

Confidential: Not to be quoted without  
reference to the Laboratory.

## CRUISE REPORT

F.R.S. "SCOTIA"

4th-18th March, 1959

### Objectives

- (i) Whiting and haddock tagging in the north-western North Sea.
- (ii) Quantitative observations on catches of nylon trawls using 20 fathom sweeps.
- (iii) Hydrography, plankton and echometer observations.
- (iv) Routine survey of Nephrops n. in the Firth of Forth.

### Narrative

"Scotia" left Aberdeen at 0900 hours on 4th March. Weather conditions and forecast precluded work on the east seaboard and passage was accordingly made to the west side of Orkney and Shetland. En route, trawling was carried out off Cruden Scaurs and plankton indicator samples taken. Orkney and Shetland west side grounds yielded poor whiting and haddock results and eventually (on 8th March), with increasing north to north-west winds, recourse was made to east Shetland grounds. Trawling was carried out in Colgrave Sound and off Balta but with similar unsatisfactory results and had finally to be abandoned owing to south-east gales which forced "Scotia" to shelter in Mid Yell until 13th March when renewal of water and stores obliged making passage to Lerwick. Weather eased somewhat on 15th March but only sufficiently to allow passage to be made and a few hydrographic and plankton stations worked until the comparative shelter of east Orkney was reached that night. Here, trial hauls off Copinsay yielded satisfactory whiting and haddock figures and intensive trawling was carried out there until 1730 hours 16th March. "Scotia" then proceeded on a hydrographic profile to Rattray Head, thence via Area C13, where further trawling was done, to the Firth of Forth, the Nephrops survey there being completed at 0300 hours and docking at Leith at 0730 hours 18th March.

### Results

#### (i) and (ii). Trawling

Excluding the Nephrops survey, twenty-one hauls were made. Results were poor except off Copinsay. Total taggings numbered 381 whiting and 129 haddock of which 355 and 110 respectively were caught and released there. Quantities of other species were noted and standard instructions followed with regard to their treatment.

#### (iii)a. Hydrography

Homogeneous water characterised all stations ranging from 6.8°C to 7.6°C in Orkney and Shetland waters and from 6.1°C to 6.8°C southwards from Orkney to the Firth of Forth.

#### (iii)b. Plankton

One-metre silk (60 mesh) oblique hauls yielded good collections, principally of fish larvae. Standard silk hauls indicated fairly rich phytoplankton over the southerly part of the area covered. Thirty-nine plankton indicator disc samples were taken for S.M.B.A.

#### (iii)c. Echometer observations

Owing to severe weather and priority of tagging work, the echometer survey along 3°E. longitude from 60° to 58° North had necessarily to be omitted. Echometer records however were taken on the other main itineraries.

(iv). Nephrops n. survey

The routine survey of the Nephrops stocks both inside and outside the Firth of Forth was completed. All Nephrops were measured and numbered 225 specimens ranging from 17 to 68 mm. Best results were obtained east of Inchkeith. The marketable fish catches in the area were small both in quantity and size composition.

Other work

All cod were examined for worm infestation and stomach contents noted from west Orkney and Shetland grounds. The degree of worm infestation was as follows: W. Orkney 11.5%; E. Orkney 21.3%; Shetland 0%; Aberdeenshire Coast 30%; Firth of Forth 5%.

General

Few commercial fishing vessels were observed during the cruise except those sheltering from the severe weather prevailing. A fleet of fifteen Russian mother ships was sighted at anchor off Fetlar on the east side of Shetland.

J. M. LAMONT.  
2nd April, 1959.

Circulation -

Mr. Wall	Captain Bruce
Dr. H. W. Graham	Captain Finlayson
Mr. R. S. Wimpenny	Mr. Taylor
Dr. J. N. Carruthers	Mr. Jappy
Mr. J. R. Gordon	Dr. Lucas
Capt. D. T. MacCallum	Dr. Tait
Mr. R. S. Glover	Dr. Fraser
Dr. E. Leloup	Dr. Rae
Dr. J. Ancellin	Mr. Parrish
Dr. J. Furnestin	Mr. Gordon (2)
Dr. P. Korringa	Dr. Thomas
Dr. H. Högglund	Mr. Lamont
Dr. E. Bertelsen	Mr. Seaton
Prof. A. Bückmann	Mr. Nicoll
Mr. G. Rollefson	Mr. Struthers
Mr. T. C. Jones, W.F.A.	Library (2)
Mr. G. S. Gault, W.F.A.	File
F.Os. Aberdeen	Spare (4)
Peterhead	Mr. Pope,
Fraserburgh	Mr. Dickson
Wick	Mr. Jones
Lerwick	