

R1/4

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

'Explorer'
REPORT

MB
2ER84

Cruise 2/84; 3/84
2-17 February; 23 February - 9 March

Objective

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

Narrative

'Explorer' sailed from Aberdeen at 1300 hours on 2 February with the intention of trawling in the Buchan Deep but the sea conditions proved too rough; the following day four stations were worked in more sheltered waters off Montrose. The subsequent five days were spent dodging between St Abbs Head and Flamborough Head as a consequent of S Westerly storms. When the weather improved 'Explorer' steamed eastwards to work stations off the Danish coast and an overnight call was made to Esbjerg on 11 February. On sailing, trawl stations were completed off Denmark and then 'Explorer' proceeded to stations in the central North Sea and commenced to work westwards towards Aberdeen. The ship docked in her home port on 16 February. After changes of scientific personnel 'Explorer' sailed again on 23 February and steamed north-east to stations in the Forties area. 'Explorer' worked northwards and eventually started trawling around the Shetland Isles; radar problems forced the vessel to call into Lerwick a day earlier than planned. After leaving Lerwick 'Explorer' completed stations around Shetland and then proceeded to stations off the Orkney Isles and in the Moray Firth. Finally stations were worked off Whitby before 'Explorer' docked for the last time in her home port on 8 March.

Results

A total of 59 hauls were made with a GOV trawl; the trawl was fitted with rubber discs for the stations in the central and eastern North Sea, 21" bobbins were used for all other stations. Each haul was of one hour duration and 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.

In addition to the GOV trawl extensive use was made of an Isaac-Kidd mid-water trawl during the hours of darkness. This trawl was shot twice in each of 49 statistical squares. Extra hauls were also made to acquire herring larvae for amino acid 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 a request from ICES.

During the course of the cruise all the samples obtained by the Isaac-Kidd trawl were analysed and all the cod, haddock, whiting and saithe otoliths were read.

A Newton

seen in draft
W Findlay/A T Hall

Table 1

CATCHES IN NUMBERS PER HOUR

AREA	SQUARE	HERRING 20cms	COD 25cms	HADDOCK 20cms	WHITING 20cms	N. POUT 15cms
CENTRAL	41F2	18	9	3828	189	93
	41F3	3	2	621	17	17
	41F4	44	2	116	35	0
	40F2	100	2	2854	39	5903
	40F3	714	0	97	18	0
	40F4	1122	2	1	77	0
	39F2	0	0	28	11	0
DANISH COAST	39F6	496	10	0	1322	0
	39F7	2905	12	0	774	0
	38F6	299	17	0	2645	0
	38F7	446	14	0	266	0
EAST COAST (SCOTLAND)	43E8	33	0	1205	139	1152
	43E9	0	34	6078	25	0
	42E7	905	7	89	4119	174
	42E8	1	0	1588	169	24
	42E9	8	0	1393	31	417
	41E7	45	0	760	423	7
	41E8	0	0	777	181	102
	41E9	54	0	2314	56	1271
EAST COAST (ENGLAND)	40E8	85	2	481	417	424
	40E9	78	2	509	28	1530
	39E8	215	232	790	10825	1
	39E9	12	2	135	63	33
	38E9	174	1	650	427	21
	38F0	1686	0	1894	3238	379
	37E9	0	3	0	25	0
MORAY FIRTH	45E7	468	1	179	216	
	44E6	668	0	89	508	392
	44E7	486	0	312	2786	3341
FORTIES	46E8	4	1	523	29	2508
	46E9	0	0	462	38	4013
	46F0	0	0	136	13	12119
	46F1	0	0	284	18	10239
	45E8	4	0	776	29	2007
	45E9	0	0	573	16	1680
	45F0	0	1	69	20	1071
	45F1	0	1	2256	43	7600
	44E8	389	0	5316	154	3591
	44E9	132	0	1430	62	3745
	44F0	0	0	360	27	2474
44F1	0	0	320	8	232	
ORKNEY	47E7	100	9	691	480	8
	46E6	0	0	1208	1539	3
	46E7	102	1	1683	219	241

SHETLAND

SQUARE	HERRING 20cms	COD 25cms	HADDOCK 20cms	WHITING 20cms	N. POUT 15cms
50E9	0	1	384	40	0
49E8	0	0	506	26	304
49E9	1	0	405	3	8840
48E7	0	0	22	0	429
48E8	12	0	1329	2	344
48E9	0	0	230	0	6170
47E8	0	0	615	15	0
47E9	2	0	498	2	140