

R1/6

IN CONFIDENCE: Not to be quoted without prior reference to the laboratory

FRV CLUPEA
Cruise 8/83
REPORT
11-30 August 1983

BCR83
AG

Objective

To carry out an intensive survey of fishing grounds around Shetland to determine the distribution of the sandeel, Ammodytes marinus.

Gear - Marine Laboratory Sandeel Bobbin Trawl (BT 153).

Narrative

FRV CLUPEA sailed north from Buckie at 1500 hours on 11 08 83 to the Shetland area where work commenced the following morning. The eastern side of Shetland was surveyed during the first week of the cruise, the vessel thereafter covered the western area and down to Fair Isle and southwards via the east coast of Orkney to return to Buckie at 1730 hours on 30 08 83.

During the survey inshore areas known to support populations of sandeels were fished and the length and age distributions of sandeels were determined for each area. These data were compared directly with samples obtained from commercial vessels landing at Lerwick and Scalloway. Exploratory fishing was carried out on unexploited inshore grounds at Shetland and at Orkney and also on offshore grounds around Shetland. The vessel's echo-sounder was run continuously to identify workable areas of sandy bottom which may have supported populations of sandeels.

Comparative hauls following a 10-day interval were made on one ground (South Sands) whilst at Boddam Voe on 26 09 five hauls were made over the same track at different times of the tidal cycle.

To establish accurate weight at length relationships mean live weight data were collected for A. marinus, G. semisquamatus and H. lanceolatus from around the Shetland coast.

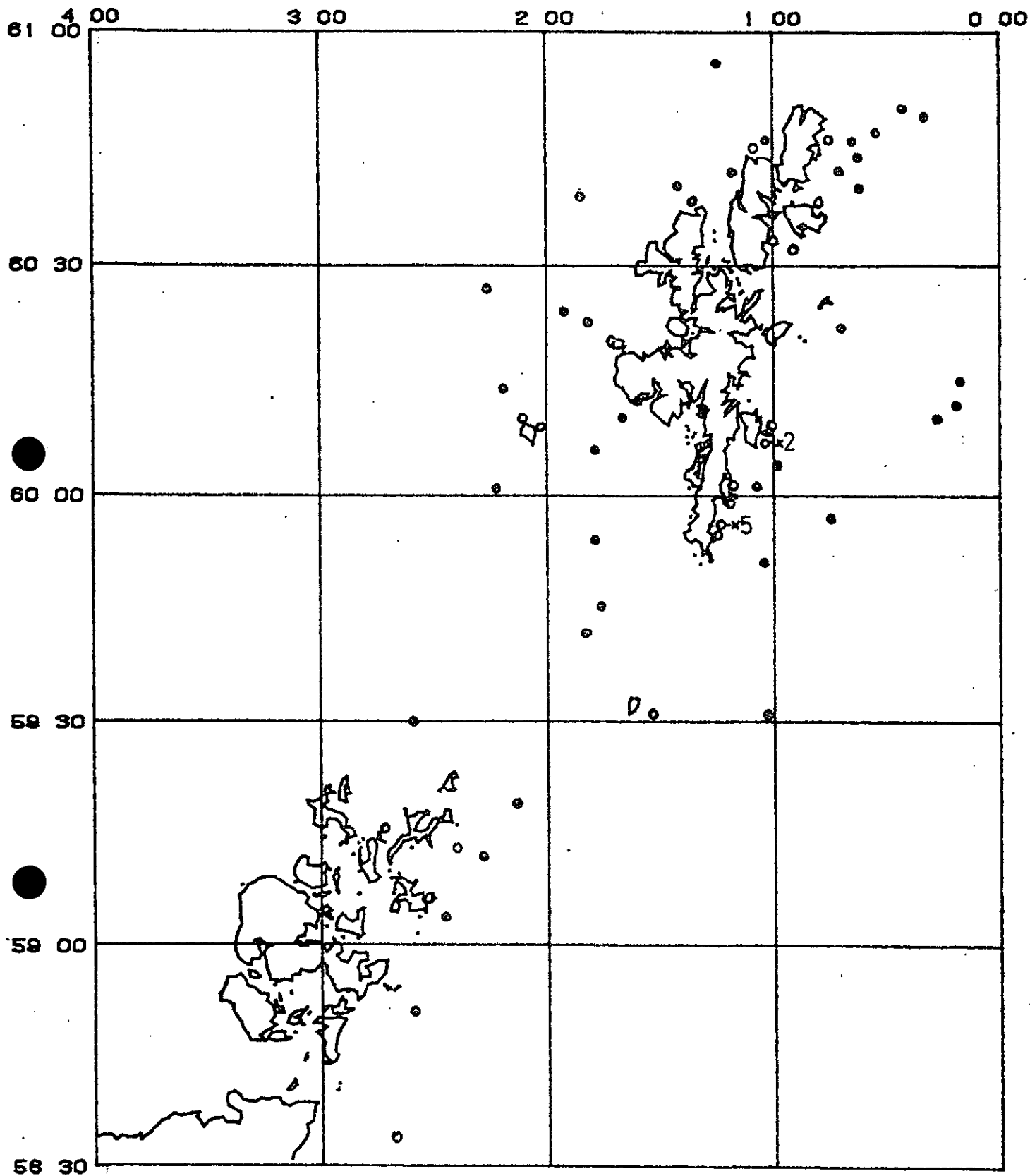
Stomachs of up to 10 fish for all species caught per haul were examined for the presence of sandeels. Stomachs of A. marinus were collected for later identification of prey species in relation to fish size and to time of day.

