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Not to be cited without prior reference to the Marine Laboratory, Aberdeen

FRV *Scotia*

Cruise 1695S (Part 2)

## REPORT

1-15 December 1995

### Personnel

D Reid	SSO (in charge)
M Walsh	SSO
P Copland	HSO
R Payne	HSO
I Gibb	SO
R Adams	SO
G Begg	Visitor (JNCC)

### Objectives

1. To carry out a combined acoustic, trawling and CTD survey on the western mackerel stocks immediately prior to the start of the migration. This survey is part of the EC AIR funded project SEFOS (project code C514).
2. To recover four current meter moorings deployed on Viking Bank.

**Out-turn days per project: C514 - 15 days**

### Narrative

Scientific staff (D Reid, M Walsh, I Gibb and G Begg) joined *Scotia* in Lerwick on the morning of 1 December, P Copland, R Payne and R Adams remained on board from part 1. The vessel left Lerwick on the evening of 3 December, after delays due to storms. The vessel proceeded to 61°30'N 1°30'E to begin the initial scouting track (one on attached figure). Concentrations of mackerel were located between 60°30'N 3°15'E and 59°30'N 3°15'E. The remainder of the survey was carried out between these points in five repeat surveys (see Fig. 1). Thirteen fishing operations were carried out successfully for mackerel and herring, also some blue whiting. Weights, lengths, maturity, stomach contents and otoliths (for age) were recorded from each catch. Thirty-seven CTD stations were completed and eight XBT deployments made. Eleven of the CTD stations were placed on a line between 3°45'E and 3°05'E along latitude 59°30'N. Two of the moorings were recovered on 7 December and a third on 11 December. The fourth was not located, although dragging operations were conducted for five hours. The vessel steamed to Aberdeen for unloading on the morning of the 15th.

### Results

The area of mackerel concentration was successfully identified, and six repeat coverages completed. Results are not yet available. Data on locations of herring and "O" group blue whiting were also obtained and will be passed to other SEFOS partners. CTD operations revealed mixed waters on the shelf and a complex structure in water deeper than 200 m with three water masses identified, North Sea, Baltic and Norwegian Trench. These will be related to the mackerel distributions derived from the acoustic and fishing operations. Initial appraisal suggests that the survey was very successful.

D G Reid  
5 June 1996

● Figure 1

Survey areas and positions of moorings and CTD Line - December 1995

