

R1/12

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FRV SCOTIA

Cruise 1393S

REPORT

7-20 October 1993

**Personnel**

P W Rankine	HSO (in charge)
M R Robertson	HSO
J G Fraser	ASO
N T Nicoll	Visitor

**Objectives**

1. To participate in the ICES International Herring Larval Surveys 1993/94 in area VIA(N) (west coast of Scotland).
2. To collect surface sea water temperature and salinity data over the survey area.
3. To obtain photographs of live plankton caught by a metre net during the survey.

Out-turn Days: 13 days EAA1

**Narrative**

FRV *Scotia* sailed from Aberdeen at 1000 on 7 October and steamed in strong northeasterly winds to station 36 (Fig. 1), where sampling commenced at 0800 the following morning, after calibration of the Scanmar depth monitoring equipment. Sampling then proceeded as in Figures 1 and 2, despite gale force winds, until a force 9 northwesterly gale caused the ship to dodge overnight at station 125 on 15 October. Sampling recommenced the following morning and continued in the southwesterly gale until 18 October. Eight calibration hauls of the Dutch Gulf III sampler and flowmeter were then carried out in the early hours of the following morning, in the lee of Broad Bay. *Scotia* then completed sampling of the remaining north coast stations before returning to Aberdeen, docking at 0600 on 20 October.

**Results**

A total of 206 hauls were made with the Dutch Gulf III sampler. All of the traditional spawning areas, off the north coast, west of Lewis, St Kilda Bank, west of the Uists and Tiree were sampled twice. All herring and other fish larvae were removed from the plankton samples and counted during the survey. Unexpectedly large numbers of both small (<10 mm) and larger herring larvae were found not only in the traditional areas but also on the western limits of the grid and, most notably, in the Minch, perhaps indicating a recolonisation of old spawning grounds in that area. Larvae of all sizes were much more widespread than in previous October surveys. Surface sea water temperature and salinity data were collected from a pumped sea water supply on board ship, as in previous years, but a malfunction of the salinity probe of the thermosalinograph prevented the collection of salinity data from 15 October onwards.

Eight hauls were made with a 1 m diameter tow net fitted with a 250  $\mu$  mesh net and a livebucket in order to catch live plankton for video and still photography. Many colour transparencies were taken of both individual species, (including *Calanus finmarchicus*, *Centrophages* sp., *Candacia* sp., *Tomopteris* sp., and the Euphausiids, *Meganyctiphanes norvegica* and *Thysanoessa* sp.), as well as other mixed groups. 8 mm high band colour video tapes of the above species, and some Ctenophora, were also recorded and the results appeared to be highly satisfactory. The tapes could provide useful back-up material for future video productions in the Laboratory.

