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CRUISE REPORT

F.R.S. "SCOTIA"

10th-29th September 1960

Forty hydrographic, plankton and trawl stations were completed, the programme being somewhat hindered by bad weather.

## Hydrography.

Temperature, salinity, oxygen phosphate and silicate samples were taken in accordance with the programme. Surface temperature was about 14°C in the Eastern part of the survey and about 13°C in the Western. This is about 1°C above the mean.

Bottom temperature was as shown in figure 1. The breakdown of the thermocline has proceeded less far than usual.

## Plankton

Sampling was carried out in accordance with the programme, and the main features were: - a typical mixed water fauna from Shetland to the Pentland Firth with Calanus and Spiratella; Thysanoessa inermis to the east of this; a dearth of truly oceanic species; Sagitta setosa as far north as G15a; S. elegans abundant elsewhere. Pseumodermopsis was found N. and E. of Shetland. Oikopleura was also abundant in the N.W. of the area.

## Trawling

Herring distribution is shown in figure 2. Catches nowhere exceeded about 100 fish per 1 hour haul. Samples for racial analysis were carried out where the numbers warranted. Iarge numbers of horse mackerel (Caranx) were taken, particularly in the Moray Firth as shown in this figure.

Haddock were taken in moderate numbers. The central part of the region however was void of haddock, as shown in Figure 3. Gurnards were plentiful and had a somewhat similar distribution as shown.

Relatively oceanic species, <u>Sebastes</u> and <u>Argentina</u> were distributed in the North Western part of the region as shown in figure 4.

G. esmarkii was adequately sampled catches exceeding 3,000 per 1 hour haul on several occasions.

Nephrops was taken in large numbers in the Upper Moray Firth, berried hens being about one eighth of the catch, Elsewhere catches were very small.

Large numbers of <u>Callionymus</u> were taken at the Colgrave Sound station, the total of 223 in a haul being exceptional. These were preserved, with others from hauls in the Moray Firth and elsewhere for parasite studies.

Nine Scorpaena were taken in El5d. One Zeugopterus punctatus and one variegated sole were taken in Dl9a.

R. E. CRAIG

20th October, 1960.

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