

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

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3CR79

FRV 'Clupea'

Cruise 3/79

REPORT

20 March - 11 April 1979

Objectives:

1. To obtain samples of herring from the Clyde Sea area.
2. To carry out herring larval surveys on Ballantrae Bank and over the lower Clyde area.
3. To collect herring gonads for rearing and histological studies.
4. To test the depth flowmeter being developed by the Laboratory.

Narrative:

Scientific staff joined 'Clupea' in Troon at 1630 on 20 March but sailing was delayed until 0630 on 22 March because of bad weather. During the remainder of the week 3 trawl hauls and a partial survey of Ballantrae Bank were carried out, before 'Clupea' returned to Troon for the weekend. 'Clupea' left Troon at 0700 on 26 March and headed for Ballantrae Bank where two trawl hauls were made. 'Clupea' then returned to Troon where herring gonads were landed for transport back to Aberdeen. During the rest of the week herring larval surveys were carried out over Ballantrae Bank and over much of the lower Clyde area. On 28 March during heavy weather the plankton wire became snagged and broke thereby restricting plankton work during the remainder of the week. After the weekend no work was possible on Monday 2 April because of bad weather and the need for repairs on the plankton wire. During the rest of the week two herring larval surveys of Ballantrae Bank and one partial survey of the lower Clyde area were carried out. In addition 4 trawl hauls were made in areas between Ballantrae Bank and Kilbrannan Sound. 'Clupea' docked in Troon at 1400 on 6 April where scientific staff left the ship.

Results:

Trawling

During the cruise a total of 13 hauls were made using a nylon wing trawl 600 HP (BT116) fitted with a 38mm cod end. Catches were generally small varying between one and eight baskets. In five of the hauls catches of more than 1 basket of herring were made. During the whole cruise a total of 3283 herring were caught of which 685 were examined for meristic characters with a further 177 being sampled for age. The majority of all herring caught on the cruise were in spawning condition, except in two hauls, south of Arran and west of Ailsa Craig which were composed of large recovering spent herring. Apart from herring the trawl hauls contained sprats, also in spawning condition, and small whiting.

### Larval surveys

During the cruise a total of 130 plankton samples were taken but in none of these did examination at the time of sampling indicate that herring larvae were present. Since spawning herring were present in trawl samples throughout the period of the cruise it is likely that the peak of larval hatching did not occur until after the end of the cruise.

### Collection of herring gonads

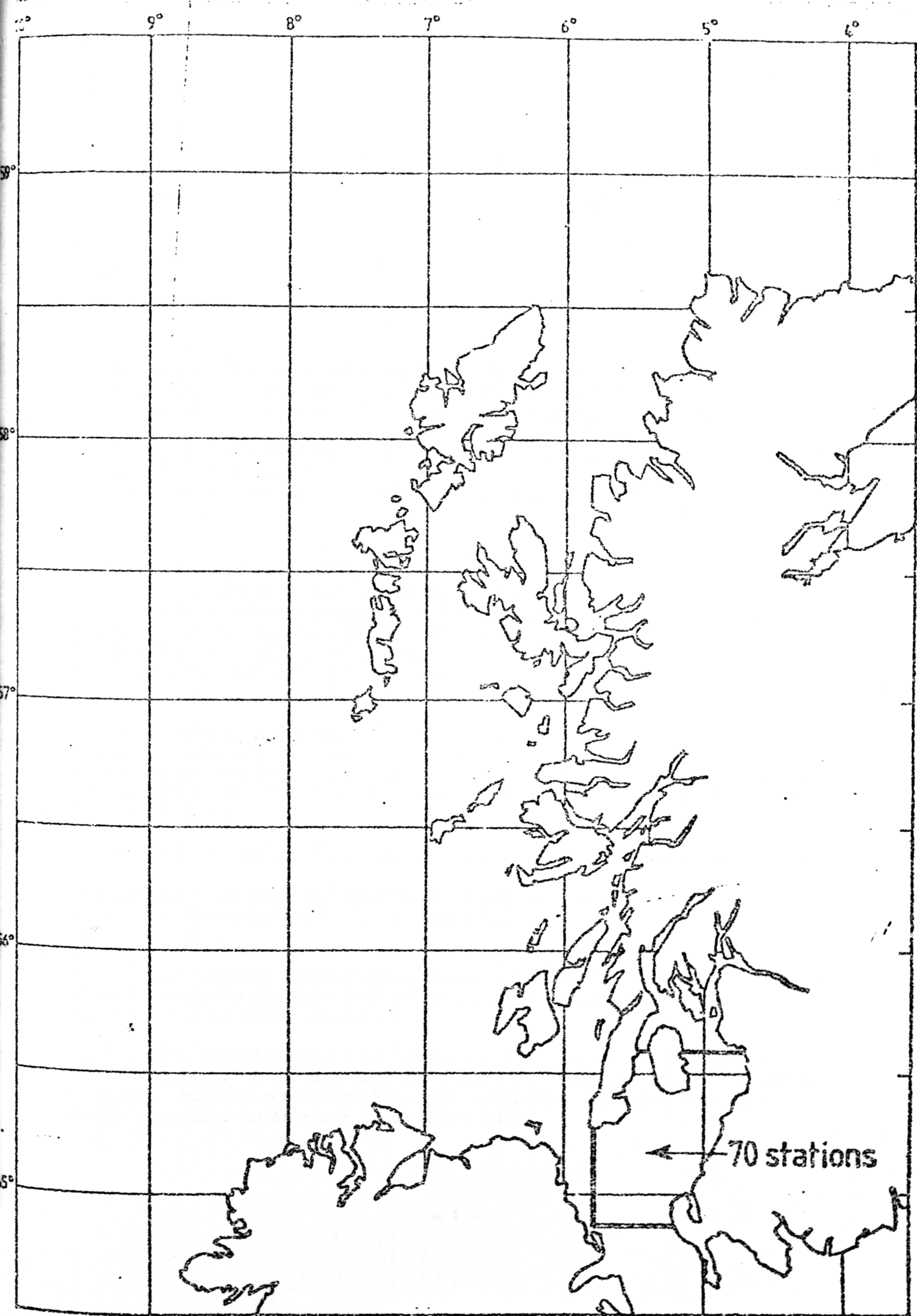
During the cruise approximately 100 herring gonads were collected for herring rearing experiments. Attempts to collect gonads in the latter stages of maturation for histological purposes were largely unsuccessful because maturation had proceeded too far to allow the gonads to be handled.

### Trials on depth flowmeter

The trials of the laboratory's depth flowmeter were unsuccessful because of a discontinuity in the electrical conductors within the cable.

David W McKay  
30 04 79

Seen in draft: G Geddes



FRV. Clupea 20 / 3 — 11 / 4 / 79

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