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CRUISE REPORT

F.R.S. "EXPLORER"

23rd February-14th March 1966

Narrative

The ship sailed from Aberdeen at 1530 hrs on 23rd February and, after completing the drift indicator stations at Turbot Bank and off Wick, commenced the trawling survey on the north coast on the morning of the 24th. A visit had to be made to Stornoway on the 25th to land two 'flu cases from the crew, and the ship was storm-bound in port until Monday 28th with persistent gales of force 8-10 around the whole west coast area. Trawling commenced again on the 28th and the ship completed the survey by Sunday 6th March, when in the face of continuous bad weather and gale warnings a passage was made to Broad Bay where the ship anchored. Thereafter, work was devoted to cod tagging off North Rona, but this was restricted through adverse weather conditions. On the passage back to Aberdeen the five stations in the Moray Firth were worked. "Explorer" docked in Aberdeen at 1730 hrs on 14th March.

Trawling

A total of 42 trawls was made, 28 of these being at positions on the trawling survey, and the remaining 14, special trawls for cod tagging purposes when the cod-end cover was removed.

Fairly good catches were made during the survey and there was very little gear damage. The dominant species were haddock and whiting, with lesser quantities of cod, plaice, spiny dogfish and skates. Particularly good catches of haddock were made on the north coast (12 baskets), north of Sula Sgeir (46 baskets), north and south of St. Kilda (20-25 baskets) and south of Stanton Bank (16 baskets). The whiting were of good size and the quantities caught were moderate (5-8 baskets). One very large haul of spiny dogfish (101 baskets) was made in the South Minch.

A catch of ripe cod made at dusk north of Rona yielded over 500 individuals with a mean length of approximately 75 cm.

Catches of small gadoids (mainly T. esmarkii and M. poutassou) were poor, seldom exceeding one basket. All the above figures refer to catch per one hour's trawling.

All fish were treated according to standing instructions and, in addition, stomachs from cod and haddock were collected for Mr. Jones, whiting ovaries for Mr. Hislop, herring were deep-frozen for Mr. Saville and samples of skates and rarer fishes were brought back for Dr. Simpson and Mr. Hawkins. A number of cod were examined for nematode infestation and for the presence of Caligus in the buccal cavity. Mr. Smith made collections of parasites from hake, haddock, whiting and skates and brought back several deep-frozen samples for examination in the laboratory.

Cod Tagging

A total of 374 fish were tagged and released in good condition. Mainly spaghetti tags were used although a few fish were marked with the flag. The distribution of the releases was as follows:

North Coast	48
North Minch (including Sula Sgeir)	194
Outer Hebrides	82
South Minch	50
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Total	374
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The fish released were of large size (60-95 cms) and in many cases were ripe running.

Plankton

1) Zooplankton

Over the whole area surveyed Calanus and other copepods were not greatly in evidence. Collections taken in the Moray Firth area consisted mainly of large numbers of Sand Eel larvae, and in the inner stations of Thysanoessa inermis. In the deeper stations round the Continental Shelf the expected greater variety of Euphausiids were found, notably large numbers of Meganyctiphanes norvegica at VV16c. Nyctiphanes couchii was fairly widespread in small quantities.

Towards the outer parts of the Continental Shelf Spiratella retroversa was very obvious. Sagitta elegans was found in most areas and was very abundant north and south of the Hebrides, and a few S. serratodentata were sampled in the North Minch. Aglantha digitale was plentiful at the south-western stations. Physophora hydrostatica was widely scattered and west of Tiree a few Sulculeolaria biloba, and Chelophyes appendiculata were recorded.

Fish eggs were sampled in quantity all round the Hebrides, and were loosely identified as Saithe/Esmarkii, Cod/Haddock, and a few Halibut from the west.

Thirty Plankton Indicator samples were collected for S.M.B.A. Experiments using a drogue with the Gulf III were successfully carried out.

2) Phytoplankton

Standard net samples were much richer in the Moray Firth than in other areas, the dominant diatoms there being Coscinodiscus concinnus, Thalassiosira gravida, and Chaetoceros sp. While at anchor in Broad Bay the standard net was twice streamed overnight to obtain material for Mrs. Reid, but catches were poor.

Hydrography

Surface dips were made with the P.N. during the trawling survey, both morning and afternoon for salinity, temperature, phosphate, nitrate and silicate. A further two deep water stations were worked west of St. Kilda off the edge of the Continental Shelf and temperature and salinity samples were taken at all depths. Sea water was collected in carboys at these stations.

The pumped sea water supply was checked and found to be working perfectly.

Current indicators were released at Turbot Bank and at three positions off Wick.

Echosounding

MS29 Several minor breakdowns occurred during the first part of the trip but latterly the instrument was working well and gave good fish traces

on several occasions. Considerable difficulty was encountered in operating the C.R.T. due to the fluctuating voltage supply. The Marconi Fishgraph gave no trouble.

D.F.S. Raitt
24th March 1966