

S.16

3SR62

## CRUISE REPORT

F.R.S. "SCOTIA"

March 3 - 19th 1962

Personnel: Dr. J. H. Fraser, S.P.S.O.  
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 Mr. B. D. Irwin " "  
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Narrative

"Scotia" sailed from Aberdeen 10 p.m. Saturday March 3rd and commenced work in the Moray Firth area, completing stations 1, 2, 3, 5, 6 and 7 but had then to return to Aberdeen to replace an engineer and the cook. Sailing again midnight March 7th and making her way northwards, the weather deteriorated and gale force winds from the SE made it advisable to shelter in Inaness Bay, Orkney, for the night of March 8th. Opportunity was taken to make a continuous haul for phytoplankton for Dr. Mowat but, as it was rather too early for the spring outburst in this area, the results were very meagre. Work continued on 9th at stations in the Fair Isle area but again it became necessary to seek shelter and Lerwick Roads was reached at 3 a.m. on March 10th. Here the heavy swell caused so much turbulence that nets were choked with sand and useless for Dr. Mowat's work. Leaving again on March 11th "Scotia" worked the whole hydro line, with trawl station as appropriate, at 61°01'N and continued work on the eastern side of the North Sea. By Wednesday March 14th stores and water were required and "Scotia" put into Stavanger for a day, leaving again on March 15th. Thereafter weather was excellent and in the remaining three days 10 trawls and 15 hydro stations were completed; "Scotia" docked on Monday March 19th preparatory to boiler cleaning.

Hydrography and Chemistry

The continuous cold and stormy weather had prevented any development of a spring thermocline and temperatures were very uniform throughout the columns sampled except in areas where the Baltic effluent was affecting the surface layer. Samples for salinity, phosphate, nitrate, silicate, oxygen, iron and productivity were taken as scheduled except that as time prevented the completion of all stations it was sometimes necessary to amalgamate the work of several stations into one. Temperatures ranged from about 5½°C off the Aberdeenshire coast, about 6°C in the Moray Firth and central northern North Sea to 7½°C NE of Shetland. Water to the immediate south of Fair Isle was nearly ½° warmer than to the immediate north. The cold Baltic water was about 1½° lower than the underlying layers. About 100 cultures were set up in the prepared tubes during the last few days of the cruise according to the instructions issued by Dr. Johnston.

Plankton

Gulf III samples were taken at all stations worked and standard and 1 metre tow-net samples were taken as scheduled but, as mentioned above, several stations were amalgamated to give the best coverage in the time available. Samples were taken for Dr. Mowat in Inaness Bay and again towards the end of the cruise where a haul of about 7 hours yielded a good sample. The call at Aberdeen to exchange crew enabled the Aberdeen station to be worked 4 times. A sample of Sagitta setosa water for aquarium work was taken in H 15c. The bad weather caused much turbulence and many of the samples in the first part of the cruise were badly contaminated with sand and mud. Phytoplankton was much more in evidence at the end of the cruise than at the beginning and Halosphaera was particularly abundant. Zooplankton was poor in the central area but fairly rich collections of Calanus and euphausiids were taken in the

north west rather than in the east. Some Themisto were brought back alive for N.I.O.

#### Trawling

The Vinge trawl was used throughout. Small gadoids, haddock and whiting were adequately sampled and there were fair numbers of herring and sprat in places; cod were not very numerous. Whiting gall bladders were taken and the catches worked up according to Standing Instructions. A fairly good catch of Nephrops was made in the Moray Firth but at the special Nephrops station in E 14b only 2 were taken.

#### Echoscunding

The echo-sounder was used throughout and gave little trouble but showed little of interest. The records have been brought back to the laboratory.

J. H. FRASER  
23rd March, 1962.