

Cruise Report

FRS Explorer
7 September - 27 October 1976

Objective

To carry out herring larval surveys off the west coast of Scotland and north coast of Ireland.

Narrative

Explorer sailed from Aberdeen at 1600 on 7 September. Sampling was begun at station 14 at 0840 on 8 September, shooting and hauling the Gulf III sampler on the starboard side from the gilson and using the middle barrel of the main trawl winch. Two stations were completed before Explorer was forced to seek shelter in Scaupa Flow from severe weather. Since the method of working the Gulf III sampler from the starboard side appeared to be practicable only in relatively moderate sea conditions and as a result the larval survey work was likely to be severely curtailed, the plankton wire was transferred back to the after plankton winch for normal working of the Gulf III sampler over the stern. The survey was resumed at 1300 on 10 September at station 14 and sampling was continued north and west along the north coast of Scotland. After completing twelve stations the neisende depth monitoring system failed due to the cable becoming badly twisted and the work was continued using warp length/depth tables as a guide to sampling depth. Explorer put into Stornoway on 15 September and sailed at 1100 on 18 September to resume the larval survey. Stations were worked in a southerly direction towards the north coast of Ireland and the first coverage of the survey area was completed on 25 September.

Explorer then proceeded to the Barra Head area to continue the larval survey west of the outer Hebrides. This work was curtailed by stormy weather on 26 September when Explorer sailed for the Clyde. After taking on fuel at Ardrossan the ship docked in Greenock on 28 September.

At the beginning of the second part of the cruise the Scientific Staff joined Explorer at Greenock on 5 October. Due to bad weather sailing was delayed until 1000 on 6 October. After leaving Greenock weather conditions rapidly deteriorated and shelter was sought in Brodick Bay from stern force winds. Explorer left Brodick Bay in the morning of 7 October and proceeded to station 140, west of Islay, where the larval survey was begun in the same evening. Working north into the Minch, along the north coast of Scotland and, west of Lewis and Harris, ninety four stations were completed before the evening of 13 October when Explorer had to land a sick member of the crew. The ship stayed in port awaiting crew replacements until the afternoon of 19 October when Explorer left Stornoway to resume the larval survey. A block of fifteen stations, west of Uist and Barra, and the eastern part of the line to the south of Barra Head were completed on 20 October. After 'dodging' for a period of about 8 hours in heavy swell and strong to gale force winds in the morning of 21 October the survey was resumed at station 130 and continued in a southerly direction towards the north coast of Ireland. Except for a break of about 14 hours 'dodging' in bad weather on 24 October the work continued in the southern half of the grid until 1900 on 25 October when Explorer sailed for Aberdeen and docked there at 0600 on 27 October.

Results

A total of 382 hauls were made with the Dutch Gulf III high speed sampler. The samples collected were returned to the Laboratory for analysis. From a cursory examination of the samples as they were taken the main concentrations of herring larvae were located in the Donegal Bay area, off the north coast of Ireland and west of Uist and Barra.

During the second part of the cruise an echo integrator survey was carried out. In the area surveyed the predominant echo traces were in the form of a layer or a series of layers of variable density. Recognisable pelagic fish traces were confined mainly to the South Minch and Little Minch areas where a number of large plumes near

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