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C R U I S E   R E P O R T

F. R. S. "SCOTIA".

July, 1952.

F.R.S. "SCOTIA" sailed from Aberdeen at noon on Friday, 4th July, and returned at 13.00 hours on Sunday 20th July. All stations on the programme were completed generally under favourable weather conditions. The scientific complement was reduced to four, Mr. Devlin taking ill shortly before the commencement of the cruise.

Hydrography.

The extended Butt of Lewis - Faroe line, 58°40'N 6°10'W to 62°15'N 9°30'W; the Enniberg line due north to 64° and the usual Svino-Flugga stations were all completed. A brief perusal of the results showed surface water in the Butt of Lewis - Faroe region to be generally above 10°C. The main water mass had a temperature of 8-10°C except 5° decreasing to -0.5° below 600 m. north of the Wyville-Thomson Ridge, and at the bottom 1.8° and 4.4° respectively at the two northermost stations. The stations due north of Enniberg show isotherms strongly inclined, e.g., the 4° isoline extends from 50 m. at 64°N to almost 500 m. at 62°50'N. Surface temperatures increase from 6.7° at 64°N to 9.7° at 62°55'N then decrease to 8.3° at 62° 32'N. All water below approximately 600 m. was less than 0°C. Between Svino and Flugga surface temperatures uniformly increased from 9.1 to 11.6°C. Water temperatures decreased rapidly with depth from 7° ca 300 m. to 0° at ca 700 m.

Chemistry.

Oxygen concentrations encountered ranged from 5.5 ccs. O<sub>2</sub> per litre to 7.4. On the whole oxygen concentrations in the upper 100 m. were high ca 6.4 - 6.9; generally higher at 10 or 20 m. than at the surface. Values were uniformly 6.9 - 7.4 in cold water (less than 7°), but commonly ca 6.0 associated with 8°C in the Faroe Channel.

Phosphate distribution in the Faroe Channel was average for this time of year. The section north of Enniberg, not previously completed showed very little surface depletion of phosphate, the lowest values recorded being ca 0.6 µg-at phosphate-phosphorus per litre at 0 m, 0.7 at 20 m. All concentrations at greater depths were near 1.0 - 1.2.

Plankton.

Many rich collections were taken. On the Butt of Lewis - Faroe Line; collections at the southern end were very rich in Calanus finmarchicus, giving way in the north to rich collections of Aglantha, Limacina retroversa, Beroe, and some Laodicea.

Approaching Faroe at VV20b, dense collections of phytoplankton were taken.

To the north of Faroe was a varied fauna, mainly of Tomopteris sp, Laodicea, Bougainvillia and Calanus. On the Faroe-Flugga line, very rich Calanus collections were obtained in the north. Further south towards Shetland, Euphausiids, Calanus and Aglantha were found. Worth noting was the occurrence of Salpa fusiformis in D20a.

Between Shetland - Aberdeen, fish larvae and eggs were found. One good collection containing lemon sole larvae was taken in C13c.

Trawling /

Trawling.

A number of half-hour trawls were made off Myggenaes for haddock for marking. Catches were variable, moderate to poor, the fish caught being almost exclusively haddock though some lemon sole and occasional whiting were taken. A total of 827 haddock above 28 cm. were tagged using either red or green plastic tags as before.

Efforts to evaluate the effect of a tickler chain had to be abandoned since the bottom was rough leading to the frequent breakage of shackles.

R. JOHNSON.

24th July, 1952.

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