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FRV *Scotia*

Cruise 1104S

REPORT

26 July – 21 August

Personnel

K A Coull
M Mathewson
J Mills (26 July – 14 August)
I Penny
A Tait
C Allan (26 July – 7 August)
M Gault (6–21 August)
J Drewery (14–21 August)
M R Robertson
L Robinson
H Fraser
N Jacob
G Stowasser

Objectives

1. To take part in an internationally co-ordinated demersal trawling survey of the North Sea.
2. To collect temperature and salinity profiles at each trawling station.
3. Carry out benthic sampling along the track of 40 trawl stations.
4. Collect samples of low nutrient seawater from statistical rectangle 45F1 (or an adjacent rectangle).
5. Carry out trawl and benthic survey work in the location of the proposed Buzzard platform.

Out-turn days per project: 22 days – MF01Tb, 5 days – MF07N

Narrative

Scotia sailed from Aberdeen at 0930 on 26 July and commenced trawling at the station east of Aberdeen. Four hauls were carried out during the first day and benthic sampling was carried out successfully at two stations during the night. *Scotia* continued working stations off the east and north east of Scotland until the afternoon of 29 July. On being notified that no berthing space was available for the proposed mid cruise break in Stavanger, the decision was taken to cover the southern part of the survey area first. *Scotia* then proceeded to work the stations off the east coast of England and Dogger area before

entering Norwegian waters on the afternoon of 2 August. The stations in the Dutch and German sectors were completed before *Scotia* called into Esjberg for the mid-cruise break on 6 August. The vessel sailed again on 7 August and resumed trawling on the stations off the Danish coast. *Scotia* re-entered Norwegian waters on 8 August and completed six hauls in the Greater Fisher and Little Fisher areas before moving northwards to cover the eastern part of the survey area, departing Norwegian waters in the morning of 10 August. After working along the northern and western edge of the survey area, the vessel then completed stations in the Bressay and Fladen area before heading to Peterhead on 14 August where *Scotia* was open to visitors as part of the town's Fish Festival week. The vessel sailed at 0730 the next day and resumed work east of Peterhead. *Scotia* then worked on the remaining survey stations in the Fair Isle, Orkney and Moray Firth regions, completing the survey area on the night of 18 August. *Scotia* then proceeded to the Buzzard development area and carried out a programme of trawl and benthic survey stations. The opportunity was then taken to carry out a trawl sample off Montrose on the morning of 20 August with a view to recording a complete set of length data on an electronic measuring and recording board. With all survey work completed, *Scotia* docked in Aberdeen on the evening of 20 August.

Results

All survey stations (87) were sampled with a total of 97 valid hauls being successfully completed. Ten stations were sampled with both groundgear A and groundgear B in order to provide some comparative data in the rectangles bordering the defined changeover for groundgear types.

The provisional numbers of 0-group haddock and whiting caught per 30 minutes (standard haul duration) in each statistical rectangle are shown in Figure 1 and Figure 2 respectively. The numbers of 0-group haddock encountered were relatively low and similar to those caught during the 2002 and 2003 surveys. The numbers of 0-group whiting encountered show an increase over the previous two years but less than the previous five-year average. The 1999 year-class (5 year olds) continues to dominate in the composition of haddock catches.

Additional biological data was collected from species listed in the EU Data Collection Regulations (EC) No 1639/2001.

The thermosalinograph was run continuously during the cruise and a CTD and Reverser bottle was deployed at each station to obtain temperature and salinity data as well as water samples for calibration of the thermosalinograph.

The Scanmar system was used throughout the cruise to monitor headline height, wing spread, door spread and distance covered during each haul.

Benthic sampling was carried out at 40 locations during the course of the survey. Where possible, a 2 m epi-benthic dredge was towed for 5 min along the seabed. The epi-benthos samples obtained were passed through 5 mm and 2 mm sieves. The 5 mm sieve fraction was sorted and processed as far as possible on board the vessel, with the organisms captured identified to species, measured and weighed. The 2 mm sieve fraction, and organisms from the 5 mm sieve fraction that could not be identified, or which were too small to be weighed on board, were preserved in 4% formalin for processing back at the laboratory. Samples of benthic infauna were obtained using a 0.25 sq m Box Corer and 0.1 sq m Van Veen grab at each station. Sediment samples were collected from each of the box corer and grab samples. Samples of benthic meiofauna were collected from the box core samples and from grab samples. The Box core samples were passed through 4 mm and 1 mm sieves, while the grab samples were passed through a sieve tower consisting of

4 mm, 2 mm, 1 mm, 0.5 mm and 0.25 mm sieves. All the infauna sieve fractions from each sample were preserved in 4% formalin solution for processing on return to the laboratory.

Three trawl hauls and benthic sampling were carried out in the region of the proposed Buzzard platform (44E9).

K A Coull

6 October 2004

Seen in draft: Captain Peter Barratt