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6CR88

FRV "Clupea"
Cruise 6/88

REPORT

4-19 July 1988

Personnel

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Objectives

1. To carry out an echointegrator survey of the Firth of Clyde.
2. To sample echotraces.

Narrative

The scientists joined "Clupea" in Buckie at 1200 on 4 July. Due to problems with the scientific electronic equipment, sailing was delayed until 0300 (high tide) the following morning. During passage to the Clyde water samples for radio caesium monitoring were collected at 3 stations on 5 July and the acoustic equipment was calibrated in Tobermory Bay the following day. The Clyde was reached at 0400 on 7 July but the start of the acoustic survey was delayed until 1430 due to equipment difficulties. "Clupea" docked in Troon at 1630 the same day, where a replacement aerial for the scientific shipmate navigator was picked up.

During the following 4 day period, an acoustic survey grid covering most of the Clyde was completed and 9 trawl hauls were made to identify echotraces. The survey track and trawl locations are given in Fig.1. "Clupea" docked in Troon for the half landing at 2000 on 11 July.

In the second half of the cruise, acoustic coverage of the remainder of the survey area was completed, most 5 mile rectangles were surveyed a second time and a further 12 trawl hauls were made. The survey track and trawl positions are given in Fig. 2. A second calibration of the acoustic equipment was carried out on the evening of 16 July in Lamlash Bay. "Clupea" docked in Greenock at 1530 on 18 July and the scientists departed at 1730.

Results

Twenty one trawl hauls were made during the course of the survey. The species composition for all hauls combined was:

	<u>Weight</u>	<u>Percentage</u>
Herring	1,132	52.1
Sprat	780	35.9
Mackerel	3	0.1
Gadoids	2	0.1
Other fish	14	0.6
Jellyfish	244	11.2
Total	<u>2,175</u>	<u>100.0</u>

In contrast to last year small herring (<20 cms) were extremely scarce in the catches:

	<u>% by weight</u>	<u>% by number</u>
1987	17.5	54.1
1988	0.6	8.5

The year classes which had dominated the catches last year as 1 ringed fish continued, however, to do so this year as 2 ringers (modal size 22-24 cms). Herring of this age group were abundant over much of the survey area. Amongst adult herring sampled for maturity 66% were filling while 34% were still in recovering spent condition. The proportion of filling herring was slightly lower than the historical average for July for the period 1975-1986 but higher than the abnormally low value of 46% encountered in 1987.

M Walsh

24 August 1988

Seen in draft: W Smith

Figure 1. Cruise track and trawl positions - Clyde herring acoustic survey
C6/88 Part 2 13-18 July

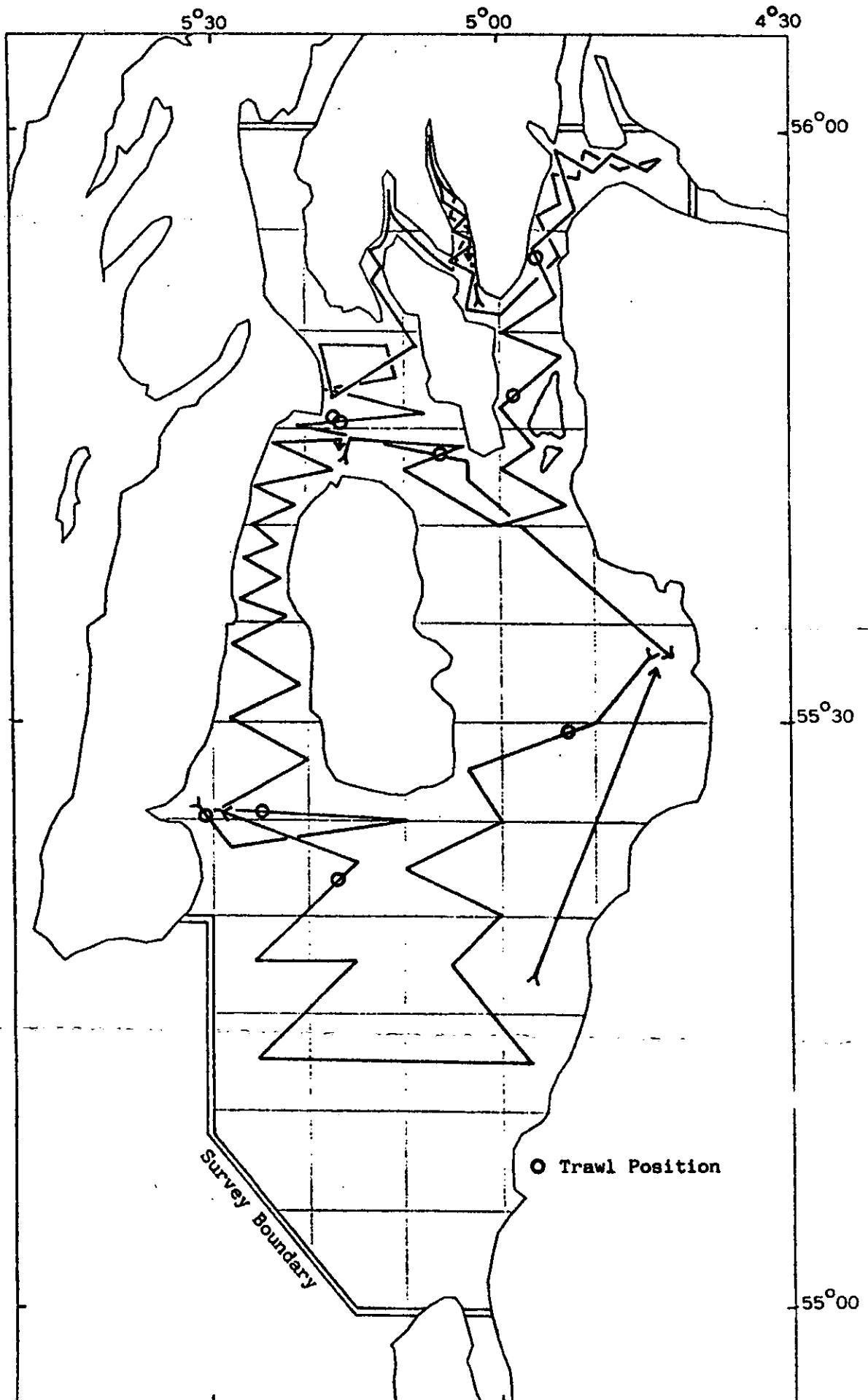


Figure 2. Cruise track and trawl position - Clyde herring acoustic survey
C6/88 Part 1 7-11 July

