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IN CONFIDENCE NOT TO BE QUOTED WITHOUT REFERENCE TO THE LABORATORY

CRUISE REPORT

FRV "GOLDSEEKER"

November 24 - December 24 1970

OBJECTIVES

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1. To investigate the abundance and biology of Pandalus spp., Norway lobsters and squid in the Firth of Clyde.
2. To take temperature readings and plankton samples.

NARRATIVE

The scientific staff joined "Goldseeker" at Troon on November 24. Mr Kinneair replaced Mr Corrigall on November 30, Mr Newberry replaced Mr Kinneair on December 6. Two and a half working days were lost due to gales on 4, 15 and 17 December and a further day was lost on refit inspection.

A Gourock No. 1 pelagic trawl with a cod-end of 50mm was used during the first week of the cruise. With minor adjustments this gear was made to work easily, but the only catches were of Rhizostoma octopus, Meganyctiphanes norvegica and larval fish (Gobius sp.); the latter two species being entangled in the net.

A standard prawn-trawl with fine mesh cod-end cover was used for bottom trawling.

"Goldseeker" sailed for Buckie on 18 December and docked there on the 24th.

RESULTS

1 (a) Pandalus bonnierii were taken in small numbers with the prawn trawl over a fairly wide area. A total of 337 individuals were caught, the catch composition is shown in Table 1.

Table 1

	No.	Mean carapace length mm
Berried	137	18.1
Un-berried	38	13.1
Total	175	17.0
Total	162	15.7

The embryos which the berried females were carrying were all in an early stage of development pre eye-pigmentation.

(b) Norway lobsters were generally scarce and of small size, the percentage size composition of the catch with mean carapace lengths in mm is shown in Table 2.

Table 2

Length groups in mm	15/19	20/24	25/29	30/34	35/39	40/44	45/49	50/54	55/59	60/64	65/69	Mean C.L.
No. 3337 ♂	0.5	10.8	36.0	24.4	13.2	10.0	3.7	0.8	0.4	0.1	+	31.5
" 1359 ♀	1.6	27.3	43.6	20.8	5.7	1.0	-	-	-	-	-	27.1

The maturity of the gonads of 1161 female Norway lobsters was estimated and are tabulated in Table 3.

Table 3.

Gonad stage	0	1	2	3	4	5	Berried
% age at each stage	19.2	38.4	21.4	15.8	2.8	1.3	0.9

The eleven berried females were all in early stages of development, only two showed the first stage of eye pigmentation.

The ratio of males to females was 1.0:0.4.

(c) Squid (Loligo forbesii) were extremely scarce only three individuals, 2 males 1/25, 1/30 and one female 1/20 being caught; the commercial fleet fishing in the area were landing very limited numbers.

2. Hydrography and Plankton.

Surface sea temperatures ranged from 8.8°C to 9.5°C with a mean of 9.2°C.

In the plankton hauls, the dominant species at all stations was the chaetognath Sagitta elegans. Calanus finmarchicus was present in moderate numbers with small numbers of Para/Pseudocalanus, Acartia and Candia armata throughout the area.

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