

IN CONFIDENCE: Not to be quoted without reference to the laboratory.

CRUISE REPORT

TRV "GOLDSEEKER"

19 July - 12 August 1971

OBJECTIVES:

1. To undertake Nephrops creeling in the Sound of Jura and the Firth of Lorne.
2. To compare the efficiencies of two types of Nephrops creel.
3. To compare the efficiencies of salted mackerel and unsalted bait.
4. To investigate the stocks of Nephrops by trawling.
5. To grab for 0-group Nephrops.
6. To take daily surface temperature readings.

NARRATIVE:

"Goldseeker" proceeded through the Caledonian Canal and started fishing south of Oban on 22 July. Operations continued in the Sound of Jura - Firth of Lorne area with only one day being lost through bad weather. The cruise ended at Corpach where the vessel was unloaded on 12 August.

RESULTS:

1. Creeling

Six fleets of 10 creels were shot and hauled daily. Nephrops were caught in good numbers south of Kerrera, south-west of Lismore and in the Crinan and Loch Melfort areas. Poorer catches were obtained in Loch Sween and Loch Buie. No Nephrops were caught in Loch Caolisport. The mean carapace length of males was 45.7 mm and females 39.8 mm. The composition of the catch is shown in Table I.

Table 1

The catch composition and length frequency distribution of Nephrops taken by creels.

Carapace mm	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	65-9	70-4	Total
♂	5	10	47	95	129	103	76	63	38	8	8	582
%	0.85	1.7	8.1	16.3	22.2	18.0	13.05	10.8	6.5	1.4	1.4	
♀	-	12	83	155	210	97	10	3	-	-	-	570
%	-	2.1	14.6	27.2	36.8	17.0	1.75	0.5	-	-	-	
♂ + ♀	5	22	130	250	339	200	86	66	38	8	8	1152
%	0.4	1.9	11.3	21.7	29.4	17.4	7.5	5.7	3.3	0.7	0.7	

2. Creel comparison

The fishing efficiency of creels with normal eyes were compared with ones having the lower part of the eye funnel covered with a fine mesh "walk in". Equal numbers of each type were used. The creels with modified eyes caught more Nephrops than the standard creels (Table II).

Table II

Comparison of catches of creels and baits

Creel	Bait	Catch per 100 creel hauls (number of <u>Nephrops</u>)
Standard	Fresh	152
	Salt	105
Modified eye	Fresh	212
	Salt	177

3. Bait comparison

Fresh fish and salt mackerel were used as bait in alternate fleets. Fresh bait was more efficient than salt (Table II).

4. Trawling

A total of 5 hauls was made using the "Goldseeker" standard Nephrops trawl, in the areas south of Kerrera, north of Gigha and off Lismore. Dogfish and small gadoids made up the bulk of the catches, which were small. The mean carapace length of males was 36.8 mm and females 30.5 mm. The composition of the Nephrops catch is shown in Table III.

Table III

The catch composition and length frequency distribution of Nephrops taken by trawl.

Carapace mm	15-9	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	Total
♂	2	30	61	58	47	70	37	17	6	2	330
%	0.6	9.1	18.5	17.6	14.2	21.2	11.2	5.1	1.8	0.6	
♀	3	42	81	48	22	27	3	-	-	-	226
%	1.3	18.5	35.8	21.2	9.7	11.9	1.3	-	-	-	
♂ + ♀	5	72	142	106	69	97	40	17	6	2	556
%	0.9	12.9	25.5	19.1	12.4	17.44	7.2	3.0	1.1	0.35	

5. Grab sampling

Hauls, using the 1/10 metre van Veen grab, were taken in each area but no Nephrops were caught.

6. Temperatures

Surface temperature readings ranged from 12.2°C south of Kerrera to 15.0°C in Loch Sween.

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