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CRUISE REPORT

FRS "CLUPEA"

25 November - 19 December 1969

|            |             |                           |
|------------|-------------|---------------------------|
| PERSONNEL: | C J Chapman | 25 November - 6 December  |
|            | A D Hawkins | 8 December - 18 December  |
|            | A Ranachan  | 25 November - 19 December |

OBJECTIVES

Assessment of the effects of ship and gear noise upon schools of herring using the Simrad Sonar. The schools to be sampled by pelagic trawl.

GENERAL

"Clupea" left Buckie on the night of 25 November and made passage through the Fentland Firth to Stornoway. During the first part of the cruise "Clupea" was restricted to working in the vicinity of Stornoway to enable repairs to be carried out on the Simrad Sonar. Mr Taylor and Mr Chapman left the ship at Stornoway on the 5 and 6 December, respectively, and Dr Hawkins embarked on the 8th. During the second part of the cruise "Clupea" operated on the west side of the Minch from Stornoway to Loch Eport, off the North West Coast of Skye, and on the East side of the Minch (off Rubh Me).

Mr MacLennan and Dr Langham joined the ship for one day, 12 December. "Clupea" berthed at Buckie at the end of the cruise on the 19 December.

SONAR OBSERVATIONS

On arrival in the Minch the Simrad Sonar developed mechanical faults and much time was spent in effecting repairs. Additional faults later developed (in the auto-scanning system) necessitating repairs by the Simrad agent in Stornoway.

The sonar operated satisfactorily during the second part of the cruise. However, though extensive searching was carried out over a wide area few schools were encountered. An extensive inshore fishery for herring was in progress, particularly in the sea lochs on the east side of the Minch, from Ring Net and Fair Trawl vessels, but the herring were concentrated in areas where "Clupea" was unable to operate. Despite the small number of sonar contacts much useful experience was gained in using the Simrad Sonar.

PELAGIC TRAWLING

Great difficulty was experienced in handling the pelagic trawl at the beginning of the cruise, the main difficulty being a tendency for the doors to cross while the gear was being shot. These difficulties were entirely overcome during the second part of the cruise, and a series of detailed measurements were made on the depth of the net at different warp lengths and ship speeds.

The netzonde system worked well, and no difficulties were experienced in handling the cored warp using the slip-ring winch. However, the warp available was rather heavy and may have distorted the geometry of the gear.

Great use was made of the ship's echosounder during pelagic trawling to compare traces recorded from the ship with those subsequently detected using the headline transducer.

The catches obtained were very small, and consisted mostly of whiting. These catches were obtained at night from discrete mid-water traces. However, at no time were large concentrations of herring recorded during the fishing operations. Comparison of those traces obtained on the ship's echo sounder with those obtained on the netzonde indicated that fish were passing below the net. These echo traces are still being analysed.

A D HAWKINS  
C J CHAPMAN  
17 April 1970