Paul W Rankine  
12 November 1993

Seen in draft: P Ramsay

VIA(N) IHLS SURVEY GRID I

'SCOTIA' 7-13/10/93

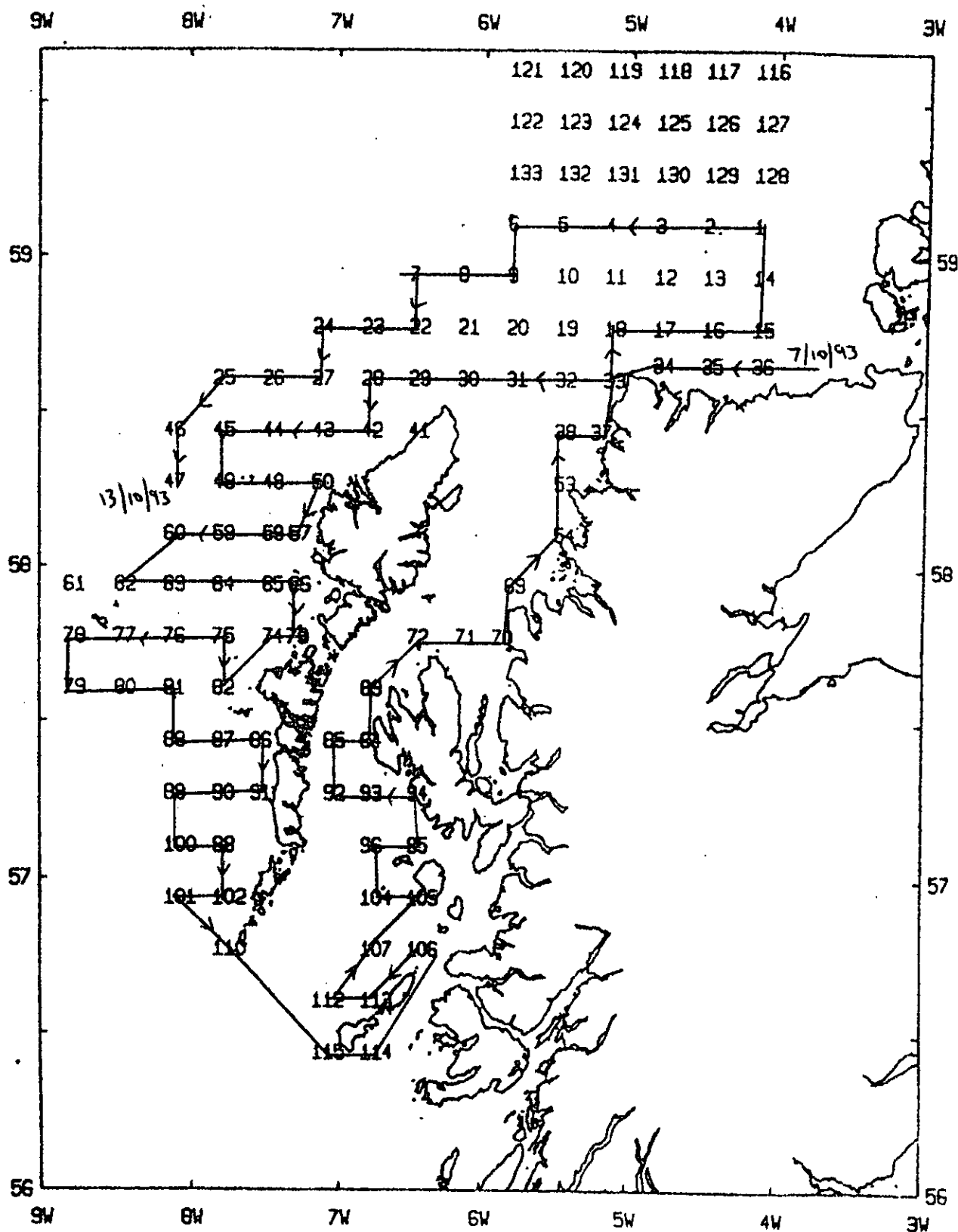


Figure 1

VIA(N) IHLS SURVEY GRID II

Scotia 13-20/10/93

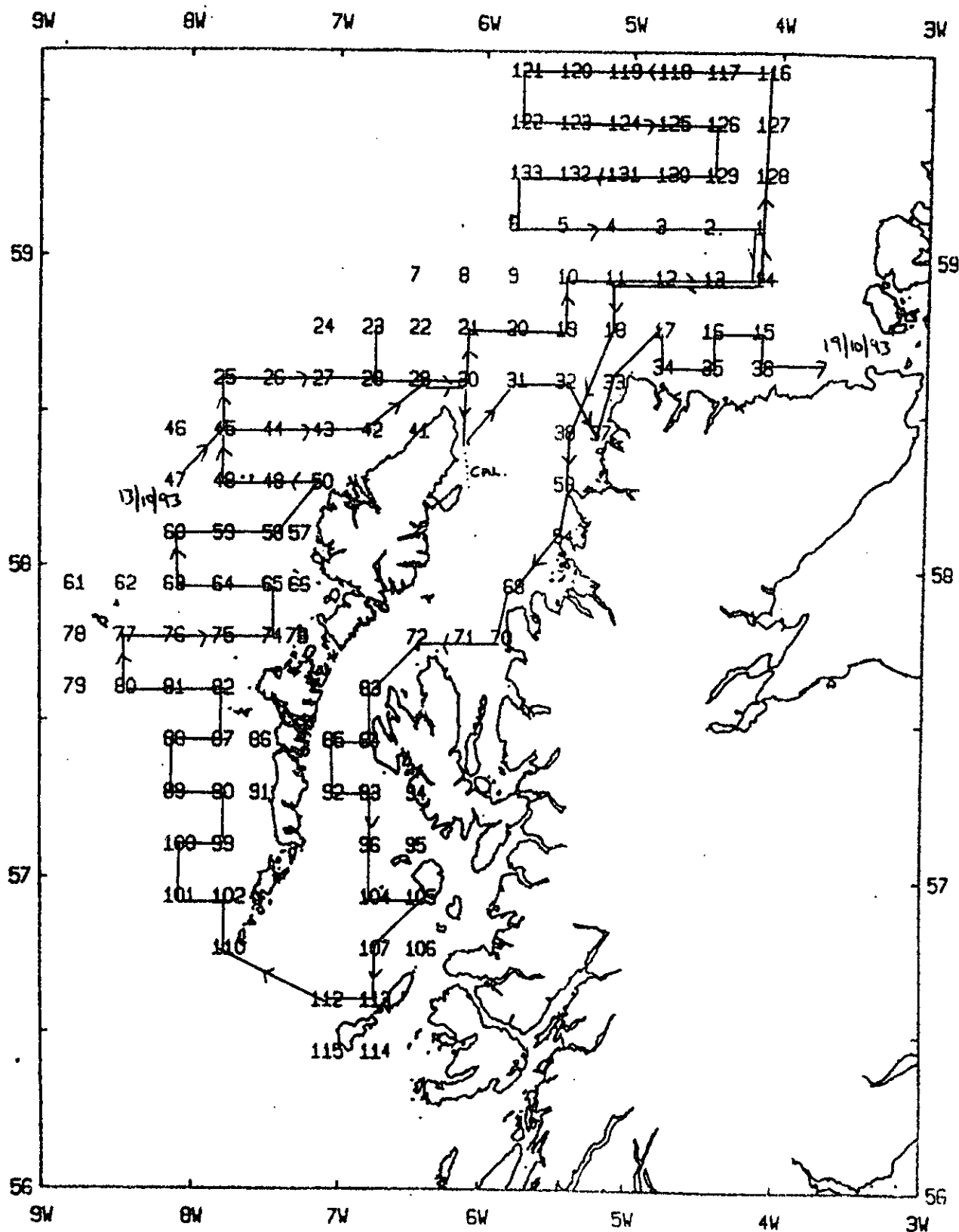


Figure 2