All trawl hauls in which sandeels were taken were accompanied with a vertical plankton haul using a 1m net of 250µ mesh. Additional plankton hauls were taken at selected positions throughout the survey area.

Samples of bottom sediment for particle size analysis were collected using a Van Veen grab on inshore grounds bearing sandeels.

Results

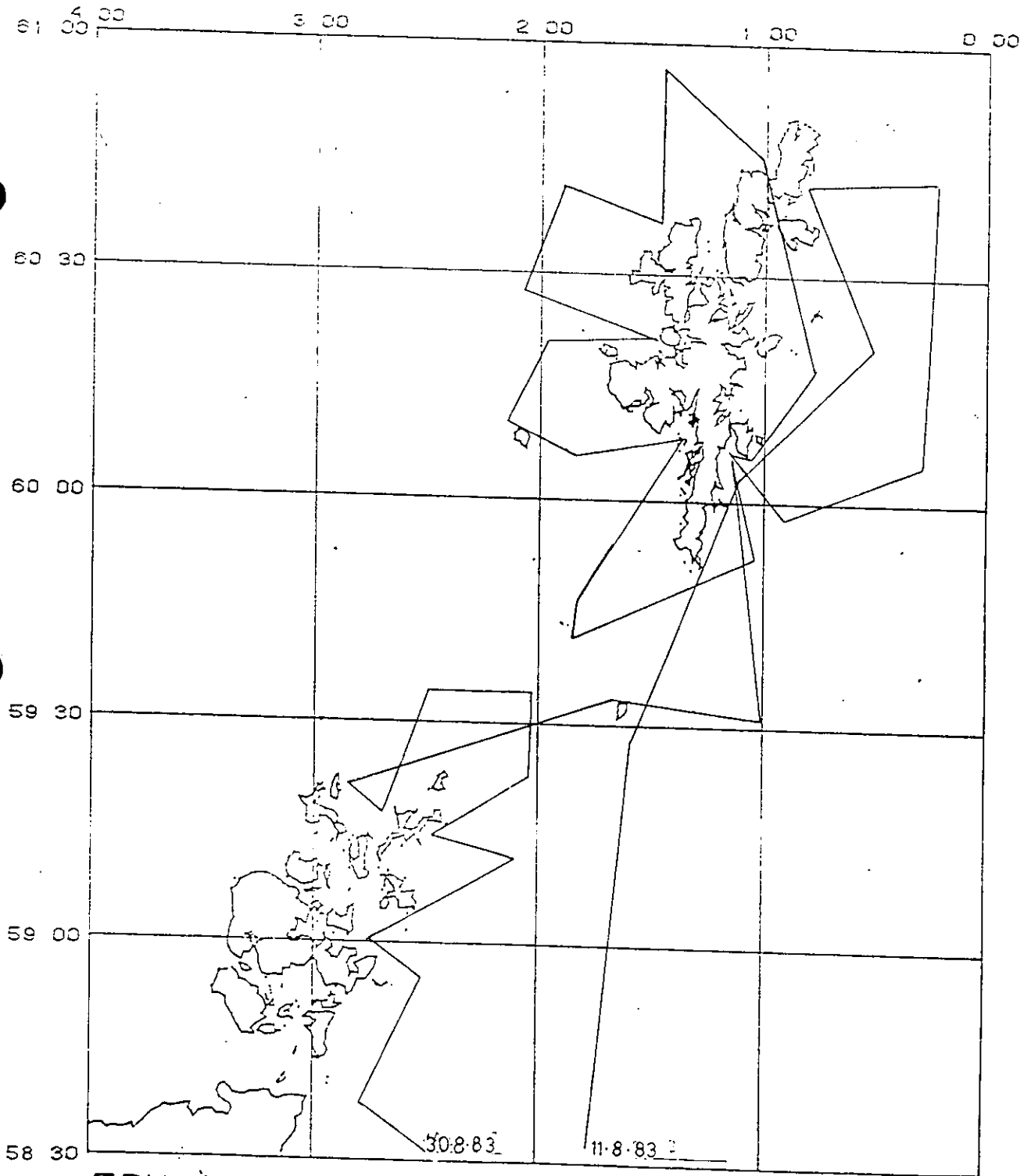
A total of 61 trawl hauls including 2 foul hauls were completed, the hauls ranged in duration from 20 to 60 minutes depending on the grounds worked. Sandeels were present in inshore areas only and in depths of < 80m. No



Positions of trawl hauls during the sandeel exploratory fishing survey on FRV Clupea, 11-30 August 1983

- = sandeels present;
- = sandeels absent

Mrs P Edwards
MARS



FRV Clupea

11-30 AUG

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