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IN CONFIDENCE : Not to be quoted without reference to the Laboratory

FRV EXPLORER

CRUISE 10/78

REPORT

19 September - 11 October 1978

Objectives

1. To carry out herring larval surveys to the north and west of Scotland.
2. To carry out an acoustic survey for herring and other pelagic fish in the area using the Marine Laboratory's echointegrator.

Narrative

The start of the cruise was delayed for 24 hours owing to crewing problems. EXPLORER therefore departed from Aberdeen at 1300 on 20 September and proceeded to the North Coast. Severe gales delayed the start of sampling until 23 September when 9 stations were completed before EXPLORER was forced to seek shelter from the weather. The severe gales continued unabated till 29 September. During this period advantage was taken of any drop or change in direction of the wind to work those areas affording some shelter. A total of 48 stations were sampled before EXPLORER docked at Stornoway at 0900 on 29 September for half-landing break.

During the mid-cruise break an exchange of chief scientists took place and EXPLORER sailed again at 1530 on 30 September to continue the survey. 27 plankton stations were completed to the west of the Hebrides before boiler trouble developed early on the morning of 2 October and EXPLORER headed towards Greenock for repairs. The echointegrator was run continuously until just before her arrival in Greenock at 1530 on 3 October. Boiler repairs were completed by 7 October and EXPLORER sailed again at 1430 towards stations north of Ireland. 12 stations were completed in this area before making a passage through the Minch to sample the remaining northerly stations. A further 16 hauls were made in this area where some stations were sampled for a second time. The echointegrator was run continuously after departure from Greenock until mid-day on the 10 October when a passage was made through the Pentland Firth for Aberdeen. EXPLORER docked at 0030 on 11 October.

Results

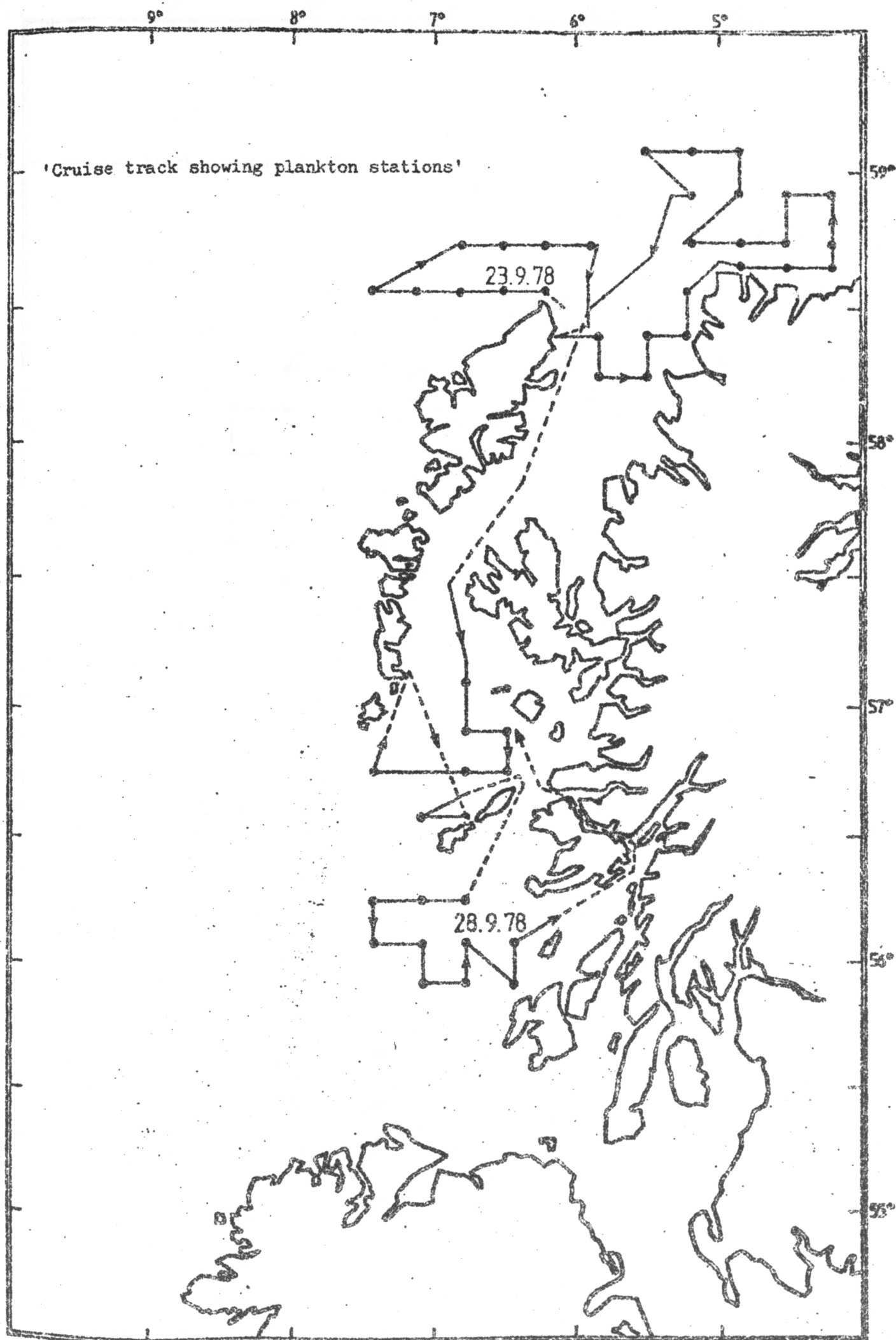
All stations north of 57°30'N were sampled and a reasonable coverage of the grid from the South Minch to Northern Ireland was achieved. This left two areas unsampled, one to the west of the Hebrides between 56°30'N and 57°30'N and one to the west of Ireland. A total of 103 plankton hauls were made and 91 out of a total of 137 stations were sampled at least once.

