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FRV *Scotia*

Cruise 1505S

REPORT

13–30 October 2005

Personnel

D Reid (In charge)
K Peach
P Copland
R Kynoch
D Bova (13-21 October)
M Burns
I Penny
K Summerbell (21-30 October)
A Petrie (21-30 October)
I Gatt (visitor 13-21 October)

Half Landing: Lerwick 21-22 October 2005

Objectives

To test the hypothesis that all monkfish that pass between the doors are caught in the new monkfish trawl. This required:

1. Setting up and performance testing new gear.
2. Setting up and testing monitoring gear; cameras, RCTV & ScanMar.
3. Carrying out a series of monitored tows in a variety of situations.

Out–turn Days per Project: MF0363 – 18 Days

Narrative

Scotia sailed from Aberdeen at 1000 hours on 13 October and proceeded to the Moray Firth to carry out preliminary trials on the new survey gear. *Scotia* then proceeded overnight to Copensay – east of Orkney to carry out trials with net mounted cameras and the RCTV. Following successful completion of these, the vessel moved to the west of Fair Isle and continued carrying out a series of experimental tows in a variety of water depths and areas - an area bounded by 59°30 to 60°30'N and 3° to 5°30'W (see attached map). The generally poor weather only allowed RCTV operations on some of these tows. Net cameras were mounted variously on the outer wings, the headline, and looking across the opening. A series of tows were then carried out in conjunction with these cameras to establish the correct deployment patterns for the gear – warp to depth ratios and tickler chain mounting. This was continued up to the half landing in Lerwick on the morning of 21 October. Mr Ian Gatt (who had been involved in the survey as an invaluable industry consultant) and D Bova left the vessel in Lerwick. K Summerbell and A Petrie joined the vessel.

After the half landing, *Scotia* sailed at 0900 on 22 October and resumed trials in the Scalloway Deeps. Severe weather prevented many deployments in the more western areas used in the first half. However, good trials areas were located in more sheltered areas close to the Shetlands and the north coast. Trials were completed at 1400 on 29 October and the ship headed for Aberdeen.

Results

Trawl Deployments	60
RCTV Deployments	26
Minicam Deployments	85
Total trawl duration	63 hours
Total distance	222 miles
Monks caught	936
Monks per hour	15

A total of 60 trawl stations were completed, comprising 63 hours of trawling in total. Most trawl stations were completed with up to 3 minicams mounted at various points in the net. In total there were 85 minicam deployments. The RCTV was deployed on 26 of the 60 hauls, the remainder were either in deep water where the RCTV could not be used or where weather prevented deployment.

