

R1/6

8CR78

In confidence not to be quoted without reference to the Laboratory

FRV "Clupea"

Cruise 8/78

Report

31 July -- 11 August 1978

Objectives

- 1) To study the distribution and abundance of Pandalus borealis stock on the Fladen ground
- 2) To observe the density and behaviour of Pandalus using underwater photography.
- 3) To undertake a plankton survey of the area

Narrative

Equipment was loaded and scientific personnel joined "Clupea" at Buckie on 31 July; "Clupea" sailed at 2030 for the Fladen grounds. There, fourteen 1 hour trawl hauls were made using a Danish 1600 mesh shrimp trawl. The photographic equipment was used whenever the weather was suitable. "Clupea" returned to Aberdeen on 10 August, the cruise ending prematurely because of a worsening oil leak in the main engine.

Results

Trawling: Shrimp catches were poorer than in previous cruises, a total of 330 kg being caught. Shrimp were restricted to the southern part of the area surveyed, where they constituted 8% by weight of the catch.

Large quantities of small fish were taken, these constituted 86% of the catch in the southern area; 87.6% of the total catch in all areas. Norway pout accounted for 96% of the small fish, the size range of the pout was 7-22 mm.

Large quantities of commercial sized cod were taken, and these together with haddock made up most of the commercial sized fish catch. One haul in the northern area yielded 75 kg of small haddock, with size ranges of 6-14 mm and 19-26 mm.

The stomach contents of 152 cod were examined, of these 46.1% contained fish, mainly small gadoids, 21.1% contained Nephrops, 8.6% Geryon, 6.6% Pandalus and 41.4% were empty.

Nephrops were generally absent from all daylight hauls, one haul made at dawn yielded 28.5 kg. (See table 1).

Photographic work: Two transects were made using television and stereo cameras. The work was however restricted to relatively shallow water (100 m) because of insufficient cable.

Other work: A plankton haul, using a metre net was made at each trawl station. The main plankton species present was Calanus. Surface water temperatures were recorded daily, the mean surface temperature during the cruise was 13.4°C.

Seen in draft A Mair

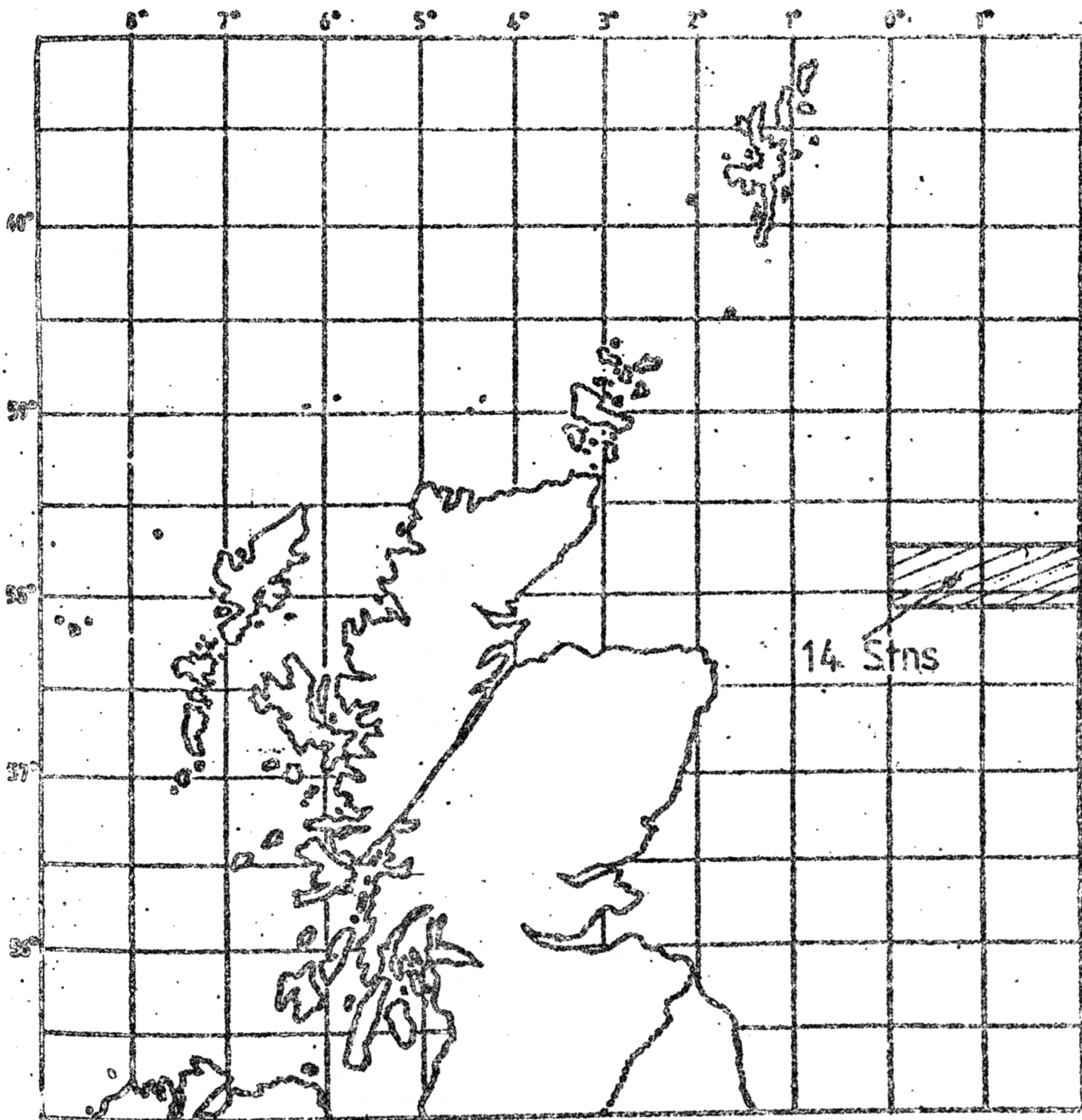
F G Howard

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Table 1

Size distribution of sex composition of Nephrops taken at Fladen

Carapace length mm	15-9	20-4	25-9	30-4	35-9	40-4	45-9	50-4	Total	Mean
Male	9	69	241	388	200	128	30	5	1070	33.3
Female	3	73	120	33	1				230	26.5
Total	12	142	361	421	201	128	30	5	1300	32.1
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