

S.16

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CRUISE REPORT

F.R.S. "SCOTIA"

4th May - 30th May 1961

Narrative

Damage caused by picking up a wire in the propeller at the end of the previous cruise, and a subsequent furnace defect delayed sailing from Aberdeen until the night of 10th May. A passage was then made to the Clyde, five plankton stations being worked en route, and large samples of bottom and surface sea water being taken for the A.E.A., at positions between Tiree and Islay, and between Rathlin and Kintyre. Mr. Saville joined "Scotia" at Campbeltown on the morning of the 13th and the Clyde survey was begun immediately. This continued until the morning of the 22nd, interrupted only by a call at Greenock to take water, disembark crew members who were beginning leave and embark replacements, and to have the radar repaired. Messrs. Saville & Craig left "Scotia" in the Clyde on the morning of the 22nd May, the Clyde survey having been completed, and "Scotia" proceeded to Stromness. On the 25th, "Scotia" sailed from Stromness where Mr. Steele and Mr. Baird joined the ship. Due to bad weather the Fladen-Rattray Head line of productivity stations was not started until the 27th, after completing this "Scotia" proceeded to Aberdeen where she docked on the afternoon of the 28th. On the 29th the ship sailed to carry out the Nephrops survey on the way to Leith.

Hydrography

The hydrographic sampling in the Clyde and North Channel survey was carried out as laid down in the cruise programme. Surface temperatures ranged from 12.0°C in Loch Fyne to 8.8°C off the east coast of Northern Ireland and in general were 0.5-1°C higher than on the corresponding cruise in 1960. In the North Channel and the southern part of the Clyde estuary temperatures showed very little variation with depth. In the northern part of the estuary bottom temperatures were, in general, 2.5-3° lower than those at the surface.

Plankton

In all over 100 plankton samples were taken in the North Channel and Clyde estuary. A rough assessment of these suggests a moderately rich crustaceous plankton over most of the area with *Calanus* the dominant organism. *Balanus* cyprids were very prominent in the collections taken in Loch Fyne whilst in the Kyles of Bute, Loch Striven and Loch Long, *Aurelia* was very abundant to the virtual exclusion of any other planktonic organisms.

Glupeoid larvae were present in a band extending from the Ballantrae Bank region northwards through Kilbrennan Sound to the lower reaches of Loch Fyne. Numbers were however rather small and no concentration was located of adequate density to justify the experimental work with the Gulf III sampler which had been planned.

Trawling

Five trawl hauls were carried out in the Clyde area. White fish catches were very poor with small hake the most numerous element in all hauls. Witches, whiting and small gadoids were the only other fish to be taken in any numbers. Only one herring was taken in all of the trawl hauls and sprats also were practically absent from the catches. Both of these fish were taken in considerable numbers at the same positions in the corresponding cruise in 1960. Nephrops were prominent in all of the hauls and considerable numbers were sexed and measured.

Productivity

A comparatively rich phytoplankton population was found on the Fladen-Rattray line. On this line there was, however, a very marked change in the zooplankton about 40-50 miles offshore, where the very large and almost pure Calanus population found on Fladen was replaced by smaller collections of Pleurobrachia and young Euphausiids nearer shore.

ALAN SAVILLE
JOHN H. STEELE

19th June 1961

Circulation

Mr. Engholm	Dr. Raser
Dr. Graham	Dr. Rae
Dr. Cole	Mr. Parrish
Dr. Carruthers	Mr. Grant (2)
Mr. Gordon	Mr. Saville
Captain MacCallum	Mr. Steele
Mr. Glover	Mr. Lawrie
Dr. Russell	Mr. Baird
Dr. Mortimer	Mr. Nicoll
Dr. Leloup	Mr. G. Craig
Dr. Ancellin	Library (2)
Dr. Furnestin	File
Dr. Korringa	Spare (4)
Dr. Höglund	Mr. Pope
Dr. Bertelsen	Mr. Dickson
Prof. Dietrich	Mr. Jones
Mr. Rollefson	Mr. Saville
Mr. Le Mare, W.F.A.	Mr. Hall
Mr. Gault, W.F.A.	Fishery Officers: Leith
Captain Bruce	Aberdeen
Captain Finlayson	Peterhead
Mr. Taylor	Fraserburgh
Mr. Jappy	Campbeltown
Dr. Lucas	Ayr
Dr. Tait	