

In confidence: Not to be quoted without reference to the Laboratory
Cruise Report

FRV 'Goldseeker'

9 - 20 May 1977

Objectives

1. To compare the selectivity of 70 and 50 mm Nephrops trawls on grounds in the Moray Firth.
2. To record incidence of Nephrops in fish stomachs.
3. Sampling of by-catch taken by each gear.
4. Biometric measurements on Nephrops: carapace length; total length; total weight; tail weight; head weight.

Narrative

The scientific staff joined 'Goldseeker' at Buckie on May 9. A programme of trawling was carried out on the grounds off Buckie and Nairn as conditions permitted. Three days fishing were lost owing to adverse weather conditions.

The cruise ended at Buckie on May 20.

Methods

The trawling programme was carried in the late evening and early mornings using 50 mm and 70 mm Nephrops trawls with 70 mm cod-end and 50 mm cover.

Results

20 one-hour hauls (10 with each gear) were carried out and a total of 8381 Nephrops (5041 males and 3340 females) of the females 61 (1.83%) were berried.

The by-catch consisted mainly of whiting, dab, a few haddock, cod, small lemon sole; few of the fish caught were of marketable size. Stomach contents were examined for the occurrence of Nephrops remains. From cod (.17) and a number of haddock and whiting only one cod-stomach contained evidence of Nephrops predation.

Mesh measurements were carried out during the trip and showed the following means.

Nets	(70 mm)	64.6 mm
	(50 mm)	47.1 mm
Cod-end	(70 mm)	64.5 mm
Cover	(50 mm)	47.6 mm

Because of the lack of suitable shore facilities and the problem of vibration on board 'Goldseeker' objective 4 was deferred to the next cruise.

The size ranges, sex composition and mean carapace lengths are shown in the following tables in 5 mm groups.

Table I 70 mm trawl with 70 mm Cod-end and 50 mm cover.

Carapace length (mm)	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	Totals	Mean Carapace length (mm)
♂	45	311	827	842	321	164	68	14	3	2596	30.1
%	1.7	12.0	31.9	32.4	12.4	6.3	2.7	0.5	0.1	-	
♀	111	505	807	359	133	31	10	-	-	1956	
%	5.7	25.8	41.2	18.3	6.8	1.6	0.5	-	-	-	25.6
Cover	2	23	44	25	2	1	-	-	-	97	
♂ & ♀ %	2.0	23.7	45.4	25.8	2.1	1.0	-	-	-		

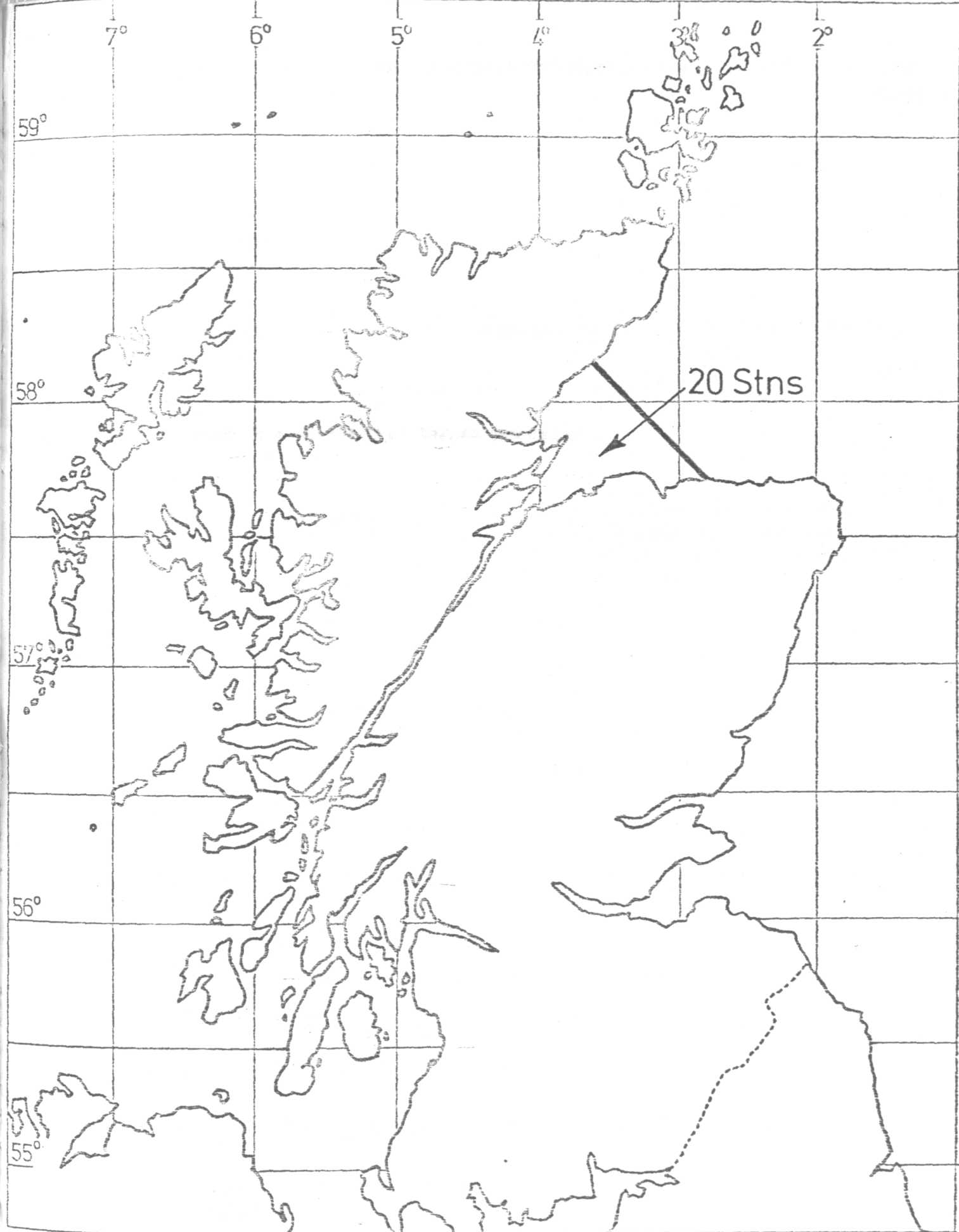
Table II 50 mm trawl with 70 mm Cod-end and 50 mm cover

Carapace length (mm)	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	Totals	Mean Carapace length (mm)
♂	16	216	847	772	308	198	63	25	-	2445	34.6
%	0.6	8.8	34.6	31.6	12.6	8.1	2.6	1.0	-	-	
♀	28	137	772	318	109	18	2	-	-	1384	28.3
%	2.0	9.1	55.8	22.9	7.9	1.3	0.1	-	-	-	
Cover	1	16	38	26	13	2	-	-	-	96	
♂ & ♀ %	1.0	16.7	39.6	27.1	13.5	2.1	-	-	-	-	

J A Sinclair
1 August 1977

Seen in draft: A Mair Goldseeker

Note: In the course of trawling operations during the trip, the trawl boards coming up inside the gantry uprights gave some problems in any swell. Some difficulty could arise in any heavy weather as the boards would be inclined to "take charge" until secured to the stanchions. This may constitute some risk to crew members on the stern of the vessel where room for manoeuvre is somewhat restricted. This matter could perhaps be discussed at a later date.



GOLDSEEKER

9

20 MAY

1977