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CRUISE REPORT

FRS EXPLORER

19 April - 2 May 1976

Objectives

1. To perform an acoustic survey of blue whiting stocks to the west of Scotland.
2. To carry out fishing with a pelagic trawl as required to identify echo traces and provide samples for biological investigation, and to pass fish to TRS for processing trials.
3. To tow a Continuous Plankton Recorder for IMER for investigation of blue whiting egg and larval distribution.

Narrative

Explorer sailed from Aberdeen on the evening of 19 April and proceeded to a point on the edge of the continental shelf north west of Shetland at 61°10N 01°20 W. The acoustic survey was then conducted as shown on the attached chart. The survey was interrupted on 27 - 28 April to change personnel in Stornoway. After leaving Stornoway on 28 April Explorer proceeded to Broadbay for calibration of the echosounder and integrator before resuming the survey. The survey was continued until 30 April when following an engine failure Explorer was forced to return to Aberdeen. Explorer docked in Aberdeen on the evening of 2 May.

Results

Although limited to the northern part of the area a reasonably satisfactory survey was carried out and the distribution of blue whiting in the area surveyed is shown on the attached sheet. The main concentration of fish was to the north east of Rosemary Bank over deep water (550 - 1500 m), the fish forming a continuous layer at depths of 350 - 450 m. The fish did not appear to be concentrated along the edge of the continental shelf or around the oceanic banks as found on previous surveys. It was thought however that the fish would concentrate around the southern edge of Faroe Bank and Faroe plateau as they move northwards. Assuming a target level of - 34 dB per kg for blue whiting the mean density was estimated preliminarily as 106 tons per km².

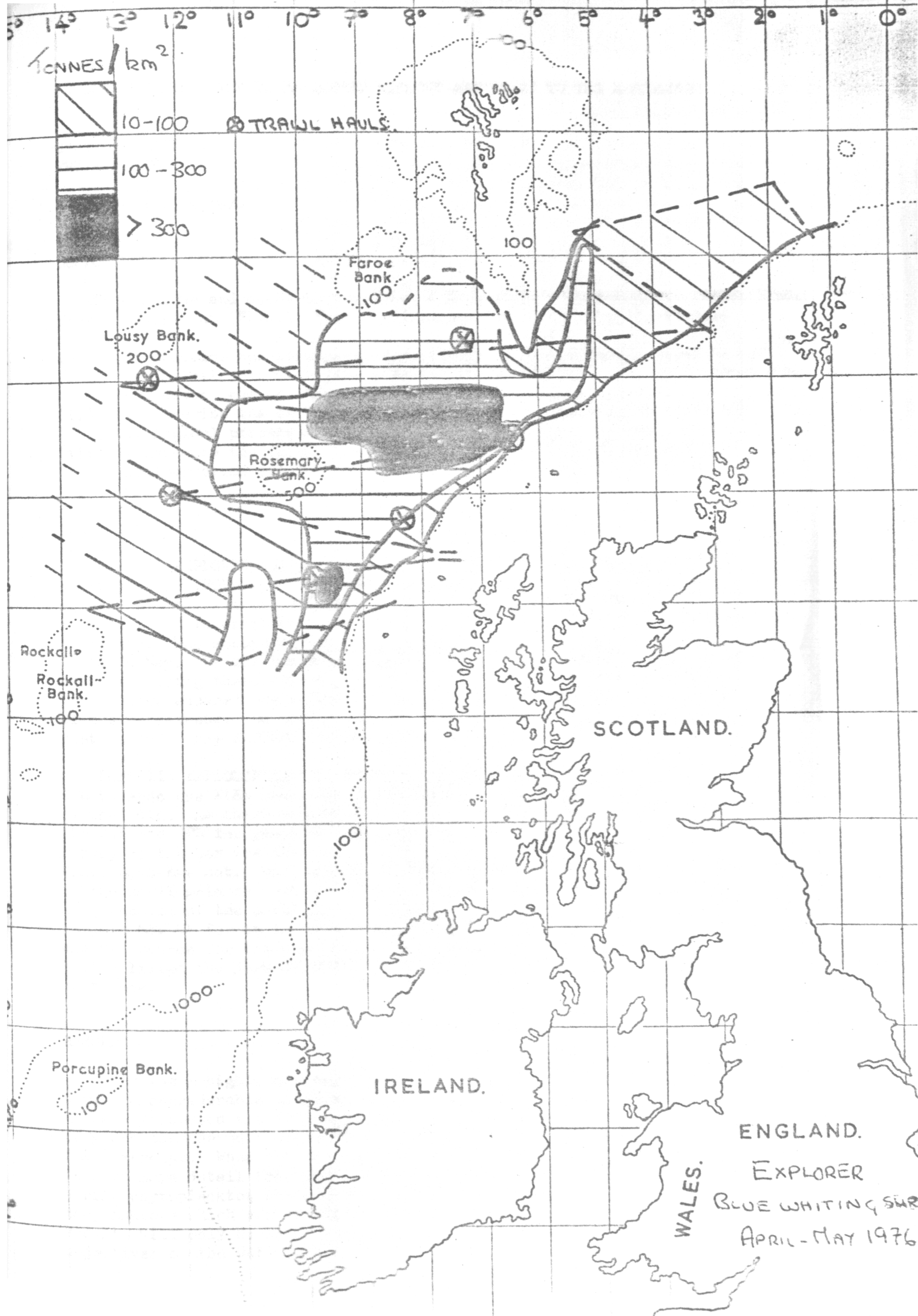
A total of six pelagic trawl hauls were made during the survey to confirm that the observed traces were blue whiting and to provide samples for biological investigation. Catches ranged from <1 to 46 baskets per hours fishing. The blue whiting in the catches were mainly adult fish in post spawning condition. The spent nature of the fish and their distribution indicate that the fish at this time are beginning to migrate to the north towards their summer feeding grounds.

From the last catch approximately 2½ tons of blue whiting were transferred to the TRS vessel Sir William Hardy for freezing.

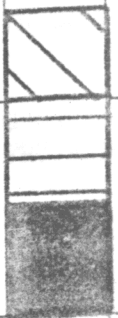
A Continuous Plankton Recorder was towed from the north of Rockall Bank to the edge of the continental shelf towards the end of the survey. The material obtained was despatched to IMER for analysis.

J Richards
17 May 1976

Seen in draft - F Orr



TONNES / km²



10-100

100-300

> 300

⊗ TRAWL HAULS

Lousy Bank.
200

Faroe Bank
100

Rosemary Bank
500

Rockall
Rockall Bank.
100

Porcupine Bank.
100

SCOTLAND.

IRELAND.

ENGLAND.

WALES.

EXPLORER
BLUE WHITING SURVEY
APRIL - MAY 1976.