

R1/6

In Confidence—Not to be quoted without prior reference to the Laboratory

FRV 'Clupea'

Cruise Report

12CR82

Cruise 12/82

30 November - 17 December 1982

### Objectives

To investigate the distribution of young herring in inshore areas to the west of Scotland.

### Narrative

Personnel joined 'Clupea' on the night of 30 November but 'Clupea' did not leave Troon until 2130 the following day because of a contractors visit. After rounding the Mull of Kintyre 'Clupea' completed one trawl haul in Loch Caolisport on the west coast of Kintyre, and another in Loch Buie on the south coast of Mull. On 3 December 'Clupea' shot the trawl at the mouth of Loch Feochan but the gear came fast and eventually a warp had to be cut with the loss of one door. The same day two further stations were completed in the area of Lismore, before 'Clupea' returned to Oban for the weekend break.

On 6 December 'Clupea' left Oban, completed one trawl haul in Ardmuchnish Bay north of Oban, and then steamed through the sound of Mull. 'Clupea' anchored for the night in Loch Scridain, completed a trawl haul there the following morning, but then had to steam back to Tobermory because of very severe weather conditions. The weather had ameliorated by the following morning however, and 'Clupea' was able to leave Tobermory and steam round Ardnamurchan Point. Between then, and 10 December 'Clupea' completed four trawl hauls in the area north of Skye and another in Loch Eynort in South Uist, before making for Ullapool for the weekend.

'Clupea' left Ullapool again at midnight on Sunday 12 December and recrossed the Minch to Loch Seaforth. Between the morning of 13 December and mid-day on 15 December, 'Clupea' carried out trawl hauls at the Shiants, at Loch Claidh, Loch Seaforth, Loch Shell, Loch Erisort and Loch Grimsheader and also in Broad Bay and at Tolsta. 'Clupea' then headed through the Pentland Firth, arriving in Aberdeen at approximately 1600 on 16 December at the end of the cruise.

### Results

#### Trawling

19 successful trawl hauls were completed during this survey, all of these in daylight. Catches of up to 18 baskets of juvenile (mainly 0-group) herring were taken in one hour trawls, and these herring were most numerous in bottom depths between 7 and 25 fathoms. Few 0-group or 1-group herring were taken at bottom depths greater than 30 fathoms. 0-group herring ranged in length from 8-17 cm and showed a high degree of variability in modal length. Adult herring were also caught in three of the hauls namely at Tolsta, Loch Buie, and at Loch Vatten. Main by-catches on this survey were sprats, *T. esmarkii*, haddock, whiting and dogfish.

Herring within the length range 8- 1 cm were weighed at 5 per  $\frac{1}{2}$  cm using the Mettler PC 8000 electronic balance, connected to the Commodore Pet 32K microcomputer. The smaller fish in this range had very low individual weights and the computed weights showed considerable variability. This was however reduced as the individual weights of the fish increased, and at 10 gms the variability was reduced to about 3-4%, which was considered to be quite acceptable. All weighings were carried out in good sea state conditions, at anchor or tied up alongside.

0-group and 1-group herring were collected from each of 3 areas:- Kintyre/Mull, South Skye/South Uist, and Lewis/Harris, at 10 per cm, and preserved in 70% alcohol for parasitological examination.

J Morrison  
29 June 1983

Seen in draft G Geddes