

R1/6

AMM

In Confidence - Not to be quoted without reference to Laboratory

2CR80

FRV CLUPEA

Cruise 2/80

REPORT

4-27 March 1980

Objectives

- 1 To survey the grounds in the North and South Minches on which populations of Nephrops and Dichelopandalus bonnieri are found.
- 2 To study the abundance and distribution of squid species in the same areas, and to obtain data on mesh selectivity.
- 3 To make photographic studies of Nephrops and D. bonnieri communities.

Narrative

CLUPEA steamed from Stornoway to Ullapool on 4 March. The scientific staff joined at Ullapool on 5 March, and the camera equipment was set up. CLUPEA sailed on 6 March and camera work was carried out in Loch Torridon on 6 and 7 March, after which the boat proceeded to Kyle of Lochalsh for the weekend. Photographic work was carried out at the entrance to Loch Carron on 10 March, and after picking up a replacement mate CLUPEA steamed to the South Minch. Trawling was carried out on grounds between Rhum and Oigh Sgeir, and on grounds east of South Uist.

On 14 March, photographic work was undertaken off Gairloch, and CLUPEA then sailed to Ullapool for the weekend.

On 17 March, CLUPEA again steamed south, carrying out some photographic work in Loch Torridon and Loch Eisort on the way. Trawling was undertaken on grounds south of Rhum, and in the deep water west of Tiree.

On 21 March CLUPEA proceeded to Stornoway for the weekend. Gales prevented sailing on 24 March, but on 25 March trawling was carried out on grounds off Tuiphan Head, and the Summer Isles. CLUPEA sailed for Aberdeen, docking there on 26 March.

Results

Trawling Catches of Nephrops were fairly good in all areas, the length frequency distribution and sex ratios for the North and South Minch are given in Table 1.

Biometric measurements were made on samples of Nephrops from each area, in order to determine the relationship between carapace length, and the width of the second abdominal segment.

Shrimp catches were very poor in all areas. The best catches were made west of Tیره, but only 6.8 kg were taken in 2 one-hour hauls.

Squid too was very scarce, only individual specimens of Loligo sp and Todarodes sp being caught.

Catches of fish were poor, with cod being the predominant species taken. Catches of undersized and small fish consisted mainly of haddock and Norway pout.

The stomach contents of cod were examined.

Photography Several transects with television and still cameras mounted on a sledge, were made in each of the areas surveyed. A good selection of video tapes and still shots was obtained of Nephrops and Munida rugosa communities.

