

## CRUISE REPORT

## F.R.S. "SCOTIA"

28th February - 16th March, 1956.

NARRATIVE

After a protracted delay due to unforeseen requirements during the annual refit, "Scotia" left Aberdeen at 1 p.m. on 28th February. From the outset the weather was unfavourable and, after working a hydrographic station in the outer Moray Firth, the vessel passed through the Pentland Firth and met the full force of the weather from the westward. Temporary shelter was sought at Scrabster but, with conditions worsening, the vessel proceeded to a safer anchorage at Longhope in the Orkneys on the following day. During the next four days severe gales (force 9 increasing for a time to storm force 10) were experienced in all sea areas to the north and west of Scotland. In the Orkneys, wind speeds from 86 to 104 miles per hour were recorded in gusts at Kirkwall and at Costa Head. Although only strong or even moderate winds were experienced for short periods during the following two weeks, gales from south-west to south-east continued to hamper fishing operations in northern waters, and it is remarkable that throughout the entire cruise no period of 24 hours was without a gale warning for the sea area in which "Scotia" was operating at the time and/or in the neighbouring area towards which the vessel was proceeding.

In the circumstances it was decided to make the best possible use of the time available by working in the comparative shelter of the north coast and the Minch while awaiting an opportunity to attempt the Butt of Lewis/Faroe Bank line. During a temporary lull a start was made at the Butt of Lewis but a heavy swell and another gale warning forced the abandonment of the line before reaching Sulisker.

As the weather appeared to be less severe in the Fair Isle area it was decided to steam to Shetland but by the time a suitable fishing position was reached west of Foula, gales had again spread to the area. "Scotia" accordingly put into Ronasvoe where a number of commercial vessels were already sheltering. Two days later the wind moderated sufficiently to permit observations off the north of Shetland, after which "Scotia" proceeded to Lerwick for water. Yet another gale from the south east put an end to further work and the ship made a rough passage to Aberdeen, which was reached at 2 p.m. on 16th March.

SCIENTIFIC WORK

Only four hydro-biological stations on the original programme were completed. An additional six stations along the north coast and in the Minch were inserted, however. Surface temperatures ranged from 6.81°C off Strathie Point to 7.29°C north of the Butt of Lewis. Bottom temperatures in the same area were from 7.03°C to 7.30°C. In the Minch surface and bottom temperatures were very uniform, ranging from 7.10 to 7.40°C. North of Shetland both surface (7.84°C and 8.30°C) and bottom (7.40°C and 7.71°C) were slightly higher than elsewhere.

Few plankton samples were collected. Attempts to procure samples of bottom deposits by means of the Van Veen grab along the north coast were unsuccessful, presumably due to the rapid drift of the ship.

Seven trawl hauls were carried out with encouraging results in each case. Particularly good fishing was experienced off Strathie Point, west of Cape Wrath and north of the Butt of Lewis with lemon soles prominent at the first position and haddock and whiting at the others. Another big haul was obtained in Broad Bay, although plaice were less plentiful than was expected in this locality. Fishing at Flugga was also successful with haddock prominent.

All the haddock and whiting caught were examined for the presence of *Lernea* on the gills. Many haddock were found to be parasitised by one or other of the various stages but whiting were not affected. The heads of many flatfishes were preserved for examination in connection with the study of the larval stages of the parasite.

A large collection of Elasmobranch livers was made for vitamin A and carotenoid analyses.

Great lines were shot on three occasions and shark lines once. The results were disappointing in each case but not altogether unexpected, since the choice of positions for fishing was largely determined by the weather. No porbeagle sharks were caught and no Scandinavian vessels were observed, although reports were received of at least one successful trip by a Norwegian sharkerman to the west of Shetland. Trials with artificial Norwegian rubber baits inserted between great lines baited in the recognised manner with white fish "dollops" were inconclusive, although the results add to the accumulating evidence that rubber baits alone are not suitable for the capture of ground fish in Scottish waters.

As may be expected, the commercial fishing fleets appeared to be considerably hampered by the bad weather. Most of the vessels observed at work were concentrated in the Minch where a fleet of trawlers was seen between Cape Wrath and the Butt of Lewis and about a dozen seine netters east of Tiumpan Head.

Echo sounding was carried out where possible. This produced some interesting traces in the Minch area which have been preserved for examination. Defects, however, developed in both the scientific instruments and in the bridge instrument which will require attention.

A fault was also found in the forward hydrographic winch which will necessitate repairs ashore.

B. B. RAE.

26th March, 1956.

CIRCULATION

Mr. Wall	Dr. Havinga	Dr. Wood
Mr. Graham	Mr. Stefansson	Dr. Tait
Dr. Carruthers	Mr. Rollefson	Dr. Fraser
Mr. Rose	Dr. Molander	Dr. Rae
Captain MacCallum	Dr. Graham, U.S.A.	Mr. Parrish
Mr. Russell	Fishery Officers	Mr. Saville
Mr. Rae	Captain Bruce	Mr. Steele
Dr. Reay	Captain Finlayson	Mr. Sinclair
Dr. Leloup	Mr. Jappy	Mr. Devlin
Dr. Tønning	Mr. T. C. Jones	Mr. Seaton
Dr. Ancellin	Mr. Gault	Mr. Gordon (2)
Dr. Furnestin	Dr. Lucas	Library (2)
Professor Büchmann	Mr. P. Burn	File
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