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2SR87

FRV "Scotia"
Cruise 2/87

REPORT

4-24 February 1987

PERSONNEL

A W Newton	SSO (in charge)
J W Smith	SSO (13-24 February)
D WMcKay	HSO
D C Emslie	HSO
R D Galbraith	HSO
Miss M A Bell	SO
G I Henderson	ASO
Miss J Staples	ASO
Miss G Guthrie	ASO (4-12 February)
I D Leaver	ASO

OBJECTIVE

To take part in the ICES International Young Fish Survey in the North Sea.

NARRATIVE

"Scotia" sailed from Aberdeen at 1700 hours on Wednesday 4 February and began working off the Scottish coast. Initially the weather was not favourable and eventually the vessel was forced to dodge for 12 hours until the seas moderated. The weather entered a settled phase and work proceeded apace across the North Sea towards the Danish coast. On the 12 February "Scotia" had to dock in Esbjerg in order to land a scientist with a recurrent knee joint problem. Mr Smith joined the ship on the 13 February and "Scotia" proceeded to work at stations off Esbjerg. Thence northwards to the Forties, into the Moray Firth and up to the Shetlands. Gales in this region caused the abandonment of stations to the north of Muckle Flugga. The final day of the cruise was spent working in the Moray Firth before docking in Aberdeen at 0900 hours on 24 February.

RESULTS

A total of 68 one hour hauls were made using the GOV trawl. Three different combinations of ground gear were used; the standard set of rubber discs with 47 metre sweeps was used in the central North Sea but on the rougher ground to the north either 18" or 21" bobbins were used in conjunction with 97 metre sweeps. Each haul was monitored for headline height and wingend spread by using Scanmar units coupled to a microcomputer. Other parameters such as speed over the ground and depth were logged at the same time.

Table 1 provides a summary of the average numbers per hour of the principle species (below a length selected as a probable upper delimeter of 1+ fish) occurring in each region sampled. Preliminary analysis of the data indicates that the herring stock is still continuing its strong recovery whilst both haddock and whiting show a stronger incoming year class than in the previous year.

During the hours of darkness the Isaacs-Kidd midwater trawl was shot to sample pre-metamorphosis herring larvae. Initial results show a high level of larvae in the area surveyed.

From 26 hauls, 182 samples each of from one to 25 larval ascaridoid nematodes (Anisakis mostly but some Pseudoterranova and Contracaecum/Phocascaris) were collected alive from individual teleosts representing 8 species; these will be frozen and electrophoretically examined for gene-enzyme systems. In addition, samples of the copepod Lernaeocera were fixed in situ in host (ie haddock) tissues for subsequent histopathology, and yet others isolated, cleaned and frozen for subsequent electrophoretic examination.

Top and bottom temperatures, salinities, phosphates, nitrates and silicates were taken at each station. In addition surface temperature was measured every 4 hours and the data transmitted to the Hydrographic Institute in Hamburg on a regular basis.

A W Newton
21 May 1987

See in Draft: Capt N E McInnes

Table 1

	HERRING <20	COD <25	HADDOCK <20	WHITING <20	N POUT <15
Scottish Coast	3993	4	600	1250	143
Moray Firth	8858	0	2298	1693	1118
Shetland	31	2	1340	74	151
Forties	367	0	906	325	2636
Orkney	8	7	2452	846	1
Danish Coast	882	1	0	54	0
Central	4317	9	213	428	101

: A.NEWTON

Scotia IYFS February 1987