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4SR63CRUISE REPORTF.R.S. "SCOTIA"April-May, 1963Objectives

- (1) Sampling on the Rattray-Fladen line.
- (2) Echo search near Utsira Bank.
- (3) Two surveys in the area $59^{\circ}00'N-60^{\circ}30'N$; $4^{\circ}00'E-1^{\circ}00'W$.

Narrative

"Scotia" sailed from Aberdeen at 2330 hours on the 22nd April to work the Rattray-Fladen line of stations. During this work the ship was forced to return to Aberdeen on the 24th for a few hours for repairs to the radio, thereafter an echo search for herring was carried out along the edge of the Norwegian Deeps between $58^{\circ}20'N$ and $59^{\circ}20'N$. Considerable aggregations of traces were found in this area. "Scotia" went to Stavanger on the evening of the 28th April and sailed on the morning of the 29th to start a survey in the area between $59^{\circ}00'N$ and $60^{\circ}30'N$. This was interrupted by a brief visit to Lerwick on 6th May to obtain medical attention for the mate.

At the end of the first survey "Scotia" went into Bergen on the afternoon of the 7th May and sailed on the 9th for the second survey of the same area, which had to be abandoned on the 12th because of southerly gales. After sheltering in Shetland till the weather improved, "Scotia" sailed to Aberdeen, docking at 0600 hours on the 15th May.

Results

On both surveys midwater traces were found in an area extending from the Norwegian Deeps towards Shetland.

It will be some time before complete results from the 150 stations are available, but from a preliminary study of the results the general position of this area appeared to be associated with temperature changes rather than with changes in zooplankton biomass.

First trials of the Bergen continuous flow turbidity meter were satisfactory. The variation in turbidity correlates reasonably with the changes in particulate organic carbon and also with chlorophyll.

J. H. STEELE
7th June, 1963.