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FRV *Scotia*

Cruise 1507S

REPORT

19–24 October 2007

Personnel

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Objectives:

1. Carry out trials with ground gear bags on the monk fish trawl.
2. To test Towed Underwater Video Multiplexer Unit (VMUX)

Out –turn Days per Project: MF0354 – 6 Days.

Narrative

Scotia sailed from Aberdeen at 0600 on 19 October and immediately carried out a test tow of the fishing gear in Aberdeen Bay. This was completed successfully and the vessel then proceeded to the area of the Galeen holes NW of Orkney to carry out the experimental work. The vessel remained in this area for one day and then moved operations to the Otter Bank area, 85 nautical miles west of Shetland. Operations involved deploying the monk net with ground gear bags, and towing for 30 minutes. A camera was mounted on the headline when light levels allowed.

Weather remained fair throughout. Fishing operations were carried out from approximately 0800 to 2100. VMUX operations were carried out at night between these times.

The vessel then steamed to Aberdeen arriving at approximately 0700 on 24 October.

Results

A total of 24 tows were carried out during the survey. Six tows were taken at the Galeen Holes (59° 56N 3° 45W approx.) and the remainder west of Otter Bank (60° 00N 3° 15W approx.). The ground gear bags were deployed on all 24 tows, and recovered undamaged on all 24. The headline camera was deployed on only 2 tows as most of the tows were deeper than 160m, and this prevented camera work.

Catches were recorded separately for the main cod end and the three bags. It proved impossible to fully work up the catches at the same rate as the hauls. Consequently, some species were treated in bulk. The main examples were mixed small gadoids (Norway pout, poor cod and blue whiting, and including argentines). The total of these were weighed and a 15kg subsample sorted for species compositions. Where bulk catches of mackerel and/or herring were taken these were also weighed only. All remaining species were weighed and lengthed as on normal IBTS operations. Otoliths were taken for a small number of angler fish.

Numbers of live monkfish were retained in tanks for return to the laboratory

Results have not been fully analysed, however, preliminary examination suggests a similar pattern of monkfish lost under the ground-gear. We were able to find areas with larger monkfish (>70cm) allowing the full size range seen on the main surveys to be studied. One of the other main species found was megrim, at all sizes, which also showed some escapes under the ground gear.

16 mid water and near seabed tows were taken with the VMUX towed body to familiarise crew and users with launch and recovery procedures and to test hydrodynamic performance. During mid-water tows attempts were made to maintain level attitude and controlled diving and climbing through use of the variable angle tail-fin, but this was not achievable due to static imbalance in the towed body's flotation system. Tows near the sea-bed (within 2 to 4 m) were eventually undertaken through manual winch control. Clear and usable video images were obtained down to 200m of areas previously crossed during programmed fishing operations. High quality video and instrumentation signals were transmitted through the net-sonde cable from which the VMUX was towed. The flotation system will be re-adjusted prior to cruise 1607S

The data from the survey will be analysed in depth at FRS and at present no clear conclusions can be drawn. Full results will be prepared for future ROAME reports and publication.

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29 April 2008