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CRUISE REPORT

F.R.S. "SCOTIA"

June 6-25, 1962

Progress of cruise

"Scotia" sailed as planned at 1700 hours on June 6. After the routine Aberdeen station the productivity section (Fladen-Rattray Head) was completed by midnight on the 7th. Work continued in good weather with 20 trawling stations in the Moray Firth, Fladen, E. Fladen and Viking grounds. On route M.A.F.F. research ship "Clione" was sighted near station 17. Greetings and fishing reports were exchanged. The 61°01'N line was started from the eastern end and 7 stations were completed before gale force winds halted work. "Scotia" made for Lerwick which was reached on Thursday evening and a berth alongside was obtained on Friday morning. At this juncture changes of ship's personnel were made for holiday leave.

Winds continued strong to gale but on Sunday morning it was decided to 'have a look' at some inshore stations. Only station 57 was workable before seeking shelter off Fetlar in renewed gales. A temporary lull next morning enabled stations 68, 70 and 69 to be worked, completing the 61°01'N line. Gale force winds rose steadily and after Gulf III and other plankton samples at station 62, the trawl had to be cancelled and shelter sought at Mid Yell. Tuesday was spent at anchor in continuing high winds. Though work during the remaining 5 days was frequently interrupted by renewed gales, 11 more trawl stations were completed before the cruise finished at Leith on Monday, 25th at 8.00 a.m.

Hydrography

Surface temperatures were between 10 and 10.5°C except in the Fair Isle and Buchan regions which were colder and more vertically mixed; the detailed temperature distribution was complex. At the deeper stations (> 120 metres) bottom temperatures were between 6.5 and 7.0°C.

Salinity, oxygen, phosphate, nitrate and silicate samples were taken at all stations worked. The productivity programme was successfully completed.

Plankton

The large total of 124 plankton hauls was made up of samples taken by various gear, as follows: Gulf III 54, 1 metre (26 mesh) 14, Standard net 20, Plankton Indicator 37 samples. Large numbers of Aurelia were visible at the surface in inshore Shetland waters.

Parasites

Approximately 250 whiting gall bladders were preserved for examination. Samples of external cod parasites were also kept.

Gear

A cod-end was over-stretched and burst with a huge catch of dogfish; this was replaced. Otherwise little damage was sustained during trawling.

Fishing

In general the catches with the Vinge trawl during 1 hour hauls were small. The best fishing was possibly inside the Moray Firth limits though

quantitatively catches of small dogfish (40-60 cm) in the Shetland waters were much greater. The largest catches comprised 65 baskets, mainly dogfish taken 12 miles E. of Balta; 9 baskets of dogfish + 3 mixed roundfish 25 miles SSE of Sumburgh Head; 16 baskets small haddock and small whiting 14 miles SE of Fair Isle; 12 baskets small haddock, whiting and G. esmarkii 15 miles E of Auskerry.

Cod

This species was taken only in small numbers. The lively fish were tagged.

Haddock

Size range 20-25 cm was plentiful in many hauls.

Whiting

Large and medium whiting were scarce.

Flatfish

Catches of long rough and common dabs ranged from $\frac{1}{4}$ to $\frac{3}{4}$ basket. Several catches of $\frac{1}{2}$ to 1 basket of lemon sole were sometimes obtained, plaice were scarce. Other species included turbot, brill, witch and megrim in small numbers.

Small Gadoids

Most hauls yielded at least $\frac{1}{2}$ basket G. esmarkii and many gave 3 or more. Very few of the other small gadoids were taken.

Herring

Most hauls contained a small number of herring. Numbers approaching 100 were caught in the E. Fladen area, where German luggers were trawling. The drift-net fleet working from Lerwick was getting good catches on Shetland grounds.

Bottom Fauna

Numerous grab hauls covering some 20 statistical squares met with virtually no success. Stomachs of fish caught in the Fladen area were preserved.

Echosounding

A continuous record was maintained. Small traces were not infrequent and some fairly extensive mid-water echoes were found.

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2nd July, 1962.