

R1/4

In Confidence - Not to be quoted without reference to the Laboratory

FRV 'Explorer' (R/V 10)
Cruise 5/81

REPORT

5ER81

JLM

4 - 24 June 1981

Objectives: 1. International O-group Gadoid Survey in the North Sea

2. Capture of live whiting for aquarium experiments

General

'Explorer' sailed from Aberdeen at 1630 on June 4 and commenced trawling on the morning of June 5. Work continued without any serious interruptions until June 10, when a northerly gale prevented trawling for some 36 hours. The survey was resumed at noon of June 11, east of the Shetlands, but was again interrupted by bad weather on June 13, when half a days work was lost because of strong winds. On the afternoon of June 14, when 'Explorer' was working west of the Orkneys, an air pump in the engine room failed, and the ship was forced to proceed at slow speed to Kirkwall for repairs. 'Explorer' reached Kirkwall at 1000 on June 15 and remained in harbour until 0630 on June 17. During this period the necessary repairs were completed in the engine room and spare netzsonde equipment was received from Aberdeen. Trawling was resumed north of the Orkneys in the afternoon of June 16 and continued uninterrupted until June 22, when 18 hours were given over to handling for whiting in the Moray Firth. The remaining three Moray Firth trawling stations were completed on June 23 and 'Explorer' proceeded to Aberdeen where she docked at 2030 hours.

Results

1) Trawling

Of the 60 trawling stations planned in the programme, 53 were completed.

a) O-group gadoids

The most outstanding feature of the results was the large number of cod taken throughout the cruise. The main area of abundance was to the east of the Shetlands, where catches of 1000 individuals were made on eight occasions. Over the rest of the survey area cod were less abundant, but widely distributed. Haddock were also abundant; they were taken in the largest numbers east of the Shetlands, with a secondary concentration west of the Orkneys. Whiting were relatively scarce in the North Sea, and these fish were mostly found within 50 miles of the eastern coastline of the Scottish mainland and the Northern Isles. However, the highest catch rates of whiting were in the two statistical rectangles off the north coast of Scotland. Norway pout and saithe were caught mainly east of the Shetlands, the abundance of the latter species being comparatively high. Blue whiting were caught on eight occasions, east and northeast of the Shetlands.

b) Other fish species

The two non-gadoid species that occurred most frequently in the catches were sandeels (mostly O-group) and O group long rough dabs. O-group herring were caught frequently, but generally in small numbers.

c) Macroplankton

(i) Scyphomedusae: Aurelia aurita (L.), Cyanea capillata (L.) and Cyanea lamarckii (Peron and Lesner) were the species caught. Aurelia and C. lamarckii were, as in previous years, most abundant inshore with Aurelia particularly numerous in the Moray Firth. C. capillata was more widely distributed and most abundant east of Orkney and Shetland and north of 58°30'N. All three species were less abundant than in 1980, particularly C. capillata.

(ii) Other species 21 other species were recorded, notable among these were:

Ctenophora - Pleurobrachia pileus, Beroë cucumis, Bolinopsis infundibulum
(Bolinopsis was unusually abundant in 1981)

Hydromedusae - Laodicea undulata, Cosmetira pilosella, Staurophora mertensi
Eutonina indicans

Thaliacea - Salpa fusiformis (beginning to enter northern North Sea)

Euphausiacea - Meganyctiphanes norvegica, Thysanoessa inermis and
Thysanoessa raschii

2) Lining for live whiting

Although several grounds in the Moray Firth were tried, whiting were found to be very scarce with the result that only eight live fish were brought back to the Laboratory.

J Hislop
30 July 1981

Seen in draft T Henderson CO

