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IN CONFIDENCE: NOT TO BE QUOTED WITHOUT REFERENCE TO THE LABORATORY

CRUISE REPORT

FRV "GOLDSEEKER"

10 September - 5 October 1973

## OBJECTIVES:

To undertake comparative fishing with various rigs of Nephrops trawl.

## NARRATIVE:

The crew and scientific staff joined "Goldseeker" at Stornoway on 10 September. Gear and stores were loaded and "Goldseeker" commenced work next morning in the area east of Tiumpán Head. Trawling continued in the area until 28 September. The last working week was interrupted by bad weather, and on 1 October "Goldseeker" made for the Caledonian Canal en route to Buckie where she docked on 5 October.

## RESULTS:

Thirty two hauls varying in time from one to two hours were made with a standard 70 mm Nephrops trawl. Each haul was made using one of the two following types of cod-end:-

- 1) Standard cod-end (mesh 64.2 mm) with small mesh whole cover.
- 2) Trouser cod-end with leg A (mesh 65.8 mm) fitted with a small mesh whole cover, and leg B fitted with a lifting cover (mesh 137 mm) and small mesh whole cover.

The gear was fished in sequence as programmed, but the duration of tow had to be altered owing to wind and tide, and varied from 1 to  $1\frac{1}{2}$  and 2 hours. Eleven hauls (total fishing time of  $16\frac{1}{2}$  hours) were made with 1) and 21 hauls (total fishing time  $31\frac{1}{2}$  hours) was made with 2).

The escape pattern from the different gears, mean overall carapace lengths, size and sex compositions of the stock fished are shown in Tables 1 and 2. The commonest species of fish taken were Trisopterus esmarkii, four bearded rocklings and whiting.

Surface temperatures ranged from  $12.5^{\circ}\text{C}$  to  $13.3^{\circ}\text{C}$  with a mean of  $13.0^{\circ}\text{C}$ .

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20 December 1973

TABLE 1

The percentage escape of Nephrops from cod ends (I), (IIA) and (IIB) in 5 mm carapace length groups, with total numbers and mean overall carapace length

	15/19	20/24	25/29	30/34	35/39	40/44	45/49	50/54	55/59	Total No.	Mean overall carapace length
(I) Standard cod end. Cod end.	97	691	2116	1817	835	177	24	3	1	5761	
mesh 64.2 mm. Small mesh cover	125	382	584	235	46	1	-	-	-	1373	29.0
% escapes	56.3	35.6	21.6	11.5	5.2	0.6	0.0	0.0	0.0		
Trouser cod end leg A Cod end	28	305	1175	1269	612	101	16	1	-	3507	
mesh 65.8 mm. Small mesh cover	23	202	447	271	48	4	-	-	-	995	29.8
% escapes	45.1	39.8	27.6	17.6	7.5	3.8	0.0	0.0	-		
(II) Trouser cod end leg B Cod end	30	366	1349	1337	593	112	22	4	-	3813	
mesh 65.4 mm. Small mesh cover	24	178	407	199	55	6	0	0	-	869	29.7
% escapes	44.1	32.7	23.2	13.0	8.5	5.1	0.0	0.0	-		

TABLE 2

The size-and-sex composition and numbers of Berried females in 5 mm carapace length groups  
with total numbers and mean overall carapace length.

	15/19	20/24	25/29	30/34	35/39	40/44	45/49	50/54	55/59	Total No.
(I) Cod end plus										
Total ♂	120	476	1456	915	299	93	21	2	1	3383
small mesh cover										
Total ♀	102	597	1244	1137	582	85	3	1	-	3751
Berried ♀	-	4	175	365	155	13	-	-	-	712
Cod end plus										
Total ♂	27	228	964	812	272	63	14	1	-	2381
A. Small mesh cover										
Total ♀	24	279	658	728	388	42	2	-	-	2121
Berried ♀	-	1	68	168	85	5	-	-	-	327
(II)										
Total ♂	28	238	988	805	242	61	16	4	-	2382
B.       " ♀	26	306	768	731	406	57	6	-	-	2300
Berried ♀	-	-	88	145	94	15	1	-	-	343