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Cruise Report

FRV Goldseeker

15 July - 5 August 1976

Objectives

To undertake comparative fishing experiments with a standard 70 mm mesh Nephrops trawl and cod end (A) and a 50 mm mesh Nephrops trawl and cod end (B).

Narrative

Goldseeker left Buckie on Thursday 15 July for Inverness where the scientific staff joined the vessel.

Fishing commenced in the area south-east of Arran on the 20 July. The cruise was completed on 5 August when the vessel was berthed at Troon remaining there during the crews week-end leave period.

Methods

A total of forty-six one hour trawl hauls were carried out using the 70 mm and 50 mm nets to a prearranged trawling pattern. Stomach contents of 73 cod were examined.

Results

Fishing at the outset was extremely poor but the addition of extra chain to the footrope gave improved results. Using the 70 mm gear a total of 6998 Nephrops were caught in 23 one hour hauls while the same number of hauls with the 50 mm net yielded a total catch of 12,647 Nephrops

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

70 mm Nephrops Trawl & cod end.
(Mean cod end mesh measurement 62.8 mm)

| Carapace length (mm) | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | Total | Mean Carapace length (mm) |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|
| Males | 7 | 322 | 909 | 956 | 485 | 390 | 236 | 92 | 29 | 10 | 5 | 3441 | 33.5 |
| Females | 1 | 266 | 696 | 1329 | 956 | 291 | 16 | 2 | - | - | - | 3557 | 32.5 |
| % | 0.1 | 8.4 | 22.9 | 32.7 | 20.6 | 9.7 | 3.6 | 1.3 | 0.4 | 0.1 | + | | |

70 of the total females (1.9%) were berried

50 mm Nephrops Trawl & cod-end
 (Mean Cod end mesh measurement 47.4 mm)

| Carapace length (mm) | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | Total | Mean Carapace length (mm) |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|
| Males | 24 | 864 | 2006 | 1792 | 531 | 318 | 157 | 39 | 4 | 4 | - | 5679 | 30.6 |
| Females | 22 | 748 | 2266 | 2588 | 1086 | 240 | 18 | - | - | - | - | 6968 | 31.0 |
| % | 0.4 | 12.7 | 33.8 | 34.1 | 12.8 | 4.4 | 1.4 | 0.3 | + | + | | - | |

92 of the total females (1.3%) were berried

The fish catch, which was very poor, consisted mainly of Trisopterus esmarkii, Trisopterus minutus, Long Rough Dabs and whiting, a few cod and Hake.

Of the 73 cod examined the stomachs of 41 (56.2%) contained Nephrops remains.

Cod-end measurements were taken at regular intervals surface temperatures ranged from 14.5°C to 15.4°C giving an average of 14.7°C.

J A Sinclair
 14 October 1976

Seen in draft - W B Reid Goldseeker