

CRUISE REPORT

F.R.S. "SCOTIA"

October, 1952.

After delays occasioned by weather and a series of mechanical defects, "Scotia" sailed at 1650 hours Friday 10th October. It had been planned to complete the Fladen Area first, but on reaching Station 1 conditions were so difficult that it was decided to continue at Station 60 and work south to 55. This was completed in moderate weather and stations to 43 were worked in a generally northward route. Gale force winds forced the abandonment of Station 42 and shelter was sought in Gamrie Bay. The cruise was resumed at Station 32 on the morning of Tuesday 14th, with stations in the Fladen Area, and thence to 31, 30 and again south picking up the stations omitted. The weather held and 48 of the 60 stations on the programme were completed. F.R.S. "Scotia" returned to Aberdeen at 0300 hours Sunday 19th October and gear and samples unloaded next day.

Hydrography

Temperature was uniform from surface to bottom except at four stations in the Fladen Area where there was a distinct thermal discontinuity at ca. 80 m., water above being approximately 10.0°C and below 7.4°C. Elsewhere temperatures were 10.0-10.6°C but in areas E12, B11, C11, D11, E11 the range was 9.4°-10.0°C.

Oxygen values were, in general, very uniform at 6.0-6.1 cc. O₂/l but below the thermocline in the Fladen Area values were ca. 5.3.

Plankton

In many cases plankton collections were rich for the time of year. In the 1-metre and 2-metre silk net collections *Calanus* and *Limacina* formed the main part with *Sagitta elegans* and *Pleurobrachia* in smaller quantity. The abundance of *Calanus* decreased towards the coast where collections proved to be mainly of *Sagitta elegans*, Euphausiids, *Pleurobrachia* and *Limacina retroversa*. Of particular note were a large collection of salps in area D15d and a dense collection of *Clione limacina* in B16b. Clupeoid larvae were found over the greater part of the area covered and appeared to be most abundant in D14 and D11; they fell off markedly in numbers north of D14. Standard net collections were poor with the best results at stations south of 56°30'N.

Note: In some cases 2-metre net hauls were replaced by 1-metre silk net oblique hauls as weather conditions precluded the use of the large net.

Trawling

Thirteen trawl hauls were obtained, including two with the herring trawl. Otter trawl catches were generally poor consisting of small numbers of small haddock and whiting. The 1951 and 1952 young haddock broods were taken in numbers in depths of over 100 m., especially at C14d where 381 of the former and 260 of the latter were taken. Only 9 lemon sole, 3 plaice, 3 megrim and 7 witch were taken during the trip. The two herring trawls yielded mostly haddock, whiting and *Gadus esmarkii*. Seven herring were taken in one of the trawls and proved to be recovering spents of good size similar to commercial samples from the same area examined in the Laboratory.

R. JOHNSTON

29th October, 1952.

Circulation

Mr. W. Russell	Dr. B. Havinga	Dr. J. B. Tait	Dr. Johnston
Capt. C. H. Champness	Dr. A. R. Molander	Dr. J. H. Fraser	Mr. Livingstone
Mr. M. Graham	Prof. Gilis	Dr. A. Ritchie	Mr. Nicoll
Dr. C. E. Lucas	Mr. K. M. Rae	Dr. B. B. Rae	Mr. MoInnes
Dr. J. N. Carruthers	Dr. G. Reay	Capt. McLaren	Spare 4.
Dr. A. V. Tanning	Dr. H. Wood	Capt. Bruce	