

R1/4 In Confidence: Not to be quoted without prior reference to the Laboratory
Cruise 2/83; 3/83

Report

3-18 February; 24 February - 10 March

2 and 3 ER83

'Explorer'

Objective

To take part in the ICES International Young Fish Survey.

Narrative

'Explorer' was due to sail from Aberdeen on Thursday 3 February but her departure was delayed by a day due to damage suffered to the vessel whilst lying at the fuelling berth. After sailing on 4 February bad weather caused 'Explorer' to seek shelter in the Firth of Forth, 2 stations were worked in the Firth but otherwise the ship was forced to shelter until Tuesday 8 February when the weather moderated sufficiently to allow work to commence on the Dogger Bank. 'Explorer' docked in Esbjerg on 10 February, picked up scientific equipment and sailed for stations in the German Bight on 11 February. Taking advantage of settled weather all the allotted stations in the eastern and middle North Sea were completed before 'Explorer' berthed in Aberdeen on Friday 18 February.

'Explorer' sailed again on 24 February and proceeded to the Forties area and worked westwards into the Moray Firth and thence up to the Orkney Isles. Passage was made to the Shetlands on 1 March and bad weather was immediately encountered. During the next 8 days scientific operations were severely hampered by storms, either westerly or southerly in direction. A call was made into Lerwick on Thursday 3 March. On 9 March passage was made to the Buchan coast where trawling was completed with 'Explorer' docking in Aberdeen at 2100 hours on Thursday 10 March.

Results

57 hauls were made with a GOV trawl which was fitted with 21" bobbins for stations off the Aberdeenshire coast and stations North of the Orkney Islands. At all other stations the GOV trawl was fitted with rubber discs. Each haul was of one hour's duration and Table I provides a summary 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 were averaged to produce a "per hour" figure.

An Issac-Kidd midwater trawl was used at night to obtain samples of pre-metamorphosis herring larvae. Unfortunately, malfunctioning equipment resulted in only 10 statistical squares being sampled.

During the cruise stomachs from 109 saithe, 7 cod, 936 herring and 156 mackerel were examined as part of the ICES stomach sampling programme. Various biological samples, including *T. esmarkii* ovaries and fish for wt/length data, were obtained for further analysis in Aberdeen. In addition 2805 cod, haddock and whiting were aged during the cruises.

Whilst at sea software was developed on a Commodore micro computer to calculate the final totals for each haul. In addition, software was developed to assemble maturity age/length keys and to provide output tables for an international report. All data was stored on floppy disks ready for direct transfer to the Laboratory PDP 11/70 computer for final processing.

A W Newton
29 March 1983

Seen in draft: W Findlay/A Hall

CATCHES IN NUMBERS PER HOUR

	Square	Herring < 20 cms	Cod < 25 cms	Haddock < 20 cms	Whiting < 20 cms	N Pout < 15 cms
CENTRAL	44F2	0	2	982	14	1250
	44F3	0	6	929	4	2593
	44F4	0	0	566	22	5
	43F2	0	6	551	13	9301
	43F3	1	4	54	33	92
	43F4	0	0	553	15	151
	42F2	40	42	6	107	2611
	42F3	398	3	1	52	70
	42F4	701	9	5	44	50
	41F2	2519	3	11	47	700
	41F3	76	1	3	50	1240
	41F4	430	2	2	61	125
	40F2	3732	1	0	12	42720
	40F3	606	13	0	177	207
	40F4	3976	8	0	108	136
GERMAN BIGHT	39F6	396	2	1	52	0
	39F7	5124	1	0	3	0
	38F6	465	3	0	52	0
	38F7	1326	31	0	28	1
EAST COAST (SCOTLAND)	43E8	46	0	256	31	6109
	43E9	0	0	143	1	8
	42E7	53	6	10	3445	842
	42E9	584	0	80	55	324
	41E7	725	8	0	3307	42
	41E8	1231	0	6	132	227
	41E9	221	0	159	39	113
MORAY FIRTH	45E6	9057	0	0	162	34
	45E7	5024	0	510	383	291
	44E6	846	0	2	1261	1192
	44E7	11102	1	1245	38	1156
FORTIES	46E8	0	0	103	37	4181
	46E9	0	0	30	0	2580
	46F0	0	10	434	11	10170
	46F1	0	1	231	39	13259
	45E8	3	0	153	49	5531
	45E9	0	1	176	1	9200
	45F0	0	2	10	9	10779
	45F1	0	1	41	10	8824
	44E8	54	0	70	32	900
	44E9	0	0	678	19	9401
	44F0	0	0	735	55	39091
	44F1	0	4	234	12	5879
ORKNEY	47E7	0	0	8	0	0
	46E6	2	0	0	117	2
	46E7	0	0	93	0	117
SHETLAND	51E8	0	0	7	0	403
	51E9	0	0	7	0	19531
	50E9	0	0	64	2	0
	49E9	0	2	744	0	4750
	47E8	0	0	36	40	18