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Not to be cited without reference to Marine Scotland, Marine Laboratory, Aberdeen

FRV *Scotia*

Cruise 1209S

PROGRAMME

3-28 September 2009

Project Codes: MF01TA 26 days

Half-landing: Ullapool (16 September, dependent on weather, but not later than 17 September)

Part 1: Rockall haddock survey

Personnel:

Marine Laboratory staff

F Burns (SIC)
F Neat
R Kynoch
J Drewery
M Gault
A Jaworski
D Bova
C Shand
A Weetman
T Cope (Visitor, JNCC)

Part 2: Deepwater survey

Personnel:

Marine Laboratory staff

F Neat (SIC)
F Burns
R Kynoch
H Dobby
J Drewery
N Campbell
E Dalgarno
T Blasdale (Visitor, JNCC)
D Gowler (Visitor, PhD student, University of Bangor)
W Reid (Visitor, PhD student, University of Newcastle)
A Santos (Visitor, PhD student, University of Cork)
J Balle (Visitor, SMRU)

Marine Laboratory Objectives:

1. Routine daylight trawl survey of the Rockall Plateau to assess the haddock stock within the 200 m contour. (See Map 1)
2. Habitat and Nephrops TV observation work along the East edge of the bank to depths of 900 m using the drop frame.
3. Identify, quantify and record all benthic invertebrate species caught.
4. Obtain temperature and salinity data from the surface and seabed at each trawling station on the Rockall plateau.
5. Collect additional biological data in connection with the EU Data Directive 1639/2001.
6. To undertake bagging trials and TV observation to assess selectivity and sampling bias/catchability of the net with 2 different ground-gears (21"v16"rock-hoppers).
7. To map the composition, distribution and abundance of continental slope species including anglerfish (*Lophius spp.*) on the deepwater slope west of the Hebrides and Rosemary Bank. (See Map 2)
8. Collect temperature at depth during all deepwater hauls using a data storage sensor attached to the trawl headline.
9. Collect biological samples (genetics and otoliths) for key species for population and contaminant studies as requested.

JNCC objectives:

1. Opportunistic use of the TV drop frame to contribute to mapping distribution of Annex I reef habitat as required under the EC Habitats Directive.

SMRU objectives:

1. Opportunistic deployment of hydrophone during night to monitor cetacean activity.

Gear

- 3 X BT 137 (GOV), 2 sets of Groundgear C
- 1 set of 1100 kg doors.
- 2 x Jackson deepwater 184 trawls with 8" floats
- 1 set of 21 " rockhopper ground gear, 1 set of 16" rock-hopper ground gear
- Ground gear bags with 20 mm blinders
- 1 set Morgere ovalfoil 1700 Kg trawl doors;

- Deepwater Scanmar net instrumentation; door & wing spread, headline height, net depth, bottom contact sensor and depth/temperature logger.
- TV drop-frame, large towing block, cameras and 1200m cable

Gear rigging and stowage

Upon leaving Aberdeen

BT 137 to be rigged on the bottom net-drum with a bottom contact bar in the bosom section. Two spare BT 137 nets stowed above winch cabin. Spare GOV ground gear stowed below. The 21"ground gear to be put onto the top net drum. The 16"ground gear to be stowed next to the hopper. 1 deepwater net bailed and stowed on deck. Spare BT 184 stowed below. Morgere doors up top, GOV doors below. Ground gear bags to be stowed in cages.

After changing doors

BT 184 to be rigged with 21"groundgear and bags and wound onto bottom net drum. 16"groundgear to be wound onto top net drum. BT 137 to be stowed next to hopper. Upon completion of 21" bagging trials (n = 6), re-rig BT 184 with 16" ground gear. 21"ground gear to be wound onto top net drum. The 'lazy decky' rope should NOT be attached to the BT184 as it caused foul hauls in the past.

After half-landing

The BT 184 with 16" ground gear will be left on the lower drum and the spare BT 184 will be wound onto the top drum without ground gear. The 21"ground gear will be stowed next to the hopper as a spare. BT 137 gear will be stowed below or taken off the ship and transported back to Aberdeen.

Drop frame – TV requirements (Part 1 only)

The 1200m cable will be put on the winch before departure as per usual. After the cable is put on the winch, the empty cable drum will be returned to the lab and brought down to the ship on return, along with the electric cable winder to take the cable off.

