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## CRUISE REPORT

FRV "CLUPEA"

17 - 29 August 1970

## OBJECTIVES:

- 1 To sample concentrations of spawning herring in the north-western North Sea.
- 2 To carry out a limited herring larval survey.

## NARRATIVE:

Sailing was delayed until the morning of the 18th by adverse weather. "Clupea" then proceeded to the area off Findochty where a herring fishery had taken place in the previous week. Only small traces were observed in this area and the pelagic trawl was shot on these. Due to a defect in the headline transducer it is not known if the trawl was fishing at the depth of these traces but the catch consisted of only 1 basket of small sandeels and sprats. "Clupea" then went towards the Clythness area doing plankton hauls for herring larvae en route. Although a thorough sonar search was made of the Clythness grounds no herring traces were found and it was decided to continue north to the Sandwich Bay area. In this area fairly heavy traces were observed extending from the bottom to about 12 fathoms off it. The pelagic trawl was shot but because the length of transducer cable was inadequate the trawl could only be got to the depth of the traces by reducing the towing speed below 2 knots. Two hauls were done in this area without catching any fish or seeing any on the headline transducer recording.

It was decided that, at the depth of these traces, pelagic trawling was ineffective and "Clupea" then proceeded to Pappa Bank carrying out plankton hauls at 15 mile intervals en route. Over Pappa Bank the attachment from the cored cable to the Gulf III broke and the sampler was lost. As this break in the cable obviated any possibility of pelagic trawling with depth control of the net it was decided to anchor at Orkney and change over to bottom trawling gear. After the change over had been completed "Clupea" carried out a sonar search off the north-east coast of Orkney. Heavy traces were found on the bottom 4-5 miles east of Start Point and the trawl was shot on these. By the time the trawl was in the block most of these traces had left the bottom and this haul yielded only a small sample of spawning herring. "Clupea" then proceeded to Kirkwall for the weekend break.

On the following Monday "Clupea" returned to the Start Point grounds. Traces in that area were by then much lighter and two trawl hauls gave only small quantities of ripe herring. A sonar search and plankton sampling were then carried out to a position east of Auskerry where herring had been reported. Two hauls in this area on small bottom traces gave small quantities of herring but few of these were in spawning condition. "Clupea" then steamed southwards towards Turbot Bank. Heavy bottom traces were located about 38 miles east of Wick and the trawl was shot on these. A 30 minute haul gave 17 baskets mostly of 0-group Norway pout together with some 0-group herring. Similar traces were seen for about 18 miles along the course towards Kinnaird Head.

Four trawl hauls were made in the Aberdeen - Turbot Bank area all of which gave only small quantities of herring and bottom traces were sparse in this area. Three further trawl hauls were done south of Montrose Bank where small quantities of clupeoids were caught but these were mainly adolescent herring and sprats. On Thursday 27 August while steaming to a trawling position off Aberdeen a radio message was received necessitating putting a seaman ashore in Aberdeen. "Clupea" sailed again, short-handed, one hour later and proceeded towards Buckie doing plankton hauls and a sonar search en route. One further trawl haul was made north of Cullen before entering Buckie harbour.

### Herring Larval Survey

Gulf III samples were taken at roughly 15 mile intervals over a wide area from Montrose Bank to Bressay. Although a full analysis of the samples taken has not yet been done preliminary inspection suggested that herring larvae were very scarce at the time of this survey, the only ones seen being in the Montrose Bank area.

### Trawling

Although no large quantities of herring were caught in any of the trawl hauls spawning herring appeared to be fairly widespread in small numbers over an area from east of Orkney to Montrose Bank. Useful samples were obtained from a number of grounds for examination of the differences between spawners on the different grounds.

In general catches of demersal fish were good, ranging from 3 to 20 baskets per hour. In the hauls made east of Orkney lemon sole at a modal size of 18 cms, together with considerable numbers of Trisopterus minutus were the most notable constituents of the catches. Over the rest of the area fished from the Skate Hole area to south of Montrose Bank haddock formed the greatest part of the catch although good quality lemon sole and plaice were also widespread in the Turbot Bank to Montrose Bank area.

0-group haddock, at a modal size of 12-14 cms, were taken in practically every haul; in small numbers north of Kinnaird Head but with catches averaging about 1200 per hours fishing in the area south of this. 0-group Norway pout, at a modal size of 6-9 cms, were also encountered over a wide area. The largest catches of these were taken in the Skate Hole area with one catch of 36,000 per hours fishing, but they were also taken, in smaller numbers, in practically every haul in the Aberdeen-Turbot Bank area. 0-group whiting were rare, the biggest catch of 140 per hour being taken north of Cullen.

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