

R1/12

In Confidence Not to be quoted without prior reference to the Laboratory

2SR85

"Scotia"

Cruise 2/85

Report

LD

1-22 February

Personnel

A W Newton	SSO (In charge)
J R G Hislop	PSO
D W McKay	HSO
K A Coull	SO
Mrs M A Brown	SO
G I Henderson	ASO
Miss J Staples	ASO
D Beveridge	ASO
A Webb	(Visitor) (1-11 February)
J W Smith	HSO (15-21 February)
Miss J Edwards	(Visitor) (15-21 February)

Objective

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

Narrative

"Scotia" sailed as scheduled from Aberdeen on Friday 1 February. Trawling commenced at stations off Aberdeen and "Scotia" gradually worked towards the Forties field and thence to stations in the middle North Sea. Stations off the Danish coast were worked before "Scotia" called into Esbjerg on Monday 11. The opportunity was taken to transfer scientific samples to the Danish Fisheries Institute, at the same time Mr Webb left the cruise. "Scotia" sailed again on Tuesday 12 and re-commenced trawling off the Danish coast. Stations on the Fisher Bank were worked before steaming to positions in the Moray Firth. At this point Mr Smith and Miss Edwards joined the cruise. "Scotia" proceeded to work northwards to the Shetland Isles. However, severe southerly gales curtailed activities in these waters and "Scotia" was forced to return to the Moray Firth to work in more sheltered waters. With the weather abating "Scotia" steamed northeast and trawled on stations between the Fair Isle and the Fladen Ground. The Young Fish cruise ended at Aberdeen on Friday 22 February.

Results

A total of 60 one hour hauls were made with the GOV trawl. The net was fitted with either a ground rope consisting of 18" and 21" bobbins (used in northerly stations) or with a set of rubber discs. The headline height was monitored continuously with a simradacoustic unit. Table 1 provides a summary of the numbers of the principal species (below a length selected as a probable upper delimiter of 1 + fish).

occurring in each square sampled. Where more than one haul was made in a particular square the results have been averaged to produce a 'per hour' figure. Although the data has not been examined in detail there are early indicators that the herring stock, in particular, is continuing to show a strong recovery.

In addition to the GOV trawl the Isaacs-Kidd midwater trawl was shot 70 times during the hours of darkness in order to sample pre-metamorphosing herring larvae. The samples from this trawl were analysed at sea. The Scottish results show a slight decrease in the number of larvae in the German Bight as compared to 1984 but an increase in numbers in the western North Sea.

Over 1200 haddock and 1220 whiting from 15 hauls were examined for infection with the parasite copepod Lernaeocera. Over 100 lemon sole from 11 hauls were preserved for subsequent examination for Lernaeocera infection. Specimens of Lernaeocera from haddock and whiting were frozen in liquid nitrogen for comparative iso-enzyme studies.

In order to participate in the ICES N Sea stomach sampling project a total of 3010 whiting and 421 cod stomachs were examined; stomachs which had not regurgitated were kept for subsequent analysis in the Laboratory.

Top and bottom temperature and salinities were taken at all trawl stations and in addition samples for phosphates, silicates and nitrates were taken at all stations in response to another request from ICES.

