

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

CRUISE REPORT

FRV "GOLDSEEKER"

7-30 November 1972

OBJECTIVES:

1. To investigate the distribution, abundance and biology of Nephrops and Pandalus spp in the Firth of Clyde.
2. To investigate the possible diurnal vertical migrations of Pandalus bonnierii.
3. To study the occurrence of Nephrops in the stomachs of predators.
4. To take: daily surface temperature readings.

NARRATIVE:

The scientific staff joined 'Goldseeker' on 6 November at Troon. South westerly gales during the first week hampered the work programme, but subsequently a series of trawl hauls were made, mainly in the area off SE Arran and in Loch Fyne. Work continued until 23 November, when the vessel entered the Crinan Canal. Ice in the canal prevented 'Goldseeker' from making a quick passage, the scientific staff left the ship on 26 November at Crinan, and 'Goldseeker' then proceeded to Buskie.

RESULTS

Nephrops investigations

Fourteen half-hour hauls, using a standard 70 mm Nephrops trawl with small mesh whole cover, were made, and a total of 1993 Nephrops caught and examined. Of these 1291 were males and 702 females, 89 females were berried, all carrying green eggs. The size ranges, sex composition and mean carapace lengths are given in the following table.

Size range (mm)	15-9	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	Total	Mean carapace length (mm)
Total male	3	121	523	360	145	70	43	21	4	1	1291	31.4
Total female	3	119	380	158	35	7	-	-	-	-	702	28.4
Berried female	-	1	40	42	5	1	-	-	-	-	89	30.3

In an attempt to catch small Nephrops (<15 mm carapace length), a haul was made with an 8 ft beam trawl with fine mesh net. No Nephrops were taken although large numbers of Calocaris macandreae were caught. The carapace length of the Calocaris ranged from 8 mm to 18 mm.

The stomach contents of Nephrops predators were examined. Few Nephrops were found, and all were of carapace length 25-35 mm.

Pandalus investigations

Small numbers of Pandalus sp were caught together with Nephrops in the 70 mm Nephrops trawl. In addition to these hauls five hauls were made using the Universal shrimp trawl, in midwater, three hauls in day-light and two in darkness.

Two Pandalus bonnieri were taken in one of the night hauls, together with Trisopterus esmarki, whiting and sprat. T. esmarki were taken in both night hauls. In the daylight hauls a mixture of herring and sprat were caught. A total of 85 fish with a size range of 4-6 cm were taken. Meganyctiphanes were present in all hauls.

Three hauls were made using a fleet of six creels equally-spaced and hung vertically in 50 fm of water. Pandalus sp were found in small numbers in some creels off the bottom.

General

White fish were present in most hauls using the 70 mm Nephrops trawl. The main species caught were whiting, hake and saithe all in quite large numbers. Total numbers caught were whiting 510, hake 337 and saithe 176.

Hydrography

Surface temperatures during the cruise averaged 11.0°C.

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