch tin tow net (TTN) fitted with an 8 inch nose cone. An increasing difference was noted with increasing depth between Kelvin Tube readings and those indicated by the electronic depth gauge. Further calibration hauls had therefore to be carried out next morning 3 September off the Scottish northeast coast in order to determine the relationship between warp length and TTN depth from Kelvin Tube readings. This was completed by 1037 hours.

The herring larval survey was commenced near Fair Isle at 1807 hours 3 September, but after the completion of 17 stations to the east and north of the Shetland Islands a strong SW wind and heavy swell made further work impossible and CORELLA anchored in Colla Firth at 1900 hours 4 September to await a moderation in the weather. The wind dropped during the afternoon of the following day and the larval survey was continued at 1719 hours, thereafter the weather remained

extremely good for the remainder of the cruise. The final station of the herring larval survey was completed in the North Minch at 1725 hours 9 September.

A larval escape experiment was next carried out off Cape Wrath using a 30 inch TTN fitted with filters of various mesh size and a 100 mesh per inch cover. This work and "free flow" calibrations were completed by 1121 hours 10 September and CORELLA then proceeded to Stornoway where she arrived at 1710 hours the same day. 11 September was spent in Stornoway changing over to herring trawling gear, and taking on water. CORELLA sailed again from Stornoway next morning 12 September at 0500 hours. Passage was made via the Pentland Firth into the North Sea and the remainder of the cruise was devoted to fishing with the Dutch herring trawl on various herring autumn-spawning grounds. Hauls were made on 13 September in the vicinity of the Aberdeen Bank and off St Abbs Head; on 14 September near the Longstone and in the Farne Deeps; and on 15 September off both Whitby and Scarborough. The fishing programme was completed by 1700 hours 15 September. Live plankton was collected off Flamborough Head between 1900-1930 hours after which course was set for Lowestoft where CORELLA tied up next morning 16 September at 0710 hours.

RESULTS

- Aim 1: Herring larvae were found to be abundant at a number of stations to the west of Fair Isle and Orkney and off Cape Wrath;
- Aim 2: This could not be carried out owing to the breakdown of the cable winch which is used for hydrographic work on board CORELLA on the previous cruise. Some temperature observations were made however via the thermistor fitted to the 20 inch TTN;
- Aim 3: Large samples of adult herring were obtained from both the Farne Deeps and off Scarborough. The 1969 year class of herring was particularly abundant in most hauls made with the Dutch herring trawl.

MISCELLANEOUS

1. In the larval escape experiment some small herring larvae appeared to have passed through both the 30 and 40 mpi filters;
2. A considerable quantity of small gadoids were deep frozen for use as fish food at the laboratory;
3. Live plankton was collected for Mrs Thompson;
4. Samples of sprats and mackerel were deep frozen for Dr Johnson and Mr Bolster.

R J Wood

20 September 1971

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 CNS

INITIALLED AJL

DISTRIBUTION

Basic list L Emerson
R J Wood J C Rigg
G J Howlett G H Hall