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FRV "SCOTIA"  
CRUISE 11/88

11SR88

Report

14-28 October 1988

Personnel

<u>ICES Herring Larval Survey</u>		<u>"Ocean Sampler" Trial 1</u>		<u>"Ocean Sampler" Trial 2</u>	
S J Hay	HSO	R B Mitchell	SSO	R B Mitchell	SSO
M R Robertson	SO	J Dunn	HSO	J Dunn	HSO
L Cargill	ASO	S Day	Seamatrix	D Owens	Seamatrix
Miss E Watt	ASO	Miss P Machin	Student		

Objectives

1. To complete a plankton survey off the Scottish north and west coasts (Area VIa) as part of the ICES International Herring Larvae Surveys.
2. To collect surface temperature and salinity data during the survey.
3. To collect sea water samples for radioactive Caesium monitoring.
4. To conduct trials of the prototype "Ocean Sampler" multi-depth plankton net.

Narrative

"Scotia" left Aberdeen at 1430 on 14 October, sailed a few miles south east and began trials of the "Ocean Sampler". The first trial was complete by 1700 hrs on 15 October and the vessel returned to Aberdeen to allow the trial team and one ailing engineer to disembark. The vessel then sailed to a position off the Butt of Lewis where the larval survey commenced at 1230 hrs on 16 October. By mid-day on 20 October all stations west of the Hebrides and in the Minches were complete. Six stations of the north coast grid were surveyed before a brief visit to Loch Eriboll to recalibrate the depth sensors in calm water. The north coast grid was recommenced and completed by 1300 hrs on 22 October. Figure 1a, b shows the tracks of the cruise.

In the light of the herring larval distribution apparent from the first completed survey, a second, slightly different grid of stations was sampled to the north and west of the Hebrides. In addition 17 stations off the Scottish north coast were repeated. The second survey was halted at 0200 hrs on 26 October by bad weather. The ship then ran south against the weather to rendezvous with the second trial team off Aberdeen at 0900 hrs on 27 October. With the second trial complete, the "Scotia" docked at Aberdeen at 0800 hrs on 28 October.

## Results

Preliminary results of the herring larval surveys are illustrated in Figures 2a and 2b. It was evident from the first survey that the larvae were widely distributed; there were particular concentrations in a narrow band west of the Hebrides, and in a patch around Tiree. The second survey confirmed this pattern although the narrow band seemed to have broken up and moved north.

A wide range of larval sizes was present with the densest patches being mostly of small larvae. In the patch off Tiree some yolk-sac larvae were found, indicating recent hatching.

Surface temperature and salinity were recorded by thermosalinograph at 10 minute intervals throughout the surveys. Samples of water for radio-caesium monitoring were collected from fixed positions at Aberdeen, Pentland Firth, Cape Wrath and Fair Isle. The trials of the "Ocean sampler" went well with problems apparent in the first trial eliminated by the time of the second trial.