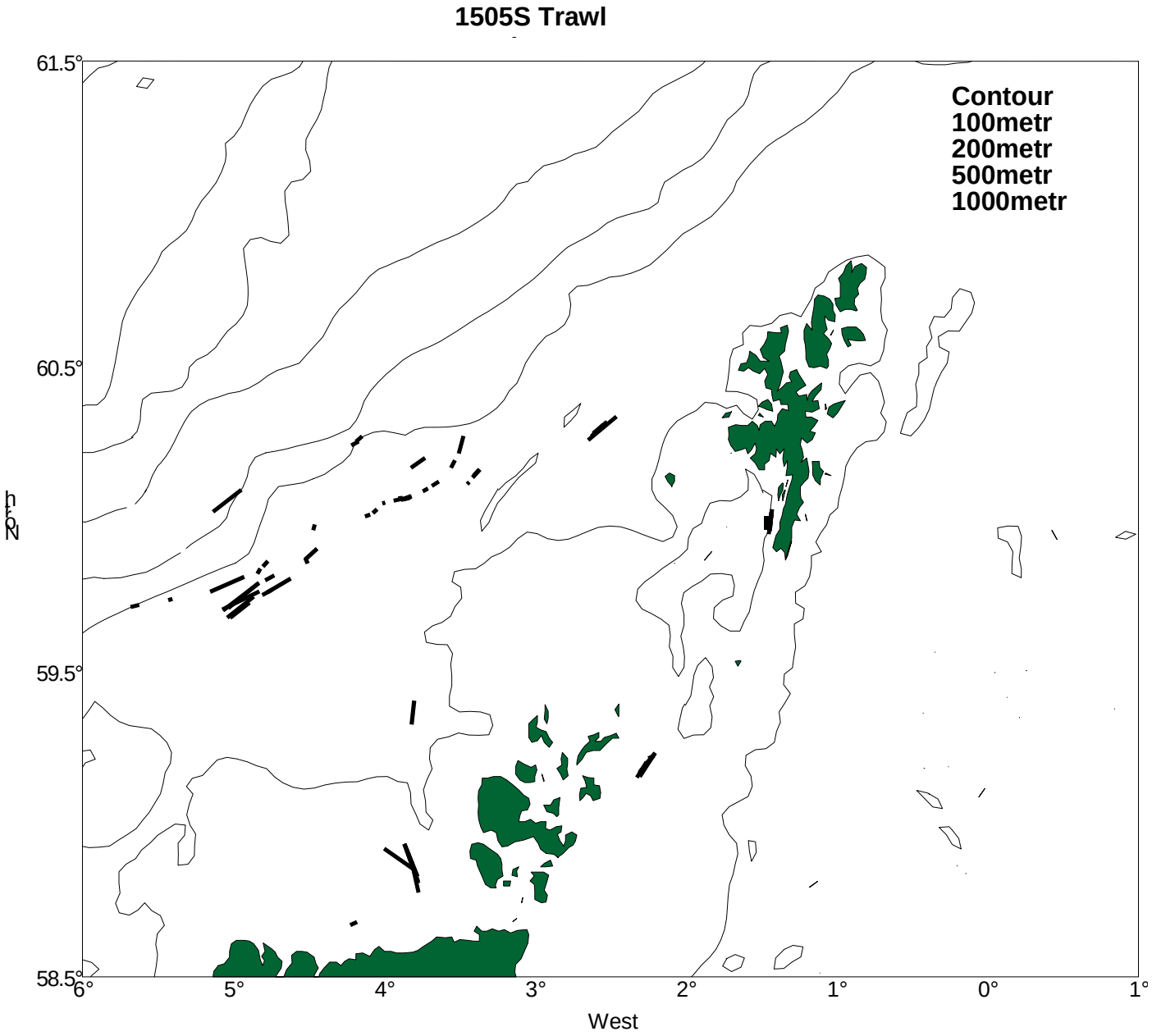
The new survey nets (Jackson Rockhopper Monkfish trawls) performed very well throughout the survey. The net proved very effective at coping with some extremely aggressive seabed. It was tested with and without the tickler chain, and different rigging of the chain was also tested. Performance was judged to be best with the chain. A total of 936 monkfish (an average of 15 per hour) were caught - with a range of sizes. Some samples from the second half of the cruise were retained for analysis of parasites. The remainder were measured and weighed.

No analysis of the video footage from minicams and RCTV has yet been carried out. However, both set ups were successful in observing monkfish and their reactions to the various components of the gear, particular the bobbins, the tickler, and the sweeps and bridles. Initial qualitative observations suggest that monkfish respond weakly to the passage of the sweeps, and are not likely to be herded in a major way. Some sightings showed monkfish being diverted into the path of the net, but many also showed the opposite or no reaction. The initial hypothesis that all monkfish that pass between the doors will be caught is probably incorrect, and that many will escape over the sweeps. No escapes over the headline were observed. Full analysis of the video material will be carried out at a later date.

This survey was very successful, and the cruise leader would like to thank all involved. The involvement of Mr Ian Gatt, a professional fisherman was extremely useful, and provided much valuable information on the working of this new net and where to best fish. The officers and crew were very helpful, both in routine operations and in support for ad hoc modifications and repair. The science team were universally excellent in performance and in practical input.

D G Reid
8 November 2005

Seen in draft: P Ramsay, OIC for FRV *Scotia*



Map of the work area showing tow tracks and bathymetric contours.