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CRUISE REPORT

F.R.S. "SCOTIA"

17th August - 13th September, 1956.

- Objectives:
- 1) Herring Trawling and Tagging.
 - 2) Herring Larvae Survey.

Herring Trawling and Tagging

"Scotia" obtained her full complement by the evening of 21st August and was able to leave Aberdeen on 01.00 hours on Tuesday 22nd. She proceeded to the Fladen area and worked with the Pick-a-Back trawl until the morning of the 28th. The wind strengthened, preventing further work, and, with no improvement in sight, "Scotia" returned to Aberdeen on 30th August.

Occasional difficulty was encountered in shooting the trawl but the nets suffered no damage. In all 32 1-hour hauls were made, 22 by day and 10 by night. The catches were fairly good consisting mainly of haddock, whiting, G. esmarkii, long rough dabs and smaller numbers of herring (up to 142 per haul). Information has been obtained about the vertical distribution of these species by day and by night.

Counts were made of the C.R.T. breaks at intervals during each haul giving an estimated total for the haul. There were very few traces on the recording paper. No relationship was found between the number of C.R.T. breaks and the size of the catch.

The herring caught were not suitable for tagging.

Herring Larvae Survey

The beginning of this part of the programme was delayed for two days due to unfavourable weather, the ship sailing from Aberdeen in the afternoon of the 5th September. A course was set for 57°00'N 1°00'W a position which previous work had suggested as a centre of spawning activity. Tow net hauls confirmed that a dense concentration of newly hatched larvae were present there and this position was chosen as the centre of the grid. A string of 50 "Craig Indicators" was laid down along the east-west axis of the grid, and sampling of the grid was then begun. In the eight days while the ship was at sea the grid was completed four times during daylight and four times in darkness. The plankton complex was uniform both between stations and throughout the period of the cruise. The standing crop was fairly high and consisted predominantly of Calanus and small individuals of Limacina. Both Sagitta elegans and S. setosa were present but the former was completely dominant to the latter numerically. Herring larvae ranging in size from 7-10 mm were taken and ranged in abundance from 1,500 - 10,000 for a 15 minute tow.

In the first twenty-four hour period five of the indicators released were resighted and suggested that little or no movement had occurred. Twentyfour hours later another five were sighted approximately three miles to the north west of their release positions. Thereafter resightings and recoveries by commercial vessels, suggested that the drift was southerly with perhaps a slight easterly component, at a rate of 2-3 miles per day. Throughout the period of the cruise the work was hampered by dense fog which made the sighting of indicators difficult

and in the absence of "Decca" made accurate station keeping a very exacting task for the ships officers. Their whole-hearted co-operation is gratefully acknowledged. Even given ideal conditions however, it is felt that resighting of these indicators is too much a matter of chance for them to be a really suitable instrument for this type of work.

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2nd October, 1956.

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