S J Hay

14 November 1988

Seen in Draft: N E McInnes, CO

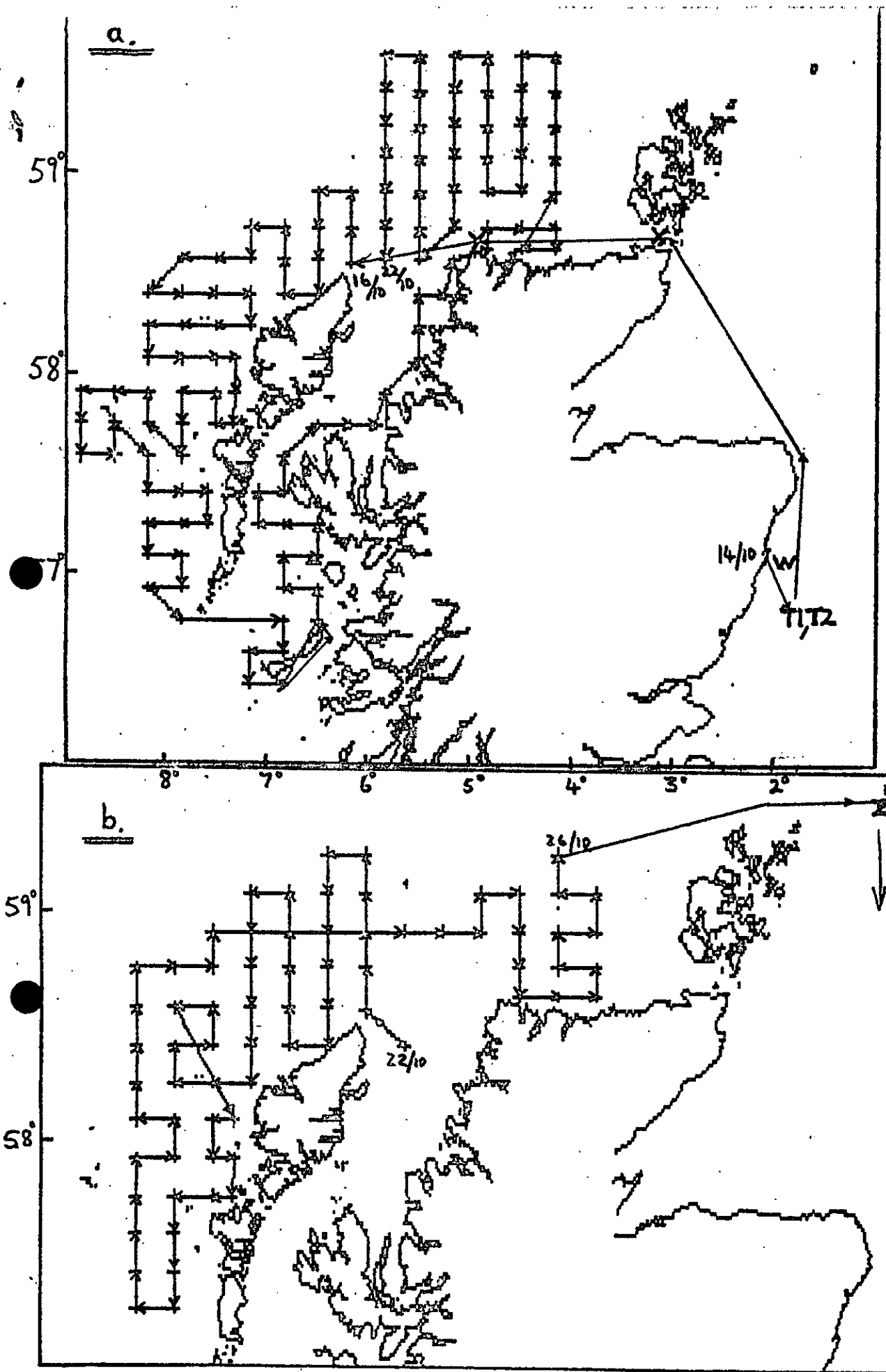


Figure 1. ERV "SCOTIA", ICES Herring Larval Survey, Oct. 14 - 28/10/88.  
 .. Cruise tracks, part one (1a) and part two (1b). Also positions W, X, Y, Z of radio-caesium samples, and Ocean sampler trials T1 and T2.

