IN CONFIDENCE: NOT TO BE QUOTED WITHOUT REFERENCE TO THE LABORATORY

CRUISE REPORT
FRS "EXPLORER"
July 4 - August 1, 1973

OBJECTIVES:

1. To survey the abundance and distribution of 0-group gadoids in midwater in the north western North Sea.

2. To make routine observations on the organic and inorganic environments.

3. To collect meterial for studies on the food of young gadoids.

4. To bring back live 0-group fish for use in the aquarium.

NARRATIVE:

A shortage of deck crew prevented "Explorer" from sailing from Aberdeen until 2000 hrs on July 10. A week was spent working in the central part of the survey area. On July 17 a call was made at Peterhead to enable Mr Newton to attend an interview at Aberdeen. The opportunity was taken at this stage to land a number of live 0-group haddock. After Mr Newton had re-embarked "Explorer" worked northwards, making a short call for mail and water at Lerwick on July 20/21. The eastern part of the survey and the Moray Firth grounds were then worked and on July 27 a second call was made at Peterhead, where Mr Edwards and the echo-integrator equipment were put ashore. The remainder of the cruise was spent working in the southern part of the survey area. "Explorer" docked at Aberdeen at 1200 hours on July 31.

RESULTS:

Objective 1. The young gadoid survey was completed successfully. One standard tow of one hour's duration (20 mins near the sea bed, 20 mins near the thermocline and 20 mins near the surface) was made in the centre of each statistical rectangle. Periodic trouble with the Netzonde equipment meant that on some occasions it was not possible to fish very close to the sea bed, due to the risk of damage to the gear.

Young cod, haddock, saithe and Norway pout were taken mainly to the north of latitude 58°30'N and to the east of longitude 01°00'W. Whiting, however, were caught in largest numbers to the south of latitude 59°00'N and to the west of longitude 01°00'E, with a minor concentration close to the east coast of the Shetland Islands. Only one blue whiting was caught during the cruise. Young gadoids of all species were very scarce in the south-eastern part of the area surveyed.

Objective 2. At 50 stations data were collected on temperature, salinity, phosphates, nitrates and silicates and samples were taken for the estimation of chlorophyll a and carbon. Nineteen standard net and 61 Dutch Gulf III hauls were made for the plankton section.

Objective 3. Samples of young gadoids from every haul were preserved in formalin for stomach content analysis.

Objective 4. Approximately 200 live young gadoids (cod, haddock, whiting and Norway pout) were brought back to the aquarium for experimental studies.

In addition, the Aberdeen echo integrator was used during the first 2½ weeks of the cruise. The equipment functioned reliably, covering approximately 1700 nautical miles (352 ½ hour integrations). Integrator data were obtained relating to 39 trawl hauls.

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20/9/73