General Survey Plan

The trawling survey will be conducted at routine stations on the Rockall Plateau using the standard BT 137 Trawl fitted with groundgear C. Weather permitting fishing operations will be carried out for 13 hours each day in line with the WTD. All hauls to be carried out in daylight. A vertical CTD cast will be completed prior to each haul to collect temperature and salinity data. Net performance data for each haul will be recorded/collected using scanmar sensors and a NOAA bottom contact sensor. In addition to the routine sampling, biological data will also be collected for certain key species in line with the EU data regulation. All fish will be processed in accordance with standing instructions. During night-time, weather permitting the drop frame will be deployed at locations on the east flank of the bank in order to map distribution of Annex I reef habitat as required under the EC Habitats Directive.

Once the Rockall plateau survey is completed, weather permitting the doors and gear will be changed on Rockall Bank in readiness for deepwater trawling. In the case of poor weather, passage will be made to Village Bay, St Kilda to do this. Deepwater trawling will then commence in ICES square 44EO at 1000 m depth. A series of 30 minute trawls using ground-gear bags will be made to compare net performance using first the 21" hoppers (n = 6 hauls) and then the 16" hoppers (n = 6 hauls). Upon completion of this work, passage will be made to Ullapool for half-landing on or around 16 September.

The survey will recommence and proceed south trawling the shelf slope between 500-1800 m (see map). At night a hydrophone will be deployed from the vessel to listen for cetacean activity. Toward the end of the survey, trawls will be made on Rosemary bank as has been done in recent years. The schedule has been set under the WTD and the expectation is that trawling will be conducted within the hours of daylight, but it may be necessary to trawl at night if daylight fishing time is lost due to poor weather or other problems. From all tows the entire catch will be sorted, weighed and length-frequency data collected. Additional sampling to be carried out is outlined in the objectives.

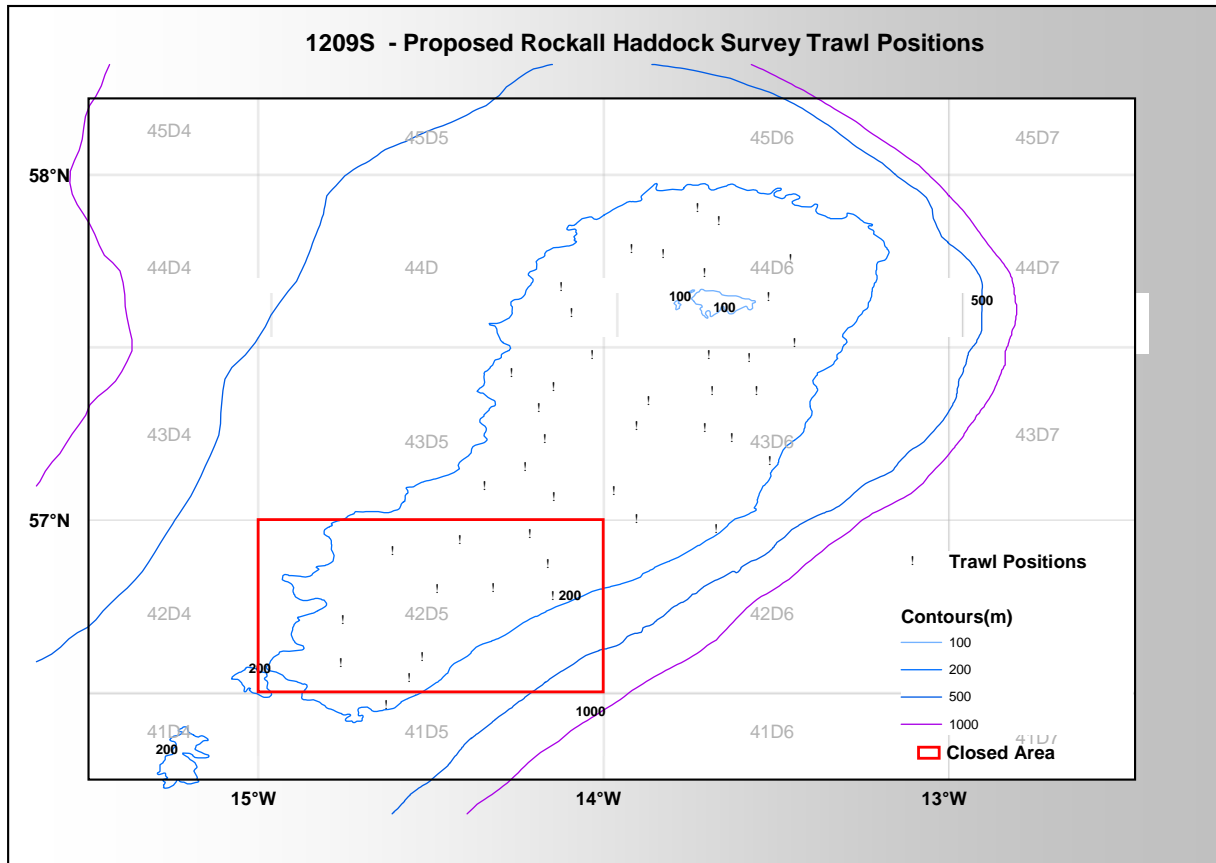
Scotia will return to Aberdeen on 28 September.

