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CRUISE REPORT

FRS 'MARA'

15 June - 10 July

OBJECTIVES

1. To determine the best way of operating the beam trawl from FRS 'Mara' for sampling flatfish in shallow, coastal water off the east coast of Scotland.
2. To obtain further information on the relative strengths of the various year classes of flatfish species, especially plaice, present in the bays of the Moray Firth, the east coast of Scotland and the Firth of Forth.
3. To collect samples of stomach contents of common and long rough dabs.

NARRATIVE

On the first three days of the cruise trials were made in Aberdeen Bay with a Dutch type beam trawl with a view to working out an efficient handling procedure. Observations on the performance of the trawl were made by divers during this period. On completion of these observations a series of $\frac{1}{2}$ hr hauls was made in the bay as a part of the general survey of flatfish stocks before 'Mara' proceeded to Buckie where she berthed on 19 June.

During the period 22-24 June routine sampling of the flatfish stocks was conducted in Nairn Bay, Burghead Bay and the Dornoch Firth. Strong winds made work impossible on 25 June but sampling was resumed in Spey Bay on 26 July before it was again interrupted due to a breakdown of the wind which necessitated a return to Buckie for repairs.

Work was resumed on 29 June and was continued with further sampling in Spey Bay and Aberdour Bay until 1 July when 'Mara' had to return to Aberdeen for modifications to be made to the trawl which had been causing some chafing damage to the side of the vessel.

On 3 July 'Mara' proceeded to the Firth of Forth and sampling was subsequently conducted in Largo Bay, Aberlady Bay and St Andrews Bay before returning to Aberdeen on 9 July to unload scientific equipment. 'Mara' returned to Buckie on 10 July.

RESULTS

Considerable difficulty was at first encountered in preventing the beam trawl turning over while being shot away. It appeared that the manoeuvring of the vessel required to ensure that the warp did not foul the propeller and the rate at which the warp was let off the winch were the major causes of the problem. However, by trying out various ways of shooting, a satisfactory method was eventually evolved. Subsequent observations made by divers indicated that the gear was fishing efficiently.

As mentioned above it was later necessary to modify the trawl. This involved moving the points at which the warp was attached and resulted in a recurrence of the problems in shooting the gear. Because of this a considerable number of foul hauls were made in the period 6-8 July. By 9 July, however, the gear was again working efficiently.

The mean numbers of plaice and common dabs per haul in the various regions investigated were as follows.

Region	Plaice	Common Dab	No of Hauls
Dornoch Firth	67.0	27.1	8
Nairn Bay	24.0	25.0	4
Burghead Bay	14.2	11.8	6
Spey Bay	117.8	138.1	8
Aberdeur Bay	19.0	244.0	4
Aberdeen Bay	13.4	238.8	10
St Andrew's Bay	153.9	127.1	9
Largo Bay	7.3	9.4	7
Aberlady Bay	9.3	20.7	3
		Total	<u>59</u>

Flounders were also caught in small numbers in Aberdeen Bay, Spey Bay, Dornoch Firth and St Andrew's Bay.

Stomachs of common dabs were collected from all regions.

Because of various delays encountered during the cruise it was not possible to work in Banff Bay, Cullen Bay, Strathbeg Bay, Rattray Bay and the region between Montrose and Milton Ness. It was also not possible to conduct comparative fishing experiments with the beam trawl and an otter trawl.

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