Seen in draft G Geddes

F G Howard

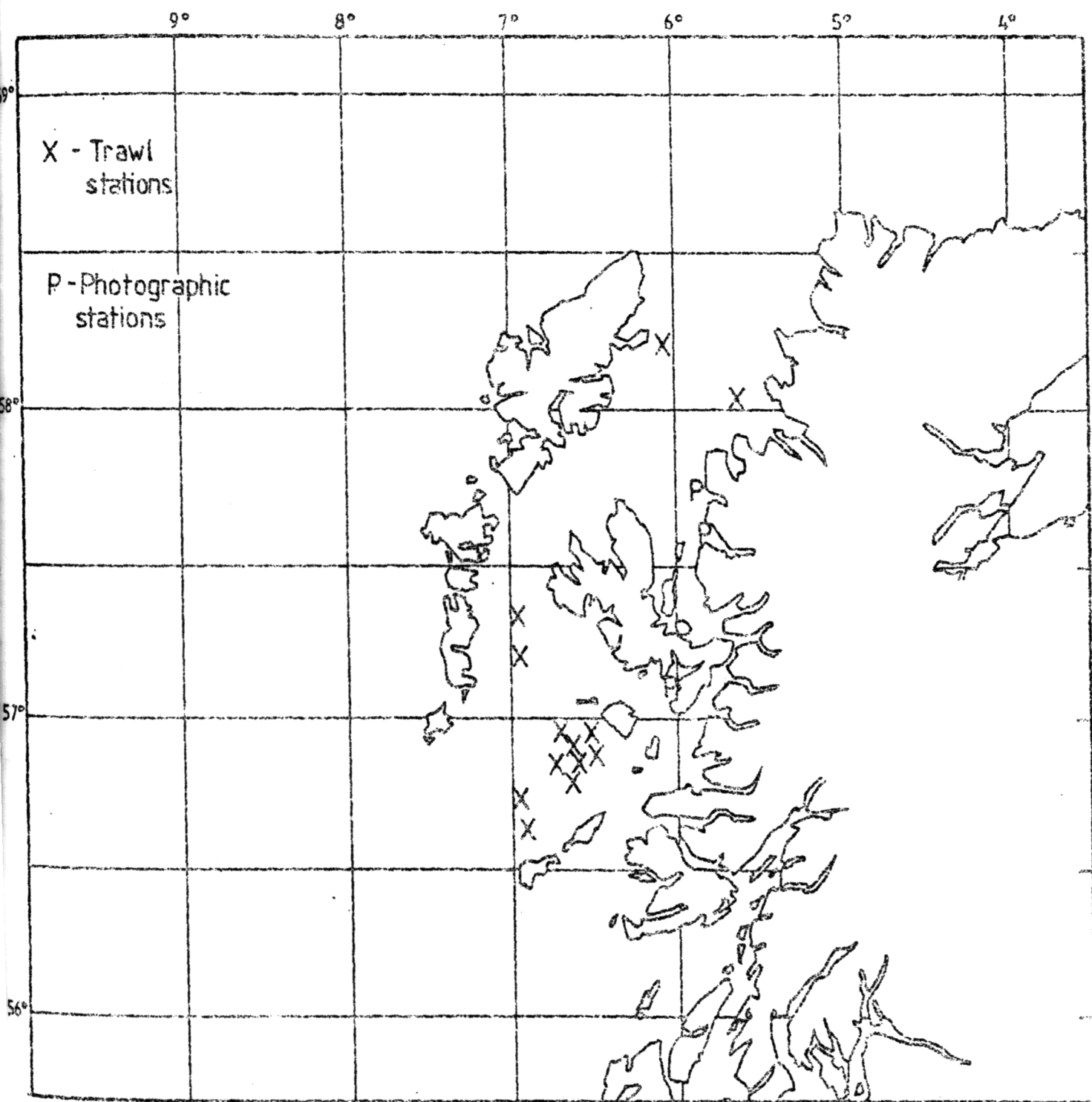
23 April 1980

TABLE 1

Length frequency distribution of Nephrops catches

Carapace length (mm)

| | 15-9 | 20-4 | 25-9 | 30-4 | 35-9 | 40-4 | 45-9 | 50-4 | 55-9 | 60-4 | 65-9 | Total | Mean |
|-------------|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Area Net | South Minch Shrimp trawl (25 mm codend) | | | | | | | | | | | | |
| ♂ | 3 | 72 | 314 | 431 | 355 | 234 | 93 | 43 | 11 | 2 | 1 | 1559 | 35.3 |
| ♀ | 4 | 71 | 227 | 128 | 29 | 5 | 1 | | | | | 465 | 28.9 |
| Total | 7 | 143 | 541 | 559 | 384 | 239 | 94 | 43 | 11 | 2 | 1 | 2024 | 33.8 |
| % | 0.3 | 7.1 | 26.7 | 27.6 | 19.0 | 11.8 | 4.6 | 2.1 | 0.5 | 0.1 | 0.05 | | |
| Net | Prawn trawl (70 m) | | | | | | | | | | | | |
| ♂ | | 4 | 49 | 91 | 33 | 15 | 3 | | | | | 193 | 32.8 |
| ♀ | | 3 | 22 | 23 | 2 | | | | | | | 50 | 29.9 |
| Total | | 7 | 71 | 114 | 35 | 13 | 3 | | | | | 243 | 32.1 |
| % | | 2.9 | 29.2 | 46.9 | 14.4 | 5.3 | 1.2 | | | | | | |
| Area Net | North Minch Prawn trawl (70 mm) | | | | | | | | | | | | |
| ♂ | | 11 | 58 | 115 | 76 | 32 | 8 | 2 | 3 | 1 | | 306 | 34.3 |
| ♀ | | 14 | 51 | 17 | 5 | 1 | | | | | | 88 | 28.4 |
| Total | | 25 | 109 | 132 | 81 | 33 | 8 | 2 | 3 | 1 | | 394 | 33.0 |
| % | | 6.3 | 27.7 | 33.5 | 20.6 | 8.4 | 2.0 | 0.5 | 0.8 | 0.3 | | | |



FR.V. Clupea 4/3 - 27/3/80

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