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In confidence: Not to be quoted without reference
to the Laboratory.

CRUISE REPORT

FRS 'CLUPEA'

11-30 August 1969

OBJECTIVE

To sample concentrations of spawning herring in the north-western North Sea.

Because of delays in refitting the stern gantry, 'Clupea' did not sail from Buckie until the afternoon of 12 August. The ship then sailed for the Shetland area, taking plankton samples for SMBA, Edinburgh, en route. The remainder of that week was spent doing a sonar search for suitable mid-water traces, and pelagic trawling on them, on grounds between Fetlar and Sandwick Bay.

Pelagic trawling was continued on the first two days of the following week in the Sandwick Bay - Mousa area. It was then decided to change over to bottom trawling and the 'Clupea', after calling at Lerwick to change doors, steamed to the west of Orkney. Two bottom trawl hauls were done in this area before strong north-westerly winds and a heavy swell made it necessary to shift to grounds to the east of Orkney. Two trawl hauls were done in this area.

From the beginning of the cruise it had been apparent that the after trawl winch was hauling appreciably slower than the forward one and this difference was gradually increasing. This was reported to the Engineer Superintendent who ordered the ship to Aberdeen for inspection of the winches. 'Clupea' docked there on 23 August and the last week of the cruise was spent in repairing the trawl winches.

TRAWLING

The mid-water trawl was shot on ten occasions on grounds between Fetlar and Sumburgh. Initially there was some difficulty with lack of balance between the two boards at speeds in excess of $2\frac{1}{2}$ knots and with the head-line transducer tearing out the fishing square. The first problem was eventually solved by adjusting the weighting of the doors but the second - which arose from the difficulty of shooting and hauling the heavy transducer cable at the same speed as the trawl warps - continued to cause some trouble throughout. At $2\frac{1}{2}$ knots the warp-depth ratio for this net was 4.25 and the vertical gape of the net was about 4 fathoms.

Only 35 herring were taken in the pelagic trawl hauls and none of these were in spawning condition. In several hauls considerable quantities - up to 5 baskets - of haddock, whiting and dogfish were caught.

No herring were taken in any of the 4 bottom trawl hauls carried out. In one haul between Sule Skerry and Orkney 15 baskets of haddock, whiting and small lemon sole were caught, and in one haul off Copinsay 35 baskets of haddock and whiting were taken.

A SAVILLE
6 April 1970