

In Confidence - Not to be quoted without reference to the Laboratory

FRV "Clupea"

9CR81

REPORT

7-17 July 1981

Objectives

- 1 To compare the selectivity of 25 mm and 35 mm mesh shrimp trawls.
- 2 To determine the quantity and composition of the by-catch of the two nets, and the proportion discarded.
- 3 To make photographic observations of mud communities and to determine shrimp density by means of photography.

Narrative

The scientific staff joined and equipment was loaded at Buckie on 7 July. "Clupea" sailed for the Fladen grounds, where fishing operations commenced at 0530 on 8 July. Five one hour and two three hour trawl hauls, together with one three hour camera sledge tow were made, and at 1930 on 9 July, "Clupea" steamed for Blyth which was reached at 1800 on 10 July. Eight one hour and two three hour trawl hauls were made in the Farn Deep, as were eight one hour camera sledge transects. "Clupea" left the Farn Deep at 1530 on 16 July, and docked at Aberdeen on 17 July.

Results

Trawling: At Fladen catches of Pandalus borealis were varied, ranging from 0 to 24 kg/hr, the average being 11 kg/hr. The catch rate of small fish averaged 180 kg/hr, and the proportions by weight of the dominant species were cod (size range 10-30 cm) 8.9%, haddock (size range 9-30 cm) 16.4%, Norway pout 44.3% and long rough dab 20.0%. Cod, ling and angler were the commonest fish of commercial size.

In the Farn Deep, Pandalus borealis was relatively scarce, and catch rates averaged only 3.5 kg/hr. Discarded fish catches averaged 186 kg/hr and the dominant species by weight were cod (size range 3-8 cm) 8.0%, haddock 2.5%, pout 34%, whiting (size range 16-27 cm) 25% and long rough dab 6.5%. The haddock, Myxine glutinosa, was present in large numbers, and accounted for 12.0% of the discards.

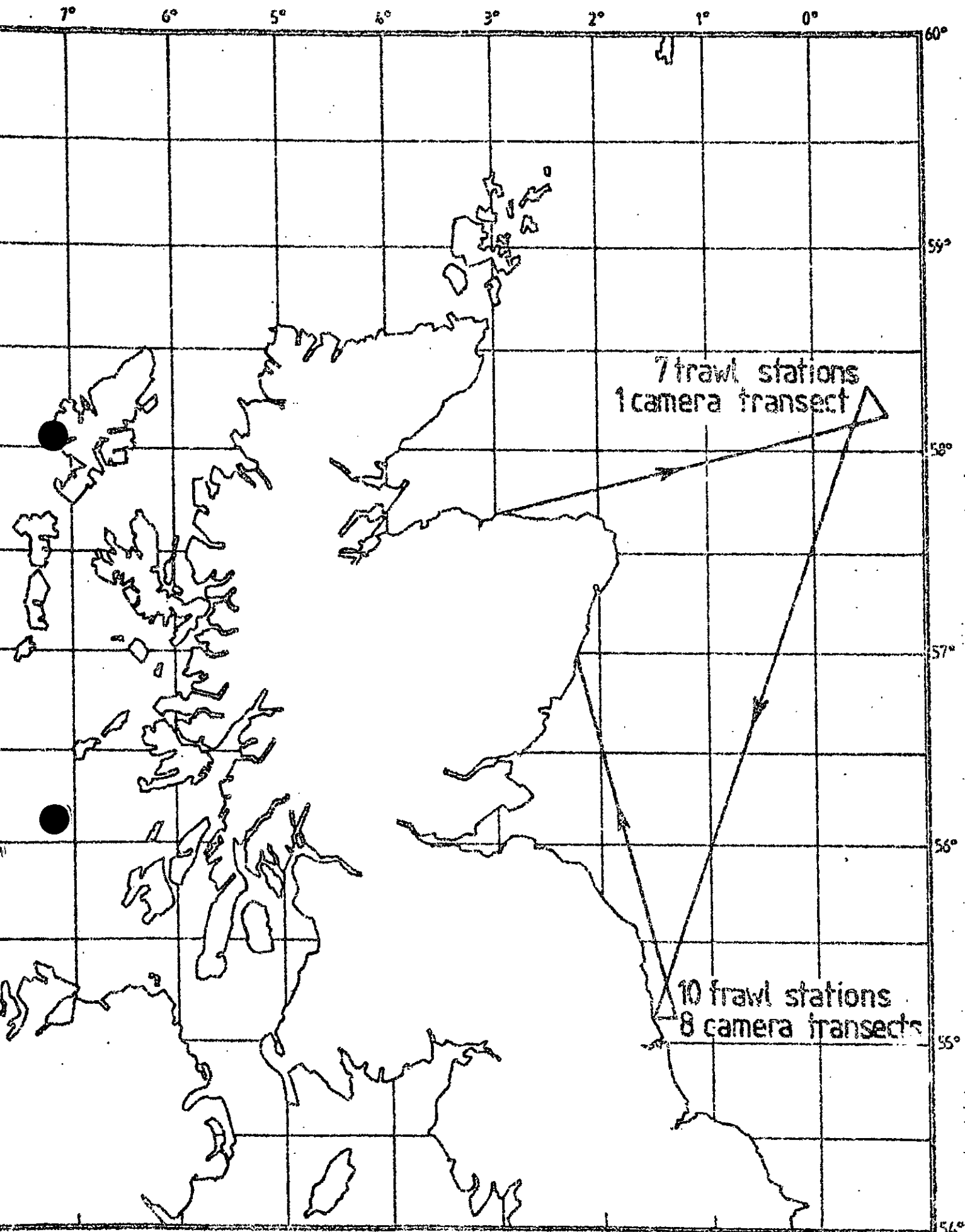
Cod, haddock, whiting and herring were the commonest commercial sized fish. Herring in the size range 17-30 cm accounted for 34% by weight of the retained fish catch. Combining the results from both areas, the mean catch rates of shrimp with the 25 mm mesh shrimp trawl were 7.7 kg/hr, and with the 35 mm mesh net were 10.1 kg/hr. The size composition of the shrimp catch has not yet been fully analysed. The catches of by-catch were not significantly different with either net.

Photography: The towed camera sledge worked well, and in both areas excellent video film and still photographs of mud bottom communities were obtained. Some interesting shots of shrimp-anemone associations were taken.

F G Howard

23 October 1981

Seen in draft G Geddes



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