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Cruise Report

FRV "Goldseeker"

10 July - 3 August 1972

Objectives:

1. To undertake creeling in the Sound of Jura and Firth of Lorn for Nephrops and Munida.
2. To compare the efficiencies of two types of Nephrops creel.
3. To compare the efficiencies of salted mackerel and unsalted bait.
4. To beam-trawl for 0-group Nephrops.
5. To investigate the stocks of Nephrops by trawling and examine the stomach contents of Nephrops predators.
6. To take daily, surface temperature readings.

Narrative:

"Goldseeker" arrived in Oban on 12 July and commenced fishing on the following day. Creel and trawl work proceeded without incident until 1 August. The beam-trawl net was irreparably damaged when two large boulders were picked up in Loch Buie on 24 July. The scientific staff left "Goldseeker" at Banavie on 2 August, "Goldseeker" returning to Buckie via the Caledonian Canal.

Results

Creeling

Six fleets, each of 10 creels, were shot and hauled daily. The best Nephrops catches were obtained in Loch Buie, around Eilean nan Coinan north of Crinan, in the Lynn of Lorn and at the southern end of Kerrera Sound. The catch composition of creeled Nephrops is shown in Table 1.

A total of 179 Munida were taken in the creels, 139 with fresh bait, 40 with salt mackerel. The two best hauls were made at Crinan (40 in one fleet) and off Loch Feochan (39 in one fleet), both fleets with fresh bait.

Table 1

The catch composition in 5 mm carapace length groups and the mean carapace lengths of Nephrops taken by creel.

Carapace length	20/24	25/29	30/34	35/39	40/44	45/49	50/54	55/59	60/64	65/69	70/74	Total	Mean C.L.
♂	-	12	22	73	137	124	92	53	23	7	2	543	46.1
%	-	2.2	4.1	13.5	25.0	22.5	17.0	9.8	4.2	1.3	0.4		
♀	4	14	57	85	113	70	14	-	-	-	-	357	39.8
%	1.1	3.9	16.0	23.8	31.6	19.6	3.9	-	-	-	-		

Two types of creel (I) with standard eyes and (II) with eyes modified by having fine mesh "walk-ins" were fished in six fleets. Each fleet was baited throughout with either salted mackerel or fresh fish. The type of bait being changed in each fleet at each hauling. Modified eyes were slightly more efficient than standard eyes; salt mackerel caught more Nephrops than fresh fish (Table II)

Table II

A comparison of creels and baits

Creel eye	Bait	Catch/100 creels (No. of <u>Nephrops</u> )
Standard	Fresh	91
	Salt	90
Modified	Fresh	84
	Salt	127

#### Beam-trawl

Ten 15 minute hauls were made with the beam-trawl. Only one small Nephrops - a ♀ of 14 mm carapace length - was caught. Other Nephrops taken with this gear ranged in carapace length from 22 - 51 mm.

#### Trawling

Fourteen trawls were made using "Goldseeker's" standard Nephrops trawl, the best catches being made off Loch Caolisport, in the Lynn of Lorn and in Loch Linnhe. The catch composition and mean carapace lengths in mm are shown in Table III.

Table III

The catch composition in 5 mm carapace length groups and the mean carapace lengths in mm of Nephrops taken by trawl.

Carapace length	15/19	20/24	25/29	30/34	35/39	40/44	45/49	50/54	55/59	60/64	Total	Mean C.L.
♂	-	10	82	204	309	209	111	59	17	6	1007	37.8
%	-	1.0	8.1	20.3	30.7	20.7	11.0	5.8	1.7	0.6		
♀	1	16	169	335	234	128	26	3			912	34.0
%	0.1	1.7	18.5	36.7	25.7	14.0	2.9	0.3				

In one trawl in the Lynn of Lorn 45 Munida were taken. No small Nephrops were found in the predator stomachs examined.

Temperature readings

Surface temperatures ranged from 11.2°C off Loch Feochan to 18.0°C in Loch Milfort.

C Davidson  
11 August 1972