Preliminary observation of plankton samples taken during the survey indicates the presence of herring type larvae, but in small numbers, to the west of the Hebrides, to the north of the Minch and to the North of Ireland ie in all areas sampled. The highest numbers of larvae and the largest proportion of the smallest size category appear to have been taken off the Northern Irish coast in the most south westerly part of the sampled grid.

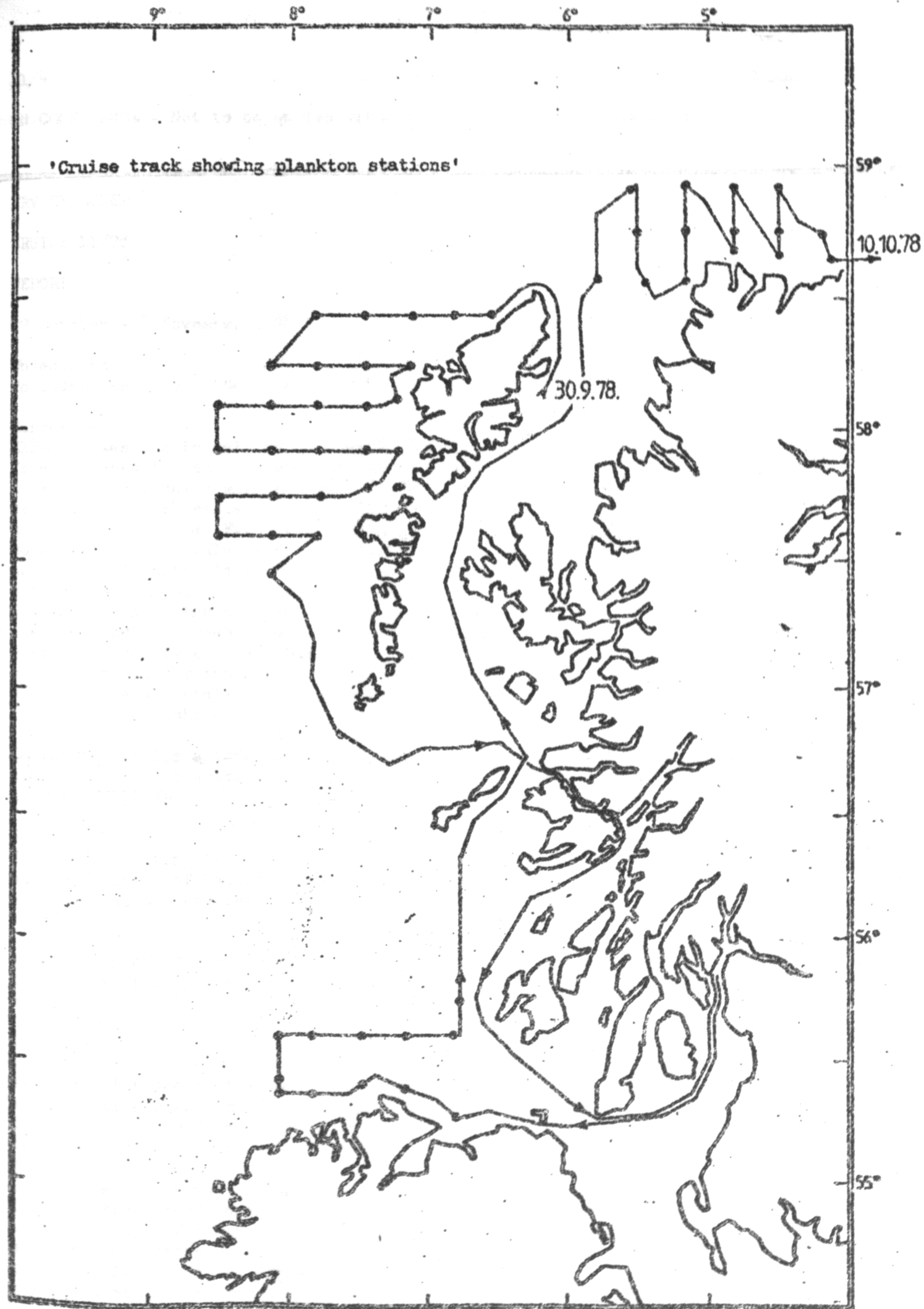
Echo traces attributable to pelagic fish were rather scarce throughout the survey. The biggest and most numerous traces were found in the waters around Coll with a second area of relatively high abundance at the northern end of the Minch and its approaches. A few traces were observed North of Ireland while the area to the west of the Hebrides was notable for ^{an} absence of marks (except for a few near St Kilda). Of the traces observed only a very small minority were of the characteristic plume shape characteristic of herring shoals, and these were found near Coll.

J GAULD
M WALSH
21 November 1978

Seen in draft: J W Gillon



Explorer 23.9-28.9.78 10 EP 78



Explorer 30.9 - 10.10.78 10 EP 78