

R1/7 In Confidence

Not to be quoted without reference to the Laboratory

11MR80
AR

FRV MARA

Cruise 11/80

REPORT

15 September - 15 October 1980

Objectives

1. To carry out a midwater trawling survey for O-group herring in inshore waters to the west of Scotland.
2. To investigate areas of abundance of juvenile herring with the Marine Laboratory echo-integrator to attempt to obtain quantitative estimates of their abundance in these areas.
3. To conduct a limited larval survey in inshore waters to the south of Mull to investigate the possibility of localised spawning in this area.

Narrative

MARA left Buckie on 15 September and proceeding through the Caledonian Canal reached Loch Linnhe by the morning of 18 September. Three trawl hauls were carried out in the Firth of Lorne area and MARA spent the night at Dunstaffnage. A pair of pelagic trawl doors that had been on loan to SMBA, Oban were taken aboard at this time and rigged to replace the existing ones aboard MARA which had been giving some problems. Two further trawl stations were then completed in the Firth of Lorne on the next day before MARA tied up at Oban for the weekend. MARA left Oban on the morning of 22 September, and completed the larval survey and six trawl stations to the south and west of Mull over the period 22-24 September. The night of 24 September was spent at Tobermory and the following day MARA proceeded round Ardnamurchan Point and made for Mallaig having completed another three trawl stations en route in steadily worsening weather. On 26 Sept., MARA remained in port because gale force winds made it inadvisable to make for Kyle, and as the weather continued to be severe MARA remained at Mallaig over the weekend. By Monday mid-day the weather had moderated slightly and MARA proceeded through the Sound of Sleat to Kyle. On 30 September despite continuing bad forecasts there was some reduction in the wind speed, and MARA made for Stornoway, completing one trawl station in Applecross Bay in passage. MARA arrived in Stornoway that night but the weather again worsened and no work was possible on the following day. On the morning of 2 October, scientists and crew left Stornoway to travel home for the long weekend, returning on 7 October. MARA was however again stormbound in Stornoway on 8 and 9 October, but finally managed to cross the Minch and make for Ullapool on Friday 10 October. MARA left Ullapool on Sunday 12 October and made for Gairloch where six more trawl hauls were completed before the trip terminated at Gairloch on the night of 14 October.

Results

1. Trawling. From 26 September until the end of the cruise progress was seriously hampered because of extremely severe weather and as a result only 21 trawl stations in all were completed in addition to the larval survey. Trawl catch rates on this survey were extremely poor and herring were only taken in one haul. This haul was in Loch Linnhe, and all herring taken were O-group

in the range 6-10cm. Small numbers of sprats, small whiting (9-10cm) and horse mackerel (<6cm) were also taken on several occasions on this survey. This trawling survey has now been terminated because the demise of FRV MARA means that indices derived from the mean number of 0-group herring caught per trawl station with that vessel would not necessarily be comparable with indices derived from the catches of an other vessel carrying out the same survey.

2. Echo-integration. Since no significant concentrations of juvenile herring were encountered on this survey, echo-integration was not employed.

3. Larval Survey. Preliminary examination of the samples from the larval grid to the south and south-west of Mull did not show any major concentrations of larvae. However, the samples still await detailed examination.

J A Morrison
13 February 1981

Seen in draft: James A Calder