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CRUISE REPORT

FRV GOLDSEEKER

November 11 - December 5 1975

Objectives

1. To undertake comparative fishing experiments with a standard 70 mm mesh Nephrops trawl and cod-end being towed for varying times.
2. To study the catch composition of Nephrops on the grounds fished.

Narrative

Crew and scientific staff joined 'Goldseeker' at Methil on November 10. Next morning gear and stores were loaded and trawling commenced in an area off Craig Leith. Fishing continued intermittently until November 26 when bad weather stopped work. The scientific staff returned to Aberdeen on December 2, 'Goldseeker' waiting for a break in the weather to make a passage to Buckie which she reached on December 4.

Twenty-four trawls of varying times were completed, eight of 2 hours, eight of 1 hour and eight of $\frac{1}{2}$ hour. All trawls were made with a small mesh whole-cover over the cod-end, the large and small-mesh catches of Nephrops and fish being treated separately. Cod-end measurements were made daily. The quantity and composition of the by-catch was noted for all hauls.

Results

The total number of Nephrops caught was 77,506 of which 23,442 were sexed and measured. Table 1 shows the aggregate catch of Nephrops taken in $\frac{1}{2}$ hour, 1 hour and 2 hour trawls respectively for large and small-mesh cod-end and overall in 5 mm carapace length groups. Table 2 shows the Nephrops catch composition in 5 mm carapace length groups and overall, together with the mean carapace lengths. A further statistical analysis of the Nephrops catch will be undertaken.

The commonest fish species caught were common dab, whiting, long-rough dab and haddock in that order numerically.

The mean mesh measurement of the large mesh cod-end was 70.2 mm. Surface temperatures ranged from 10.6°C to 8.9°C (mean 9.6°C).

C Davidson
15 December 1975

Seen in draft - W B Reid

TABLE I

The numbers of Nephrops - large mesh, small mesh and overall - taken in 8 x $\frac{1}{2}$ hour trawls, 8 x 1 hour trawls and 8 x 2 hour trawls.

$\frac{1}{2}$ Hour Trawls

Carapace L (mm)	10/14	15/19	20/24	25/29	30/34	35/39	40/44	45/49	50/54	55/59	Total No
L Mesh	-	206	1567	2389	818	236	84	-	2	-	5302
S Mesh	-	229	1078	872	165	21	2	-	-	-	2637
Overall	-	435	2645	3261	983	257	86	-	2	-	7669

1 Hour Trawls

L Mesh	6	775	3966	6037	1925	545	234	15	4	-	13507
S Mesh	8	586	2617	2149	369	26	10	-	-	-	5765
Overall	14	1361	6583	8186	2294	571	244	15	4	-	19272

2 Hour Trawls

L Mesh	-	1541	10377	14591	4941	1309	481	84	28	6	33358
S Mesh	6	1361	7858	6607	1194	139	40	1	-	-	17206
Overall	6	2902	18235	21198	6135	1448	521	85	28	6	50564

TABLE 2

The Nephrops catch composition (total catch) of male, female and berried Nephrops, with numbers and percentages at each size group and mean carapace lengths.

CARAPACE L (mm)	10/14	15/19	20/24	25/29	30/34	35/39	40/44	45/49	50/54	55/59	Total No	MEAN CL (mm)	
♂	No	-	2496	14403	19880	7956	2050	554	34	6	-	47379	26.5
	%	-	5.3	30.4	41.9	16.8	4.3	1.2	0.1	+	-		
♀	No	20	2193	13061	12776	1456	225	282	82	28	5	30128	24.6
	%	0.1	7.3	43.4	42.4	4.8	0.7	0.9	0.3	0.1	+		
No Berried	-	-	-	19	32	9	8	-	-	-	-	-	-