R1/12

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FRV "Scotia"
Cruise 6/85 (Part 1) 6pt1SR85 MB

Report
14 - 25 June 1985

Personnel

P A M Stewart	PSO - in charge
R S T Ferro	SSO
R Priestley	SSO
J Dunn	HSO
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Objectives

1) To measure the performance characteristics of the GOV trawl on "Scotia" using standard gear instrumentation.

2) To observe the performance of the GOV trawl using the remote control TV vehicle.

3) To test new plankton sampling equipment.

Narrative

Fishing gear and other equipment were loaded in Aberdeen on 13 June. The vessel sailed at 17.00 on the 14th and spent the remainder of the day in Aberdeen Bay calibrating speed logs with the Decca Trisponder system. Following an overnight passage the fishing gear, RCTV and instruments were tested off Copinsay. The vessel then sailed to Balta and worked for 5 days in excellent weather conditions. The next 4 days were spent east of the Orkney Islands trawling in shallower water. The vessel returned to Aberdeen for a half-landing, docking at 06.30 on 25 June. Fishing gear and scientific equipment were unloaded on the same day and replaced with equipment for Part II of the cruise.

Results

Twenty two instrumented hauls were carried out to investigate the performance of the GOV trawl. Tows were conducted in water depths of roughly 110 m and 70 m, using the permitted long and short sweeps as appropriate. In both depths, hauls were made with 3 permitted ground gears. In addition, the effects of varying the warp length and the door rigging were investigated. The instruments performed very well and a comprehensive set of measurements was collected. These will be catalogued, analysed and published in due course. The data indicate that the gear performance is sensitive to towing speed and rigging changes, suggesting that

performance should be monitored at all times. To measure gear performance, towing speed is altered every 15 minutes during a haul in a systematic way. To simulate performance during a survey, 2 hauls were performed at constant speed and the gear variability recorded.

Eleven hauls were carried out using the RCTV to make direct observations on the gear. This was mostly done in 70 m depth. Although the visibility was never good, it was possible to observe the gear rigged with all 3 sets of groundgear. The bottom contact of the groundgear was checked at various speeds and the light groundgear was seen to be just lifting off at 4 knots. The triple bridles were found to be untwisted in use. The net shape was carefully observed for comparison with model gear studies and none of the distortions seen in the models was observed. The performance of the doors at different speeds and with different rigging was examined.

The new stratified depth plankton sampler was tested on 8 days. This enabled the instrumentation to be tested and gear instruments were used to monitor additional aspects of performance. The sampler appeared to perform well.

Peter A M Stewart

9 August 1985

See in draft: W Findlay