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## CRUISE REPORT

FRS "SCOTIA"

16 NOVEMBER-3 DECEMBER 1970

## OBJECTIVES

Trawling and environmental survey of the northern North Sea.

## NARRATIVE

A series of mechanical defects delayed 'Scotia's' departure from Aberdeen until noon on Wednesday 25 November. As a consequence of this delay the remaining seven days of the cruise were devoted to trawling and the environmental survey was restricted to plankton sampling and hydrographic observations at the trawl stations.

After completing two trawls off Aberdeen 'Scotia' returned to Aberdeen harbour mouth on Thursday afternoon to pick up Mr Newton from the Aberdeen pilot boat. On the following two days trawling continued in the Moray Firth and Fladen areas until late on Saturday 28 November when adverse weather conditions forced the ship to 'dodge' for 48 hours and ultimately to make for shelter in Inganess Bay in Orkney.

As conditions in this area were likely to remain unfavourable 'Scotia' left Inganess Bay at 0830 hours on Tuesday 1 December and proceeded to the more sheltered waters of the Moray Firth where she was able to carry out a further two trawls. On Wednesday 2 December, after collecting samples of live plankton, 'Scotia' sailed for Aberdeen and docked at 1700 hrs.

## RESULTS

## Hydrography and Chemistry

Surface temperatures varied from 9.31°C off Aberdeen to 7.90°C to the north west of the Fladen area. Surface chlorophyll samples were collected at all stations and phosphate and nitrate samples from both surface and bottom. Drift envelopes were released, on behalf of the Deutsches Hydrographisches Institut, at the position 57°15'N 01°45'W on 25 November and 2 December.

## Plankton

Duplicate hauls for zooplankton standing crop investigations were taken at all stations; one sample was preserved in formalin and the other deep frozen. Hauls with the modified Plankton Indicator were made at selected positions within the Buchan/Shetland area for IMER, Leith, and samples of live plankton obtained for Dr MacDonalld of Aberdeen University and for Dr Johnston.

With the exception of the euphausiid Thysanoessa inermis crustaceous plankton was generally sparse. Samples from the inshore stations in the Moray Firth did however contain moderate numbers of Acartia, Temora and Para/Pseudocalanus. Offshore Pleurobrachia pileus was the dominant organism.

#### Trawling

The catches of haddock of the 1969 year class varied greatly in numbers, even at stations within the same statistical square. In the North Central area numbers ranged from < 10 fish per hour to > 1400 fish per hour and in the Moray Firth they ranged from < 300 fish per hour to > 1300 fish per hour.

Collections of stomachs of common dab and long rough dab were made for Mr Armstrong. Haddock stomachs were preserved for Mr Jones and a large sample of Pandalus borealis obtained for Dr Thomas.

#### Echosounding

The echosounder was operated throughout the cruise.

D D SEATON

8 December 1970