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

FRV "EXPLORER"

CRUISE 4/78

REPORT

21ST MARCH - 12TH APRIL 1978

Objectives

- (1) To investigate the engineering performance of a high lift, three bridle trawl, using underwater TV equipment operated by Laboratory divers.
- (2) To compare the efficiency and performance of Polyvalent and standard flat boards when fished with the four panel trawl, vinge trawl and three bridle trawl.

Narrative

"Explorer" sailed from Aberdeen for the Moray Firth at 1100 hrs on Wednesday 22nd March. At the commencement of the diving programme on the 23rd engine trouble developed, and "Explorer" proceeded to Leith for repairs.

Repairs completed, the vessel was back on station in the Moray Firth on Tuesday 28th and the diving programme with underwater TV was continued till the evening of the 30th.

"Explorer" then returned to Aberdeen to disembark the diving team and load instruments for the second part of the cruise.

Sailing from Aberdeen on 3rd April for Shetland, "Explorer" trawled in the Balta area till the evening of 9th April. A further haul was made at Clythe Ness during the return to Aberdeen where the vessel docked at 2000 hrs on 11th April.

Results

The three bridle trawl, when fishing, assumed its projected shape, showing no areas of slack netting and having the meshes well open in all sections. Headline heights of 20 feet were attained, but areas of the net and its wire rig were seen, where with further alterations, it was felt this could be improved upon.

On the second part of the cruise 13 instrument hauls were made. Of these 8 were with the three bridle comparing the performance of trawl boards and their effect on the geometry of the gear. The trawl boards were 10° flat, 11° flat and 1000 kg polyvalent.

The remaining hauls were made with the four panel trawl using polyvalent doors only, as performance data for 10° and 11° flat doors with this net is already available from a previous cruise.

The data is meantime being analysed but an early assessment would indicate that the net drag of the two nets is comparable.

Seen in draft - W P Watt
Officer-in-Charge

A Corrigan
16 June 1978