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CRUISE REPORT

F.R.S. "SCOTIA"

5th-19th December, 1958

Objectives

- (i) Herring larval survey of the western central North Sea.
- (ii) Firth of Forth Norway lobster investigations.

General

"Scotia" left Aberdeen at 2030 hours on the 5th December, and commenced to work the northernmost line of the herring larval grid. After one day of good weather, the wind strengthened from the east and, at 1545 hours on the 8th December, after completing two lines, it was necessary to shelter in Peterhead Bay. Work was resumed at 0730 hours on the 10th December, but, at 2230 hours on the 11th, after a further $1\frac{1}{2}$ lines had been worked, easterly gales again caused work to be abandoned. After working three inshore trawling stations in the Firth of Forth, "Scotia" proceeded to Leith, arriving there at 1515 hours on the 12th December. The opportunity was taken to obtain stores and a P.N. bottle to replace one damaged during the first part of the cruise. Persistent easterly gales prevented "Scotia" from leaving Leith until 1600 hours on the 16th December, when she proceeded to Largo Bay and dropped anchor. Several attempts were made to trawl for Nephrops, but little was achieved owing to adverse weather, and most of the time was spent at anchor. The cruise was finally abandoned, and "Scotia" ran to Leith before a severe easterly gale, arriving there at 0915 hours on the 19th December. In all only 34 out of 114 stations were worked and it was not possible to complete the Firth of Forth Norway lobster survey.

Hydrography

Temperatures and salinity samples were taken at all stations worked, according to the programme, and samples were collected for Mr. Steele. Owing to a defect in the depth recording apparatus of the for'ard hydrographic winch, which could not be repaired until the ship was in calmer water, the 'midships winch had to be used in most unpleasant conditions. The heavy weight on the stirrup of the P.N. bottle rendered it difficult to handle in a heavy swell,

Plankton

Hauls with the Gulf III high speed sampler yielded very few herring larvae, never more than four in a haul, averaging less than one per haul. Standard net hauls showed that phytoplankton was generally scarce, but dinoflagellates were fairly abundant in areas G12c and G13d. Fleurobrachia was taken in numbers in E14a and G14a, and Sagitta elegans in C13c and E13c.

Trawling

It was not possible to trawl at the outermost Norway lobster station in the Firth of Forth (Stn.1) and only one haul was possible at Stn.2. Only two hauls were possible at Stn. 3, off Fidra, since it was impossible to fish there in a heavy swell owing to the presence of wrecks in the area. An extra station was worked in Aberlady Bay and three hauls were made at Stn.4. In all eight one-hour hauls were made, four with a 60 mm mesh and four with a 70 mm mesh codend.

Of the total of 576 Norway lobsters caught (average 72 per haul) only 27, or 4.7%, were females. No berried females were taken. Only 9 Nephrops were caught in the two hauls at Stn.3, while 181 were caught in the one haul at Stn.2. The size distribution (carapace length in cms) was as follows:-

Size Group	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9
Male	13	104	214	183	35
Female	7	12	6	2	-

JAMES MASON.
12th January, 1959.