R1/3

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Charter Vessels *Rosebay* PD 65 and *Robian* FR 29

Cruise 1796H

REPORT

27 May - 14 June 1996

Ports

Loading: Fraserburgh
Unloading: Fraserburgh
Half landing: Peterhead

Personnel

G I Sangster	HSO (in charge)	(27 May - 9 June)
R J Kynoch	SO	(27 May - 9 June)
D S Beveridge	SO	(27 May - 9 June)
M J Burns	SO	(27 May - 9 June)
S J McKay	ASO	(27 May - 9 June)
H Ozbilgin	PhD Student	(27 May - 9 June)

Out-turn days per project: 14 days IBD1 and five days IAI1

Objectives

1. To investigate the influence of cod-end mesh size and diameter on pair seine selectivity using covered cod-end techniques. Semi-rigid rings will be used to hold the cover off the cod-end meshes.

2. To carry out instrumented fishing gear trials, working in cooperation with FRV *Clupea* on cruise 0996C.

Narrative

Staff, together with equipment, travelled to Fraserburgh on 27 May to join the vessels. Both vessels were fitted out with the scientific gear and familiarisation trials commenced that same afternoon in local waters. Thereafter, mesh selection experiments were carried out on suitable fishing grounds around the Forties area. The test cod-ends were divided between the two vessels and a changeover of cod-ends was made after the half landing to minimise any vessel or trawl effect. The test cod-ends carried in the trials were:

Number	Mesh size (nominal)	Diameter (total meshes round)	Number	Mesh size (nominal)	Diameter (total meshes round)
1	90 mm	100	5	90 mm	120
2	100 mm	120	6	100 mm	100
3	110 mm	100	7	110 mm	120
4	120 mm	120	8	120 mm	100

Gear performance was measured, where possible, using Scanmar equipment. Vessel ground speed and distance covered was logged for most hauls. Due to severe adverse weather, the half landing was bought forward by a day and took place on 1 June at Peterhead. The selectivity part of the trials ended at Fraserburgh on 9 June and staff returned to Aberdeen. For the last five days of the trials the vessels took part in gear instrumentation work with FRV *Clupea* on suitable grounds off Fraserburgh.

Results

A total of 41 pair seine hauls were made, of which 32 provided adequate quantities of fish in both cod-end and cover for selectivity purposes. Due to the size ranges of fish populations on the grounds, it was decided to concentrate only on the 90 mm, 100 mm and 110 mm cod-ends.

The results will be fully analysed in the Laboratory. Preliminary haul by haul analyses were obtained during the trials. Details of the cod-end mesh selection data are as follows:

Cod-end (mm)	Total meshes round	Species	L50	Selection range
90	100	Haddock	26.4	6.45
			26.4	7.35
			26.5	3.47
			29.8	3.80
		Whiting	35.4	12.10
			31.9	4.90
		Cod	30.8	4.60
90	120	Haddock	27.1	3.64
			24.5	4.09
			26.2	3.50
100	100	Haddock	33.4	6.50
			27.3	4.90
			31.8	4.90
			28.6	4.52
			26.0	6.30
			28.6	6.99
			32.7	4.51
		Whiting	30.7	10.50
		Cod	36.4	3.85

Cod-end (mm)	Total meshes round	Species	L50	Selection range
100	120	Haddock	29.5	3.80
			30.4	7.40
			29.6	3.60
			30.3	3.36
			29.8	5.90
			30.5	4.90
		Whiting	34.0	6.40
		Cod	34.4	4.10
			33.8	5.40
			35.4	3.70
110	100	Haddock	35.5	11.30
			32.7	9.80
			35.2	6.70
			34.4	4.80
			35.6	4.50
			34.9	7.00
		Cod	37.1	8.97
			38.3	6.90
			37.8	11.40
110	120	Haddock	34.3	4.90
			34.5	5.00
			32.9	5.50
			28.9	3.84
			36.3	8.90
			32.9	8.77
		Cod	36.9	4.00
			38.5	4.40
			37.5	6.40
			42.6	10.70

G I Sangster
4 July 1996