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Charter Vessel "Ardent" (LK 472)

REPORT

13 February-3 March 1989

Personnel

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Objectives

1. To identify spawning grounds of the lesser sandeel Ammodytes marinus to the south and west of Shetland.
2. To collect biological data on Ammodytes marinus.

Narrative

Scientific staff joined "Ardent" at Fraserburgh at 1000 on 13 February. Due to severe weather, sailing was delayed till 0800 on 16 February when "Ardent" proceeded north to Shetland waters. During 17-27 February sampling was carried out in the Shetland area and during 28 February-3 March at Orkney. Continuing storm and gale force winds restricted sampling to inshore sheltered areas. To compensate for time lost due to weather conditions, the cruise was extended to 3 March when "Ardent" returned to Fraserburgh.

Results

A total of 124 grab samples were collected from a variety of types of bottom substrate spread over 20 sampling locations. Sandeel eggs were found at four locations (see chart) on substrates ranging from coarse shell to very fine sand. The numbers of eggs present per grab sample were few (6-20) and no large clumps or mats of eggs were observed.

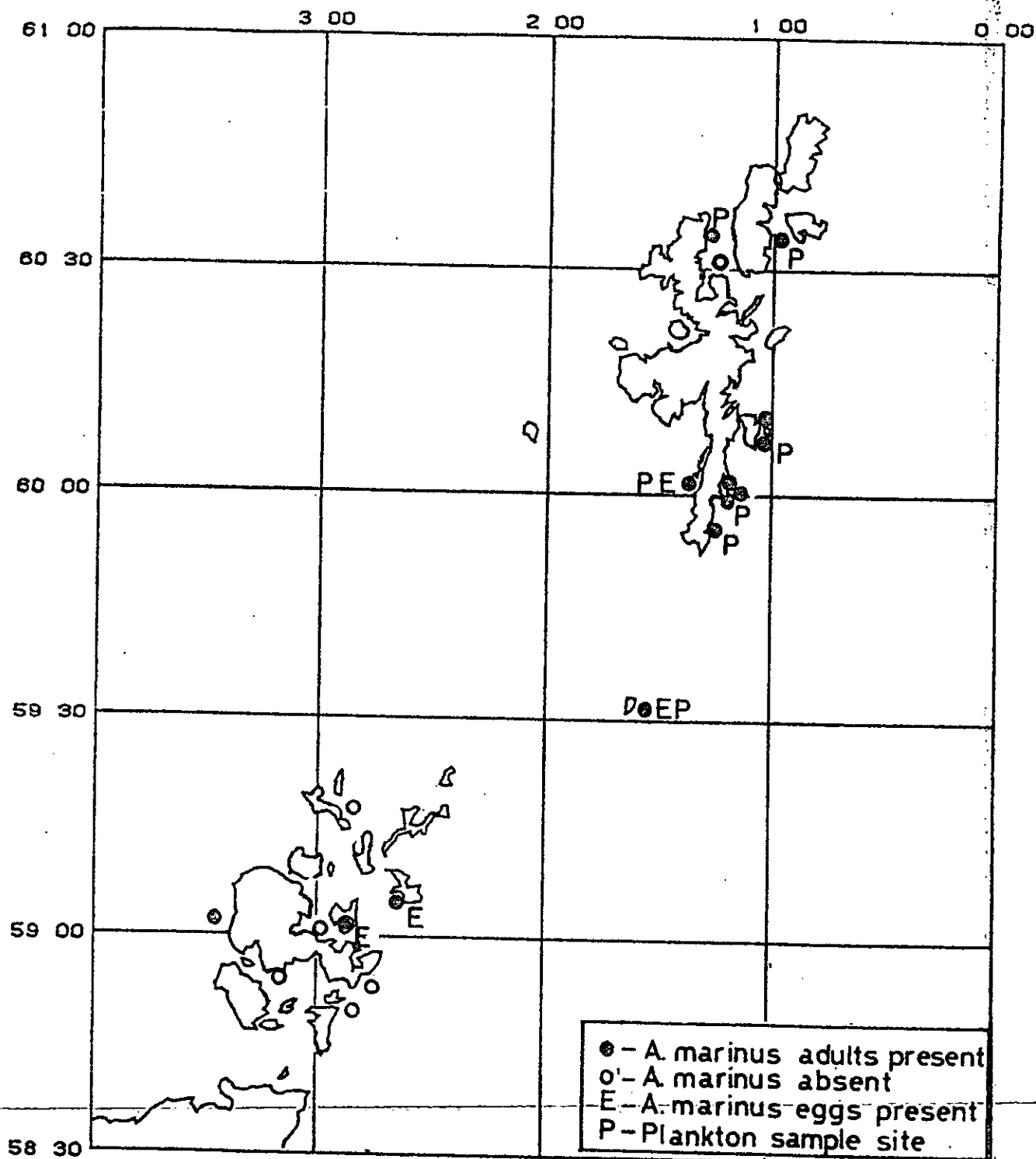
Samples of adult sandeels were collected at 13 locations (see chart) using a sandeel trawl and/or dredge. Examination of gonad condition showed all fish to be either immature or recovering (maturity stages 1 or 2) except for 2 fish (one female and one male) which had well developed gonads (maturity stage 4).

Samples of plankton were collected at 7 locations at Shetland using a one metre net of 250 µm mesh towed vertically through the water column (see chart). Stomachs of A. marinus were collected at 6 locations at Shetland. Both plankton and stomach samples were returned to the Laboratory for analysis.

Few adult sandeels were caught, the numbers ranging from 36-516 per 30 min trawl haul and from 2-32 per 15 min dredge haul. Numbers of H. lanceolatus and G. semisquamatus were present in all trawl and most dredge hauls. No marks of sandeels were observed on the vessel's colour echo-sounder. Examination of the stomach contents of 16 fish species taken in the trawl showed few fish to have been feeding on A. marinus.

J A Gauld

4 April 1989



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