Normal contact will be maintained with the laboratory.

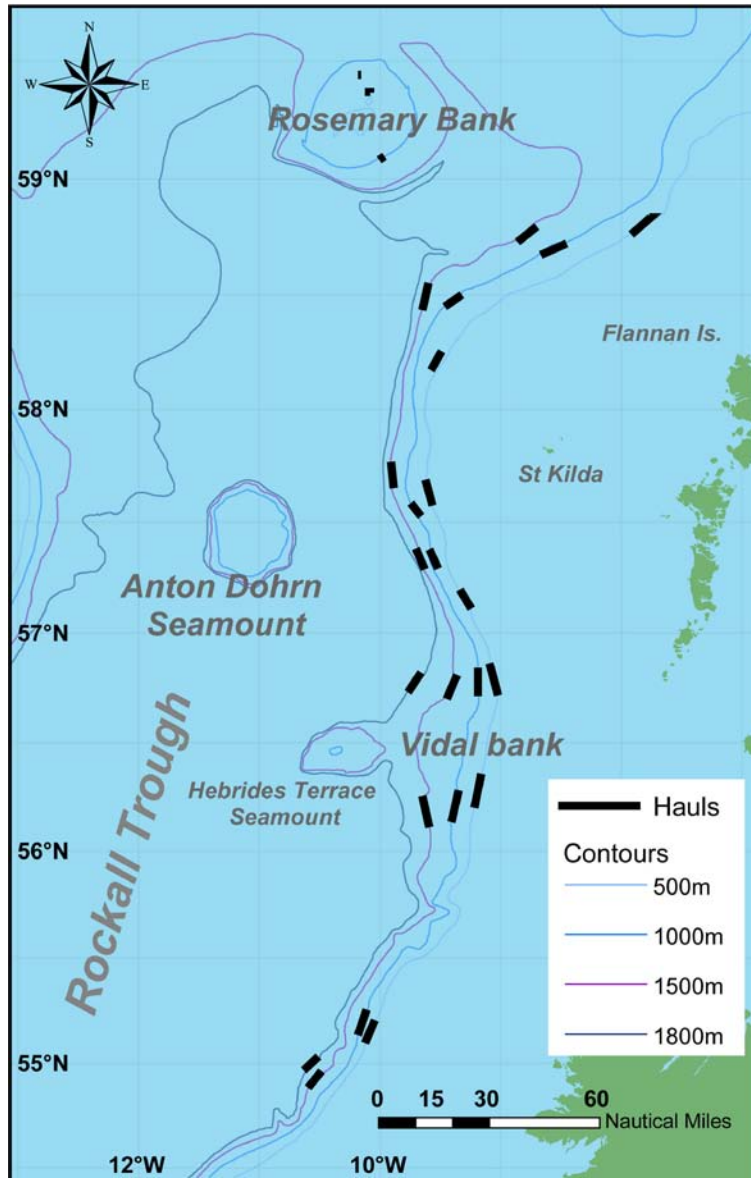
Submitted:
Francis Neat / Finlay Burns
8 July 2009.

Approved:
I Gibb
28 July 2009.

Map 1: Part 1 - Rockall Trawl Stations.



Map 2: Part 2 – Deepwater Trawling Stations.



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Cruise 1209S Part 2

16-28 September 2009

PROGRAMME AMENDMENT

The following personnel changes will take place:

D Gowler will be replaced by D Moore.

I Gibb

25 August 2009