A W Newton

8 March 1985

Seen in Draft: J W Gillon

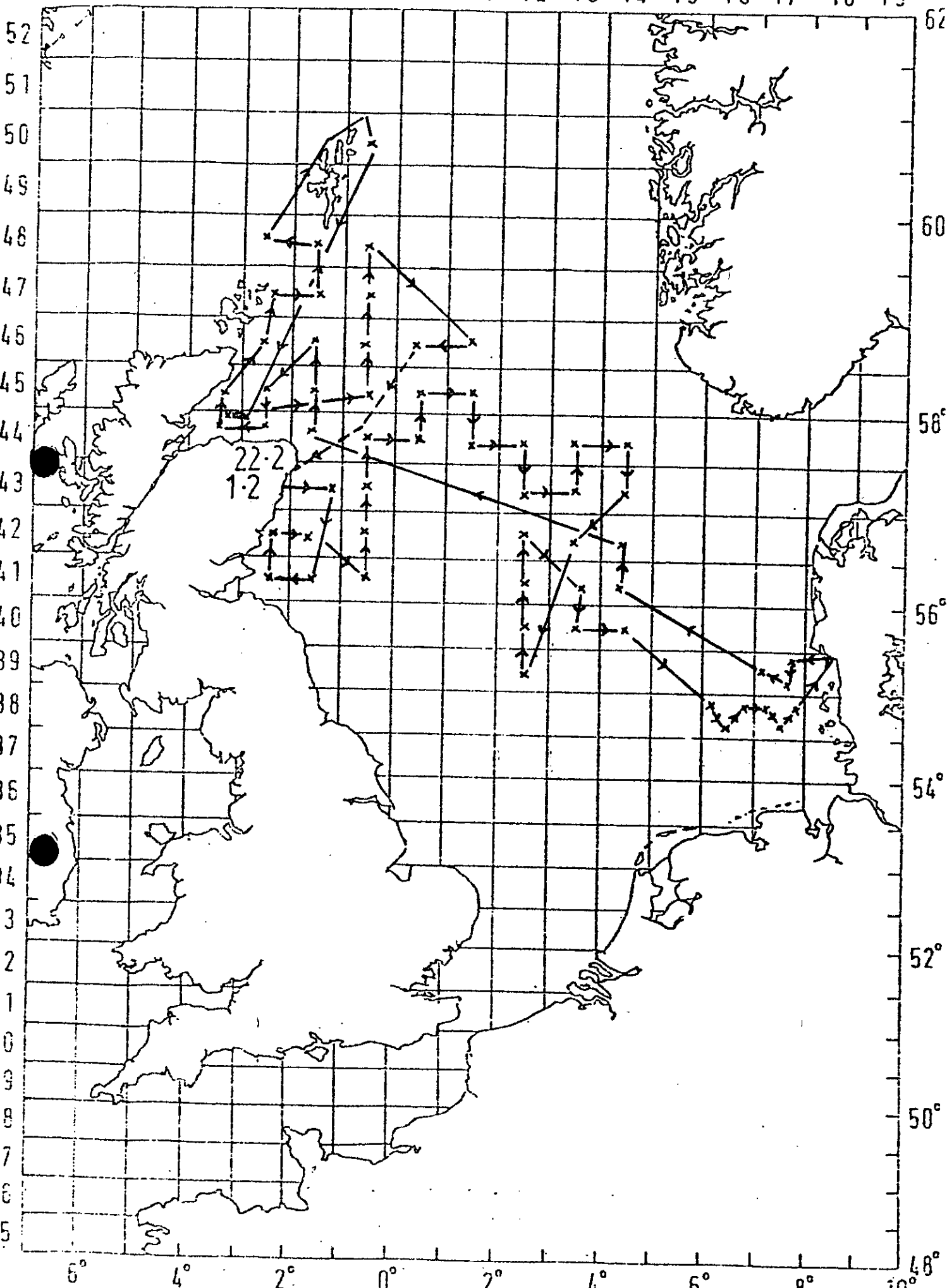
TABLE 1

Area	Square	Herring < 20	Cod < 25	Haddock < 20	Whiting < 20	N Pout < 15
Central	44F2	367	4	117	12	0
	44F3	158	1	37	37	0
	43F2	96	1	17	1	0
	43F3	5	1	5	88	0
	43F4	386	3	107	21	0
	42F2	30	2	1	49	0
	42F3	10	0	0	15	0
	42F4	177	0	15	15	191
	41F2	142	1	32	46	0
	41F3	1577	0	42	19	5310
	41F4	1562	0	3	19	28
	40F2	3684	0	157	6	2
	40F3	60	0	9	3	1
	40F4	456	2	7	13	0
	39F2	61	0	0	2	0
Danish Coast	39F7	788	0	0	0	0
	38F6	1724	4	0	21	0
	38F7	3028	0	0	1	0
Scottish Coast	43E8	12	0	60	23	93
	43E9	0	0	1	0	0
	42E7	265	0	11	47	8
	42E8	732	0	5	57	1
	42E9	5	0	2	0	0
	41E7	2607	0	0	0	0
	41E8	1861	0	1	9	5
	41E9	15	0	0	0	0
Moray Firth	45E6	671	0	1685	1855	86
	45E7	1227	0	749	426	176
	44E6	1239	0	242	1925	407
	44E7	591	1	1100	1032	618
Forties	47E9	0	2	126	35	2066
	46E9	1	0	510	15	1135
	46F0	1	0	1	58	656
	46F1	1	0	7	41	517
	45E8	9	0	955	170	1260
	45E9	48	0	1166	313	3728
	45F0	8	1	30	435	5302
	45F1	17	1	59	31	102
	44E8	142	0	441	377	575
	44E9	8	0	299	103	357
	44F0	4	0	213	48	772
	44F1	37	0	9	3	0

Table 1 (Continued)

Area	Square	Herring < 20	Cod < 25	Haddock < 20	Whiting < 20	N Pout < 15
Orkney	47E7	0	0	12	1	0
	47E8	1	0	226	0	29
	46E7	69	0	183	255	0
	46E8	3	0	332	174	1088
Shetland	50E9	0	0	96	0	435
	48E7	0	0	44	0	1
	48E8	0	0	40	0	24
	48E9	0	0	282	2	2920

E3 E4 E5 E6 E7 E8 E9 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9



Scotia 1 - 22 Feb 1985

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