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reference to the laboratory

## CRUISE REPORT

### FRV GOLDSEEKER

7 January - 24 January 1974 (Part I)  
29 January - 14 February 1974 (Part II)

### Objectives

To undertake comparative fishing experiments in the Firth of Clyde area with various cod-end rigs on a Nephrops trawl.

### Narrative

'Goldseeker' left Buckie on 9 January and the scientific staff for Part I joined her at Oban on 16 January. She proceeded into the Clyde, where trawling was prosecuted off S E Arran, but persistent southerly gales caused many delays. The first part ended at Troon on 24 January.

The scientific staff for Part II joined at Troon on 29 January. Trawling was continued in the area off S E Arran. Weather conditions were greatly improved for this part of the cruise. The second part ended at Troon on 14 February.

### Results

A total of thirty three, one hour hauls were made with a standard 70 mm Nephrops trawl. Three different cod-end rigs were used:

- A - with small mesh whole cover
- B - with a 100mm lifting cover
- C - an uncovered cod-end.

Eleven hauls with each rig were made, and the rigs were fished in a random pattern.

The exact mesh measurements of each cod-end were determined; these were:

'A' - small mesh cover	:	34.1 mm
'A' - '70' mm cod-end	:	65.5 mm
'B' - '70' mm cod-end	:	69.2 mm
Lifting cover	:	101.2 mm
'C' - '70' mm cod-end	:	65.3 mm

The catch composition, size ranges and mean carapace lengths of the stock fished are shown in Tables 1 and 2.

The commonest fish species caught were cod, hake, saithe, whiting, long rough dabs and Trisopterus minutus.

Surface temperatures ranged from 6.2°C to 6.8°C with a mean of 6.6°C.

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1 March 1974

Table 1

Catch composition and size ranges  
of Nephrops taken with the different cod-end rigs

Gear	Sex	15-9	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	Total	Mean carapace length	MCL ♂ + ♀
'A' Small mesh cover	male	-	15	36	15	1	-	-	-	-	67	27.7 mm	} 27.5 } 30.5
	female	-	8	33	4	-	-	-	-	-	45	27.0	
'A' '70 mm' codend	male	1	127	819	745	391	115	17	2	-	2,217	31.5	} 30.7 }
	female	6	116	551	309	43	1	-	-	-	1,026	28.7	
'B' '70 mm' codend + 100 mm lifting bag	male	1	99	648	514	238	63	9	-	1	1,573	31.2	} 30.3 }
	female	1	105	452	224	9	1	1	-	-	793	28.4	
'C' '70 mm' cod-end	male	3	148	1,077	785	341	113	31	4	-	2,502	31.3	} 30.2 }
	female	4	144	680	352	15	-	-	-	-	1,195	28.4	
Gear 'A' % escapes: cod-end to small mesh cover		0.0	8.6	4.8	1.8	0.2	0.0	0.0	0.0				

Table 2

Catch composition and size ranges of all Nephrops

Size range mm	15-9	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	Total	Mean carapace length
Total male	5	389	2,580	2,059	971	291	57	6	1	6,359	31.3 mm
Total female	11	373	1,716	889	67	2	1	-	-	3,059	28.5 mm
Berried female	-	-	1	6	2	-	-	-	-	9	32.3 mm
Total catch	16	762	4,296	2,948	1,038	293	58	6	1	9,418	30.4 mm