

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

REPORT: RV CORELLA: CRUISE 13
 (PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF

P O Johnson
 T W Boon
 Mrs T E Benford
 Miss L Emerson
 H Cowen (Visitor)
 H R Stewardson)
 W L Huggins) Part time

DURATION

Left Lowestoft 0730 h 28 September
 Arrived Lowestoft 0430 h 11 October
 All times are Greenwich Mean Time

LOCALITY

Central North Sea, Farne Islands-Humber

AIMS

1. To carry out a high speed tow-net survey for herring larvae in the western portion of the central North Sea between the Farne Islands and Humber entrance.
2. To carry out mid-water trawling to identify pelagic fish traces and collect material for fecundity and biological studies on herring.
3. To freeze-dry samples of clupeid larvae for biochemical studies (Dr Greer Walker).
4. To test the acoustic towed body.

NARRATIVE

After leaving Lowestoft trials were carried out with the acoustic towed body a few miles off the coast. These were successfully completed later that day when Messrs Stewardson and Huggins were disembarked by launch off Gorleston. CORELLA then steamed overnight to commence the tow-net survey off Flamborough Head next morning. However, after the completion of only 4 stations a severe westerly gale developed and shelter was sought in Bridlington Bay later on 29 September. An attempt was made to continue work on 30 September but conditions were still unfavourable. The wind did not moderate until 1 October and CORELLA left her anchorage early that day to resume the survey. However, a heavy northerly swell prevented immediate resumption of work and whilst dodging a heavy sea swept the two reserve tow-nets from their lashings and broke off their tail fins, also damaging the fin of the net in use. Temporary repairs were made and tow-netting recommenced later that day, continuing in improved weather on the 2 and 3 October. The weather again deteriorated on 4 October with another westerly gale and heavy swell, and after conditions worsened on the morning of 5 October CORELLA proceeded to Sunderland where she docked

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at 1630 h. whilst here a reserve townet and other spares were taken on board and the damaged townets off-loaded for return to Lowestoft. The vessel left Sunderland at 1700 h 6 October in improving weather and continued the survey which was finally completed at 1800 h 9 October. CORELLA then proceeded to Filey Bay where she rigged for fishing and the final, 10 October, was spent searching for pelagic fish traces and mid-water trawling, the vessel docking at Lowestoft early on 11 October.

RESULTS

1. A total of 103 townet stations were successfully completed, temperature/depth profiles and surface salinity samples also being taken on each of these. Surface temperatures were mainly 13.0-14.5°C on the shallower water stations in the southern part of the area, and 11.0-13.0°C at the deeper water stations further north. A well marked thermocline was still present between 30-50 m depth in the deeper water over the north eastern sector of the area. Smaller clupeid larvae were mainly found on those stations within the sector north-east to south-east of Flamborough Head.
2. Two hauls were made with a mid-water trawl in an attempt to obtain adult herring, the first on the Flamborough Off Ground and the second at Smiths Knoll. Only a few juvenile herring were caught and both tows yielded predominantly whiting and large quantities of 0-group sprat. The echo records showed that larger pelagic shoals were generally scarce, although smaller scattered shoals were evident over extensive areas nearer the coast.
3. One sample of clupeid larvae, grouped into size ranges, were freeze-dried for RNA/DNA analysis (Dr Greer Walker).
4. The acoustic towed body (TL2) was tested in deeper water off Lowestoft and towed satisfactorily up to a speed of 8 knots. It should prove suitable for use by CORELLA after some modifications have been made to the positioning of blocks and leads.

Station and track chart are appended.

P O Johnson
6 November 1978

SEEN IN DRAFT: G R Oliver - Master
R C Newrick - Fishing Skipper

INITIALLED: AJL

DISTRIBUTION:

Basic List
P O Johnson
T W Boon
Mrs T E Benford
Miss L Emerson
H Cowen (Visitor)
H R Stewardson
W L Huggins

