

IN CONFIDENCE: Not to be quoted without reference to the Laboratory

CRUISE REPORT  
FRV GOLDSEEKER  
1 - 24 NOVEMBER 1977

### Objectives

1. To investigate the selectivity of a shrimp trawl, particularly of those parts of the net other than the cod end.
2. To assess the stocks of Dichelopandalus bonnieri off Gairloch and the Small Isles.
3. To assess the Nephrops stocks in the same area, and to investigate the occurrence of Nephrops with a carapace length less than 20mm.
4. To obtain samples of live Chlamys opercularis.

### Narrative

The scientific staff joined GOLDSEEKER at Corpach on 1 November. The boat sailed next day and dredging was carried out in the Sound of Mull. Live queens were landed at Oban to be transported back to the Laboratory.

From Oban the vessel steamed to Ullapool, and a series of trawl hauls were made in Loch Broom and Little Loch Broom.

Severe gales prevented the vessel from working south to the Gairloch area.

Dr Mason and Mr Craig joined the vessel on 15 November to observe the modified trawlrig and winding-on gear in operation. They also examined safety factors on board.

From Ullapool the boat steamed to Kyle of Lochalsh, and again severe weather conditions prevented work except in certain sheltered lochs. Continued gales prevented the vessel from returning to Buckie, and she was left at Kyle for the long weekend.

The scientific staff left GOLDSEEKER at Kyle on 22 November.

Some difficulty was experienced when trawling in deep water owing to the reduced amount of warp now on the winch barrels.

### Results

a) Dredging Six 15 minute dredge hauls using the standard 16-tooth scallop dredge were made at the eastern end of the Sound of Mull. A total of 408 queens were caught and landed live; 68 scallops were also caught, their age composition is given in table I. Five queen spatula were found on Laminaria.

b) Trawling A total of 14 half hour hauls were carried out using a 45mm shrimp trawl and 35mm cod end. Six, one metre square small mesh pouches were fitted to parts of the square and belly of the net.

Because of weather conditions, trawling was restricted to sheltered waters, and hauls were carried out in Loch Broom, Little Loch Broom, around the Crowlin Islands, Loch Duich and Loch Alsh.

Nephrops were caught in all hauls, their size ranges and sex composition are given in table II.

No hauls were made on known shrimp grounds, and catches of shrimp were negligible.

Fish catches were variable, the most common species caught were dogfish, skate, haddock and whiting. The last two were generally undersized, in range 11 - 26 cm. Good catches of haddock in the range 23 - 37 cm were made in Little Loch Broom.

Two baskets of queens were taken by trawl in Loch Alsh.

Nephrops were examined for the trematode parasite Stichocotyle nephropis. Percentage infestations found, ranged from 0% in Loch Broom to 15.6% at the Crowlin Isles and 35.2% in Loch Duich.

Seen in draft A Mair

F G HOWARD  
23 December 1977

Table I Percentage age composition of scallops caught in the Sound of Mull.

No of growth rings											No. in best catch
0	1	2	3	4	5	6	7	8	9	>9	
1.5	2.9	4.4	7.4	1.5	19.1	11.8	14.7	8.8	4.4	25.5	45

Table II Size ranges and sex composition of Nephrops

Area	10-4	15-9	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	65-9	70-4	75-9	Total	Mean Carapace Length
Little Loch Broom																
Male		4	29	155	215	212	120	58	25	10	4	5			837	36.1
Female		4	43	124	47	48	31	9							306	31.1
Berried ♀				3	16	22	10	3							54	36.9
Loch Broom																
Male				12	21	49	33	19	7	4	2	-	1		148	40.2
Female			1	3	7	3	2	1							17	34.0
Crowlin Isles																
Male	1	4	15	48	125	96	61	58	14	10	9	4	-	1	446	38.1
Female		3	15	40	39	18	19	7	1	1					143	32.7
Berried ♀				1	6	10	9	3							29	38.7
Loch Duich																
Male			5	41	103	54	28	20	16	20	9	2			298	38.4
Female			3	46	61	26	21	3	1	1					162	33.6
Berried ♀					10	21	19	2	1	1					54	39.4