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IN CONFIDENCE: Not to be quoted without reference to the Laboratory

CRUISE REPORT

FRS 'CLUPEA'

31 AUGUST-23 SEPTEMBER 1970

## **OBJECTIVES**

To carry out a herring larval and hydrographic survey off the Scottish east coast.

## NARRATIVE

The scientific staff joined 'Clupea' at Buckie and the survey was begun on 31 August. After only a few stations it was apparent that the metre block for the hydrographic wire was not functioning properly, making it difficult to carry out the hydrographic work. It was therefore decided to do no more hydrographic work until repairs could be carried out to the block. During the remainder of the week only a limited amount of the first coverage of the grid was possible due to bad weather; for the whole week 48 stations were done. 'Clupea' docked at Aberdeen for the weekend at 1400 on Friday 4 September, and the hydrographic block was repaired.

'Clupea' sailed from Aberdeen at 1630 on Monday 7 September and completed some stations in the southern part of the Grid but bad weather again curtailed operations and a day was spent in Leith where repairs to the radio were carried out. 'Clupea' sailed from Leith at 1200 on Thursday 10 September and did inshore stations north to Rattray Head where the radar broke down, and it was decided to head for Buckie to have it repaired. 'Clupea' docked at Buckie at 0830 on Friday 11 September.

'Clupea' sailed from Buckie on the morning tide of Monday 14 September and made directly for the most easterly stations which had been omitted due to bad weather earlier in the cruise. Good progress was made until early Thursday morning, 68 stations having been completed in this time; the weather then deteriorated and 'Clupea' headed for the shelter of Aberdeen. The scientific staff and crew remained in readiness until Thursday night when it was decided not to proceed to sea on Friday as winds were still high and a gale was forecast.

During the last half week of the cruise the remaining stations plus some additional stations in the Moray Firth were completed. 'Clupea' docked in Buckie early on the morning of Wednesday 23 September. RESULTS

The Grid as a whole was only completed once during the cruise but some areas, notably the Moray Firth and Longstone areas, were done two or three times. No large concentrations of larvae were found although patches of limited distribution were found off Rattray Head and in the Longstone area.

size

David W McKay M Walsh 14 October 1970