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CRUISE REPORT

F.R.S. "SCOTIA"

14th November - 6th December 1963

On leaving Aberdeen on the 14th November "Scotia" commenced work on the six trawl positions nearest to Aberdeen, which were completed on the 15th. To take advantage of the reasonable weather that could be expected during the next two days, it was decided to work stations in the exposed eastern area. Unfortunately only five more stations were completed, when "Scotia" had to return to Aberdeen to effect repairs to the engine feed-pump ram; at the same time a minor defect in the trawl winch was put right.

On resumption on the 20th November very unsettled weather prevailed for the remaining days of the cruise, which caused frequent breaks in the programme. On the 21st November shelter was sought in Deer Sound, and on the 24th after a further 36 hours work a south east gale compelled "Scotia" to go into Haugesund (Norway). After putting in to Lerwick on the 30th November for water and stores, stations to the west of Orkney and in the Moray Firth were worked till the morning of the 5th December when a passage was made to Leith to dock there in time for contractors' visits on the 6th December 1963.

Hydrography

Over the greater part of the northern North Sea from 1°W to $3\frac{1}{2}^{\circ}\text{E}$, where oceanic conditions prevailed, surface temperatures varied from 8.07 to 10.01°C , with the salinity range from 35.11 to 35.30‰ . The highest temperature of 10.40°C was recorded off Aberdeen and the lowest of 7.45°C in the inner Moray Firth. Salinities in Scottish coastal waters ranged from 32.74 to 34.96‰ .

Phosphate values showed a seasonal recovery from 0.52 to $0.69 \mu\text{g}$ at $\text{PO}_4\text{-P}/1$ while the corresponding values for silicate were from 3.5 to $4.6 \mu\text{g}$ at $\text{Si}/1$.

Plankton

Hauls were made principally with the Gulf III sampler and at a few positions 1 metre silk nets were used in tow and obliquely.

Approximate estimates of settled volume showed an area of fairly high standing crop (> 30 c.c. per haul) extending south eastwards from the Orkney-Shetland area. Calanus, Sagitta elegans and euphausiids were the dominant forms present.

Trawling

Hauls of an hour's duration were made with "Scotia's" small-mesh, wing trawl at each of the 36 stations occupied, and these were fairly well distributed over the area to be sampled.

Outstanding among the catches was a "Scotia" record of 110 baskets in statistical square F17a. The floating bag appeared so enormous, that it was judged prudent to bring the catch on deck in six portions. The contents were principally haddock in the size range 24-32 cm and the estimated number of fish was 20,000. Strangely enough throughout the whole of that day not a trawler was sighted in the region.

Another large catch at ZZ17d of 40 baskets contained 7,300 haddock, principally in the same size range, with a few larger individuals up to 44 cm.

Haddock in the same restricted size range figured in most of the other trawls in numbers varying from 500-4,000. Fair numbers of larger haddock ranging from 33-59 cm occurred in the trawls shot to the north and east of Shetland.

...hiting of a size range from 17-29 cm and with individual counts from 500-1,500 were taken in the trawls shot to the east of Aberdeenshire and in the Moray Firth.

Best catches of other species were - Nephrops, 428 individuals, (20-51 cm) at B14a; Gadus esmarkii, 2022 fish (11-20 cm) at A17c; Gurnards 203 fish (11-38 cm) at D20a; Common dabs at H15c, 176 fish from 10-21 cm; Long rough dabs at D16b, 150 fish (11-21 cm); and herring 177 fish from 25-33 cm at F15a.

R. B. BURNS

16th January, 1964.