

## CRUISE REPORT

F.R.S. "SCOTIA"

September 11 - 30, 1962.

Objective Herring larval survey.

Narrative F.R.S. "Scotia" left Aberdeen as scheduled at 2300 hrs 11.9.62 and after working the Aberdeen Bay plankton station began the larval survey in the Moray Firth. Work went ahead in moderate winds until 1600 hrs 14.9.62 when rising winds made conditions unsuitable and the ship went to anchor in Sinclair Bay. Next morning brought some improvement and work was resumed west of Orkney but was again interrupted at 2000 hrs 15.9.62. After dodging all night it was obvious that there would be no immediate improvement in this area so an anchorage was sought in Sinclair Bay. Forecasts suggested better weather conditions prevailed at the south end of the grid and work recommenced there at 0700 hrs 18.9.62 and continued until 1745 hrs 20.9.62 when a brief call was made at Aberdeen for water, provisions and replacements for gear damaged; sailing again 24 hours later. A good spell of weather enabled continuous work to proceed until 1745 hrs 25.9.62 again in the Fair Isle region when strong winds put an end to work. After dodging all night in a heavy swell "Scotia" anchored in Deer Sound but later was forced to move to Ingeness Bay. Work was impossible on the 26th and on the 27th thick fog came down. In the afternoon however it cleared sufficiently for the west Orkney Stations to be repeated in rising wind. Once through the Pentland Firth however increasing wind and heavy seas prevented work and shelter was sought in Gamrie Bay (1030 hrs 28.9.62). By morning the wind had abated but severe gales were forecast. "Scotia" weighed anchor at 0730 hrs and made a fair passage to the Forth before the gales reached the area. "Scotia" docked on Sunday 30th September at 0230 hrs at Leith.

Despite many interruptions for bad weather the essential part of the grid was covered once and the principal areas of larval herring population were sampled twice.

Hydrography Almost complete coverage was secured for temperature observations and salinity, oxygen, phosphate, nitrate and silicate samples. Very little vertical stability remained in the water column as surface and bottom temperatures were closely similar in most parts. The range of temperature was also very small about 10.9° to 11.7° as the extreme limits.

50 drift indicators with 5-fathom drogues and 500 bottom current markers were liberated in the channel between N. Orkney and Fair Isle and similarly over Turbot Bank.

12 carboys of sea water were collected for the John Innes Institute.

Plankton The various plankton collections comprised

Gulf III, 40 mesh	110 hauls
1 m. silk net (26 mesh)	18 "
Standard net	5 "
Plankton indicator	84 "

Plankton volumes (less jelly-like forms) showed smallest values east of the Aberdeenshire coast and east of the Orkney Islands. Average volumes occurred in the Moray Firth and along the north coast of Scotland. The largest volumes were found mainly offshore skirting the W. Fladen area and also west of the Orkneys. Salpa fusiformis was noted at one station (D14a).

A rough visual analysis of the collections for herring larvae showed three main areas of population. The most dense one along the north coast of Scotland, west of Orkney Islands and extending to Clyde Ness. A small patch occurred near Kinnaird Head. These two populations were of small larvae. Larger larvae were thinly dispersed on the southern offshore fringe of the grid, accompanied by large numbers of Pleurobrachia.

Trawling Two hauls were made in the Moray Firth for Nephrops. At the first haul the wing trawl split from end to end and could not be repaired aboard. The second haul with the 30' otter trawl yielded only a few Nephrops; the bulk of the catch being horse mackerel and hake.

Echosounder The sounder broke down during the first part of the trip and again after repair the same fault recurred in the second half. One or two interesting markings were noticed but few large 'fish' traces.

R. JOHNSTON  
4th October, 1962.