

R.1/6

In Confidence: Not to be quoted without reference to the Laboratory. 10CR66<sup>5</sup>

## CRUISE REPORT

F.R.S. CLUPEA

10th - 21st October 1966

Objective: Routine trawling survey for 0+1 group herring in the Moray Firth.

The survey was begun on October 10th and completed in the afternoon of October 19th. Additional trawl hauls were made during the last two days of the cruise to provide supplementary data on the 0+1 group herring concentrations.

At each station of the trawling survey temperatures and salinities were taken at surface and near bottom, and plankton samples were obtained with Gulf III hauls.

Temperatures at the surface ranged from 10.9°C to 11.8°C and at the bottom from 11.4°C to 11.9°C. The higher temperatures at the surface and bottom were obtained at the outer Firth stations. Ctenophores were generally the most abundant group in the plankton collections and they were also sometimes prominent in the small mesh catches of the trawl.

0 group herring were widely distributed over the survey area and were particularly abundant in hauls made off the Nairnshire coast where up to 6,000 of these young herring were taken in  $\frac{1}{2}$  hour tow, but some good catches were also obtained at stations off Buckie and Clythness. 1 group herring were generally scarce; the best catch was about 50 of these fish at station 12. The average length of the 0 group herring was between 9 and 10 cm and about 18 cm for the 1 group fish. Sprat catches were generally very small at stations where herring were abundant. The best catches of sprats of between 1,000 and 1,400 fish per  $\frac{1}{2}$  hour tow were taken at stations 16 and 20. The mean length of these fish was between 9 and 10 cm. Apart from herring and sprats good catches of young whiting were also obtained and these fish were widely distributed over the survey area.

A  $6\frac{1}{2}$  ft porbeagle shark was taken in the trawl at one station worked off Nairn. This fish was sent to the laboratory at Aberdeen for detailed examination.

I.G. BAXTER  
G. McPHERSON

2nd November 1966