

IN CONFIDENCE - Not to be quoted without reference to the laboratory

FRV EXPLORER

CRUISE 11/78

REPORT

17 October - 8 November 1978

Objectives

To undertake a North Sea pre-recruit demersal fish survey.

Narrative

EXPLORER was due to sail on Tuesday 17 October but a fault with the scientific deep freeze caused the ship's departure to be delayed until 1700 hours on Wednesday 18. On Wednesday evening work started off the Aberdeenshire coast and then the ship proceeded to work eastwards. Forecasts of severe NW winds caused EXPLORER to seek shelter in the Moray Firth where all available stations were worked. A slight moderation in the gales was sufficient to allow EXPLORER to leave the Moray Firth and work the off-shore stations. Although conditions were not good trawling continued until EXPLORER docked at Lerwick on Friday 27 October. The ship sailed again on Saturday 28 and, taking advantage of good weather, trawling continued to the north of the Shetlands and then towards the Norwegian coast. On Wednesday 1 November south-westerly gales forced EXPLORER to go to anchor in Inganess Bay. However, weather conditions quickly improved and EXPLORER was able to return to the Norwegian zone and complete all stations in the Ling Bank area. Finally EXPLORER trawled at stations off the Aberdeenshire coast and then docked at 1730 on 7 November.

During the cruise a total of 55 stations were worked, a total only obtained through a combination of moderate weather conditions and close co-operation by the officers and crew of EXPLORER.

Results

Trawling. During the cruise a wide coverage of the northern North Sea was obtained and good yields of haddock and whiting were obtained. These results have been expressed as numbers per 10 hours fishing for each sampling area and are tabulated in Table 1.

A large number of cod, haddock, whiting, saithe and plaice were deep frozen and returned to the laboratory in order to investigate their round-weight/gutted weight relationship.

Parasitology

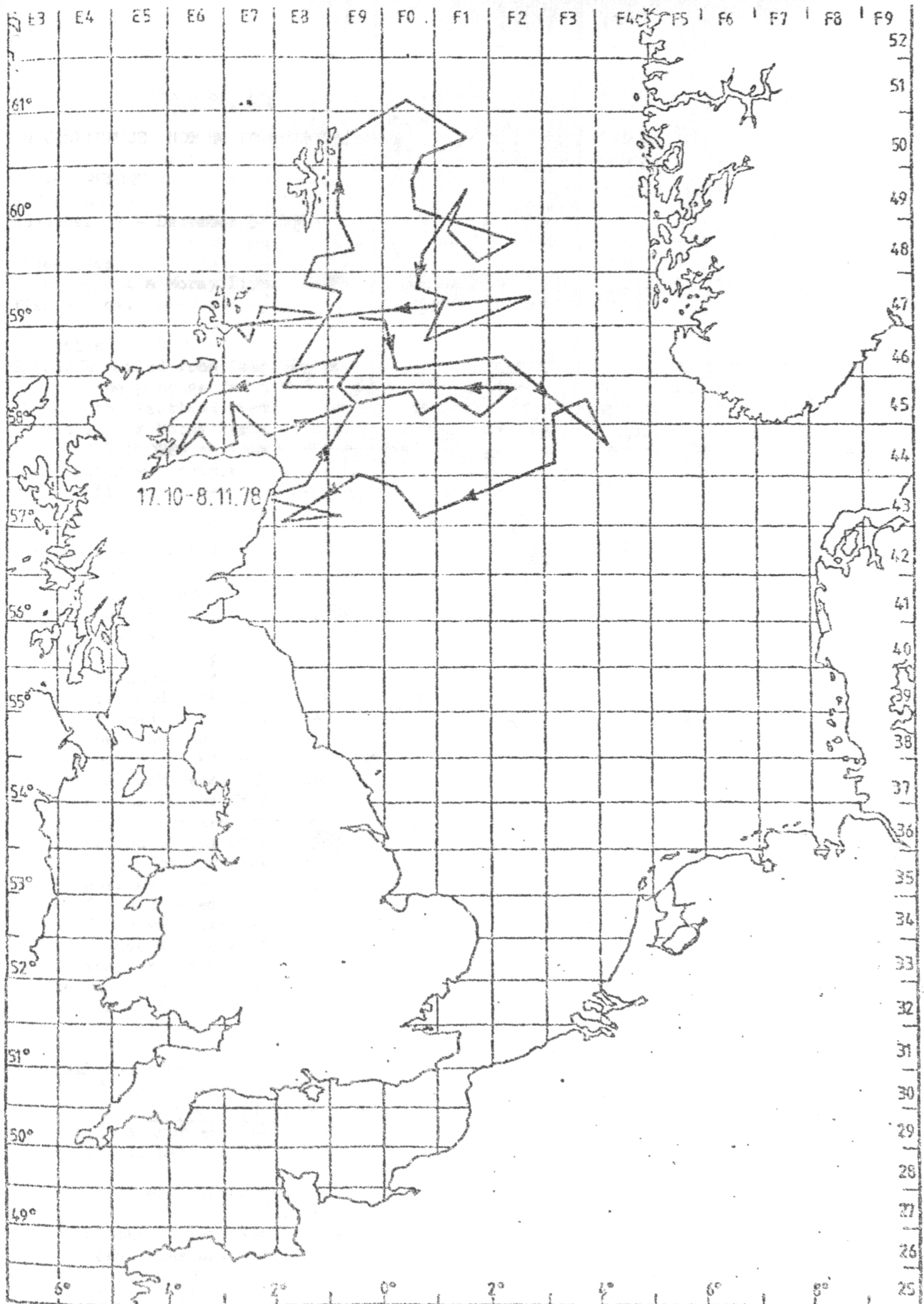
1. Samples of kidney were taken from 2657 measured haddock from all stations and examined microscopically for Ichthyophonous infection. Thirty five whiting, 12 cod and 79 plaice were similarly sampled with additional samples of these species and pout preserved or frozen for future laboratory examination. Gel diffusion antibody tests were carried out on the blood serum of 75 haddock using fungal antigen from both plaice and haddock.

2. Studies on larval Anisakis in whiting. A batch of 40 whiting was gutted on capture, the viscera and flesh of individual fish being preserved separately by deep freezing. Further batches of 40 fish were gutted at 12 hours and 32 hours after capture, stored on ice, and treated similarly. The material will be examined subsequently for larval Anisakis by pepsin - HCl digest to investigate if post-mortem migration of larvae from the viscera to the flesh has occurred.

3. Samples of whiting, mackerel and squid from various stations were deep-frozen for subsequent examination for larval nematodes.

A W NEWTON
19 March 1979

Seen in draft: J W Gillon



Explorer 17.10-8.11.78. 11EP78