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Cruise Report

FRV Goldseeker

5 - 29 November 1974

Objective

To undertake comparative fishing experiments with different rigs of a standard (70 mm mesh) Nephrops trawl and cod-end.

Narrative

After a gear change at Leith on 5 November Goldseeker proceeded to Anstruther. Fishing commenced next morning off Fidra, where reasonable catches of Nephrops were made. All subsequent fishing throughout the cruise was carried out in that area. Throughout the cruise both trawls used were similarly rigged. One trawl and one cod-end were damaged and had to be changed. When damage occurred the programmed towing time of two hours was halved to increase the number of trawls. Operations were curtailed by bad weather. Goldseeker left Anstruther on the 28th and docked later that day in Aberdeen.

Mesh measurements of the cod-ends and of the cod-end cover were made periodically throughout the experiment.

Results

A total of twenty-eight trawls were completed, fourteen with cod-end only and fourteen with cod-end plus lifting cover.

The catch composition, size ranges and mean carapace lengths of the Nephrops caught by different rigs are shown in Tables 1 and 2. A further statistical analysis of the results is to be undertaken.

Mesh measurements of the cod-ends showed the mean mesh size of the first cod-end used to be 65.6 mm and of the second to be 66.0 mm; the mean mesh size of the lifting cover was 97.6 mm.

The most numerous fish species in the by-catch were whiting and common dab.

Surface temperatures ranged from 8.0°C to 10°C with a mean of 8.9°C.

C Davidson  
15 January 1975

Table 1

The Nephrops catch composition in 5 mm carapace length groups by (A) Nephrops trawl and cod-end only and (B) Nephrops trawl and cod-end with 100 mm mesh lifting cover.

Carapace length (mm)		15/19	20/24	25/29	30/34	35/39	40/44	45/49	50/54	55/59	60/64	Total No	Mean CL(mm)
Gear (A)	No	337	2,605	8,347	3,454	1,888	523	128	29	15	1	17,327	28.8
	%	1.9	15.0	48.2	19.9	10.9	3.0	0.7	0.2	0.1	+		
(B)	No	155	1,281	3,903	1,900	1,094	342	90	20	1	2	8,798	29.3
	%	1.8	14.6	44.4	21.6	12.4	3.9	1.0	0.2	+	+		

Table 2

The catch composition (total catch) of male, female and berried female Nephrops

Males	No	234	1,820	7,118	4,711	2,718	713	152	31	12	3	17,522	30.1
	%	1.3	10.4	40.6	26.9	15.5	4.1	0.9	0.2	0.1	+		
Females (total)	No	258	2,066	5,132	643	264	152	66	18	4	-	8,603	26.7
	%	3.0	24.0	59.6	7.5	3.1	1.8	0.8	0.2	+	-		
Berried Females	No	-	-	66	56	24	28	13	1	-	-	188	-
% berried at each size group	%			1.3	8.7	9.1	18.4	19.7	5.6	-	-		