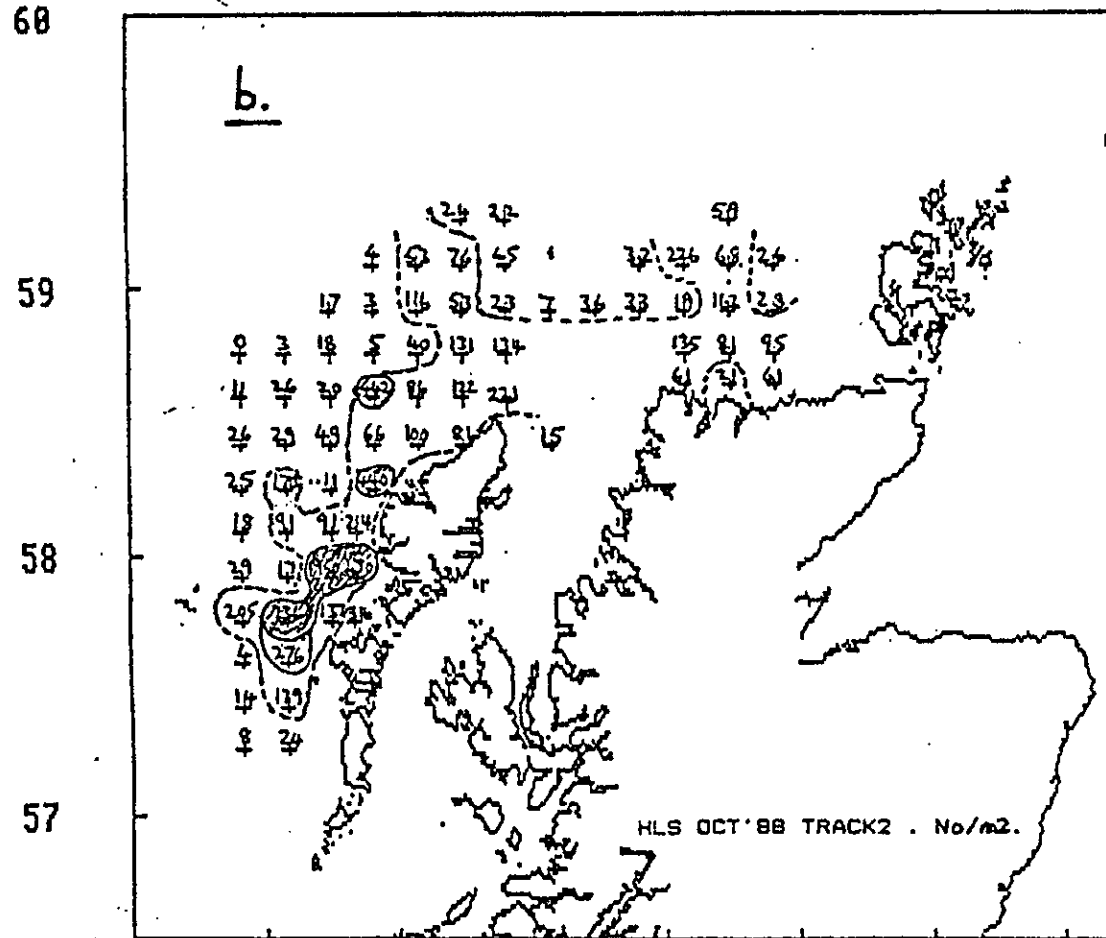
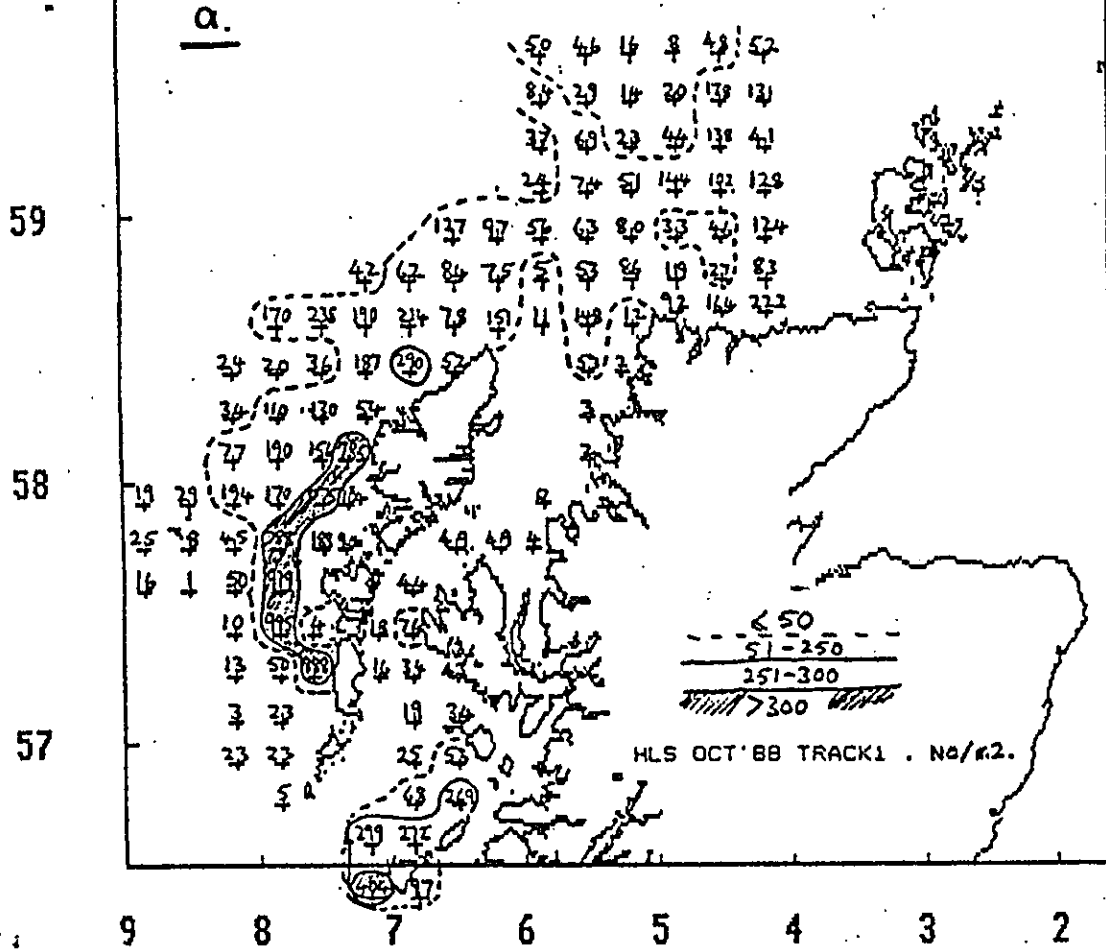


Figure 2. Preliminary estimates of numbers of herring larvae per square metre for survey one (2a) and survey two (2b) stations.