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Charter Fishing Vessel *Genesis* (BF 505)

Cruise 2207H

REPORT

18-28 March 2008

Personnel

I Gibb (SIC)
F Neat
D Tobin

Objectives

1. To identify important cod spawning areas in areas IVa and IVb.
2. To tag spawning cod from west Shetland for investigations of their movements. Tagging will involve both conventional and data storage tags.
3. To biologically sample all cod (and haddock from three areas) for length, sex and maturity. Otoliths, genetic samples and ovary sections will be extracted at sea and preserved in vials for later analysis.
4. To collect live cod eggs from Buchan and Viking areas and return them to local ports for transportation to Ardtoe field station.

Out-turn days per project: MFP6Q04 – 11 days

Narrative

All gear and scientific equipment was loaded onto the vessel in Peterhead on the morning of Tuesday 18 March. After the installation of gear was complete, the vessel departed at 1300 and made passage to the Moray Firth to trawl for spawning cod in order to collect live cod eggs. Despite 3 hauls of up to an hour duration conducted during the day, only 2 females were found in running state, and fertilisation was not possible. The vessel then sailed through the night for Papa Bank. Weather conditions the following day were good, and the day was dedicated to cod tagging. 5 hauls were conducted, and a total of 12 cod were successfully tagged with electronic tags and released back to the capture area. The vessel then set sail for Sumburgh Head grounds at 2300. Fishing activities were conducted throughout 20 March, working North East from Sumburgh Head. Due to deteriorating weather conditions the vessel docked in Lerwick at 2130. A small amount of mending work was required from the last haul and this was conducted in port. The vessel stayed in port during Friday 21 March due to severe gales but departed first thing on the 22 March, making passage for the Bressay Grounds where fishing operations resumed at 1300. Five hauls were conducted before the vessel made passage to the Ninian Field where 8 hauls were conducted the following day. Not enough cod in spawning state were

found to make egg collection viable from this area. The vessel then made an overnight passage down to the East Bressay grounds, where 7 hauls were conducted throughout 24 March. Again, no cod in spawning state were located and so the emphasis was then changed to haddock, where a suitable number of spawning individuals were located, stripped and fertilised onboard. The vessel then made an overnight passage to the 110 Mile Holes where the highest catch rate of the cruise was attained during the next 24 hours (4890 cod hr⁻¹). After sampling on 26 March the vessel then made an overnight passage to Fraserburgh where the fertilised haddock eggs collected from the East Bressay grounds were returned at 0500. FRS transport then transferred them to Ardtoe. The vessel immediately resumed the survey in the Buchan area on 27 March, haddock were sampled again but no viable eggs were available for fertilisation. The cruise ended in Macduff on the morning of 28 March.

Tow positions during the cruise were determined from information supplied by the skipper and previous FRS surveys. Exploratory tows were made in consultation with the skipper. No sampling was conducted within the Norwegian sector due to diplomatic clearance not been given before or within the time frame of the cruise. A minilogger was attached on the net headline to record water temperature throughout the tows and the onboard Scanmar system was used to monitor net dynamics during each haul. Catch rates of cod are shown in Figure 1. Grateful thanks are extended to the skipper and crew of the *MV Genesis* for their co-operation with this survey.

Fish Tagging

A total of 17 cod were tagged with DST tags.

Biological and genetic sampling

A total of 1143 cod were sampled for biological, otolith and genetic studies during the cruise. A total of 150 haddock were also sampled from three areas for genetic studies.

Iain Gibb
2 April 2008

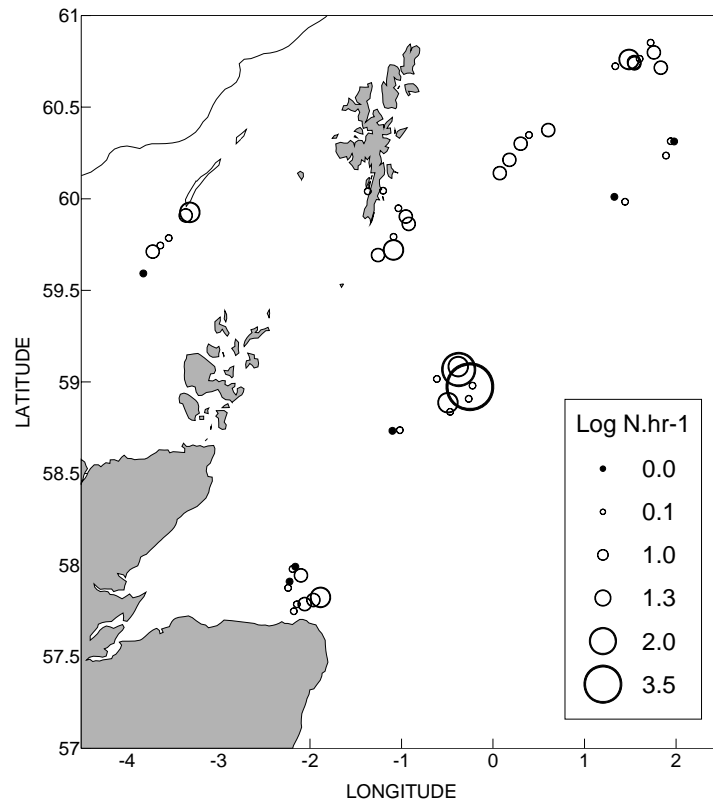


Figure 1: 2207H trawl locations. Catch rates of cod varied from 0 – 4890 per hour.