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MS  
6GR79

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

FRV 'Goldseeker'

Cruise 6/79

Report

7-31 May 1979

### Objectives

1. To investigate the selectivity of a shrimp trawl, particularly of parts of the trawl other than the cod end.
2. To undertake a survey of the Pandalus borealis stocks on the Farn Deep.
3. To undertake a Pandalus and Nephrops larval survey.

### Narrative

Scientific equipment was loaded at Buckie, and "Goldseeker" left there on 7 May. The scientific staff joined the vessel at Blyth on 8 May.

A series of trawl hauls ranging in duration from half an hour to three hours were made on grounds 12 miles east of Blyth. A total of 25 hauls using a standard 45mm shrimp trawl were worked, 13 hauls were made using a cod end of 35mm and 11 hauls with a cod end of 25mm stretched mesh. One haul was foul.

Twenty-one plankton tows were made using a metre net; three horizontal tows of 15 min duration were made at different depths at stations 3, 6, 9 and 12 miles offshore. Surface temperatures were taken daily.

Live Myxine were sent to the Endocrinology Unit, Hammersmith Postgraduate Medical School.

The scientific staff left "Goldseeker" on 29 May, the vessel proceeding to Buckie.

### Results

Catches of Pandalus were good, a total 285kg being caught with a total catch rate of 9.6kg/hr, or 14.3kg/hr in those hauls which contained shrimp.

Nephrops catches were generally poor, but improved slightly during the second half of the cruise. A total catch of 35kg were taken. The size range and sex composition are shown in Table I.

Fin-fish catches were good with cod (size range 34-74cm) being the dominant species caught. Other species caught in quantity were plaice (size range 20-45cm), lemon sole (size range 21-34cm) and skate (range of wing width 17-31cm). In one haul 37 herring (size range 23-31 cm) were taken.

Whiting (size range 7-20cm), four bearded rockling and Lumpenus constituted the bulk of the trash fish species.

Small mesh pouches attached to different parts of the net collected varying quantities of shrimp and trash fish.

The stomach contents of cod (37 individuals) and four bearded rockling (11) were examined. The results are shown in Table II.

The average surface temperature during the cruise was 8.6°C, the surface temperature range was 7°C-10.6°C.

F G HOWARD  
15 June 1979

Seen in draft W B Reid

TABLE I

Nephrops length frequency composition

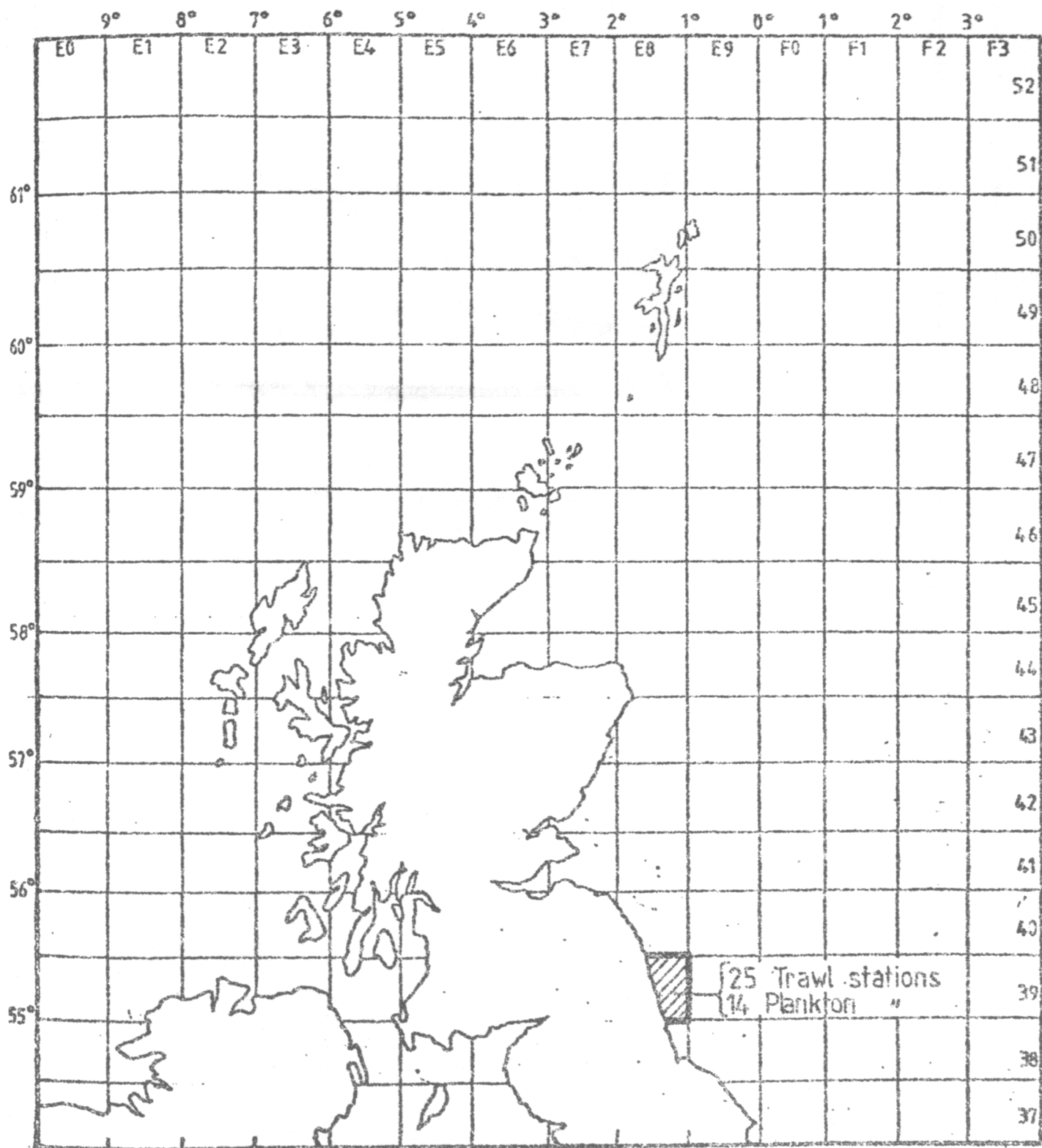
Carapace length (mm)

	15-9	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	Total	MGL
Males	9	45	179	249	95	97	55	31	9	1	770	34.7
Females	1	25	59	56	11	8	3	-	-	-	163	30.2
Female berried				1							1	
Total	10	70	238	305	106	105	58	31	9	1	933	33.9
%	1.1	7.5	25.5	32.7	11.4	11.3	6.2	3.3	1.0	0.1		

TABLE II

Stomach contents: % occurrence of prey species

	Pandalus	Crangon	Nephrops	Calocaris	Fish	Unidentifiable	Empty
Cod(37)	62	0	14	0	43	0	16
Four bearded rockling(11)	0	9	0	18	0	45	27



FRV Goldseeker 715 — 31/5/79

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