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CRUISE REPORT

F.R.S. "SCOTIA"

6th-26th September 1961

Sailing was delayed one day due to the absence of one of the seamen on compassionate leave. F.R.S. "Scotia" left Aberdeen on the evening of 6th September and work went on smoothly and successfully until the morning of the 12th when Meteorological Office warnings of the imminence of the "fag-end" of hurricane "Betsy" were received. There was no alternative but to seek shelter and "Scotia" steamed all day to anchor near Mid Yell in the evening. From then until the 18th gales were repeatedly forecast and encountered and only two trawls were achieved. Water and provisions were taken on board and crew changes were made at Lerwick on the 14th and 15th while the weather was bad. The cruise finished on a happier note with four days of successful trawling followed by good hauls on the Firth of Forth nephrops survey.

Hydrography Surface temperatures in the northern North Sea ranged from 13.65°C (F15d) to 11.10° (D19c) with vertical temperature discontinuity well-marked at the warmer stations. Except at the northernmost station (D21c) phosphate was virtually absent from surface water samples and was low throughout the water column.

A culture experiment testing the effects of various plankton extracts on phytoplankton growth was initiated using waters from a wide area east of the Fladen ground.

Plankton Hauls with the Gulf III townet and with the Plankton Indicator were made at each station. Occasional supplementary samples were taken with 1 m silk nets and the Standard net.

Fishing In all 34 trawls were completed, all without damage to gear. Catches were moderate, usually 4-8 baskets per 1 hour haul with only one or two poor catches and one extra large haul (D20c) which included 16 baskets of dogfish.

Herring Almost all the herring caught were from the Fladen area and just east of Fladen. Several hauls of one basket of spent adult fish were obtained. In addition, one haul yielded only fish of 20-25 cm and another of 10-15 cm size only. Pectoral fin, gill raker and otoliths were taken and vertebral count, k_2 scales, length, sex and maturity were recorded for each fish in daily samples.

Cod Numbers of cod caught were small except in B11c where 148 were taken, size range 21-82 cm. Notes were made on the occurrence of muscle parasites in samples from each area.

Haddock Many hauls contained baby haddocks but marketable sized fish were more patchy in distribution; sizeable quantities were taken in B16b, C13b, C17b, D19c, D20b, E13a, F15d, F16c, F17a, and d, and G16c.

Whiting Small numbers were found in many areas but useful quantities of commercial-sized fish were restricted to C13, C15 and D15. Small (9-18 cm) whiting were numerous in the Firth of Forth area.

Small gadoids A considerable proportion of the hauls yielded 2 or more baskets of small gadoids, (G. esmarkii, G. minutus) mixed with substantial numbers of long rough dab.

Flatfish Lemon sole, plaice, negrim, witch and turbot were found in small numbers. Only one halibut was taken.

Other Fish Apart from the usual skates, hake, mackerels and so on, numbers of the less common 3-bearded and 4-bearded rocklings were taken and one greater fork-beard (Phycis blennoides) was preserved.

Nephrops Catches except for two stations in the Firth of Forth included only small numbers of Nephrops. The larger catches consisted predominantly of male Nephrops and about one-third of the females were carrying eggs.

Echosounding A complete record was kept during all steaming, but sizeable traces were few and far between.

R. JOHNSTON

3rd October, 1961.

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