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Not to be cited without prior reference to FRS Marine Laboratory, Aberdeen

FRV Scotia

Cruise 0309S

PROGRAMME

20 February - 6 March 2009

Ports

Loading: Aberdeen, 17 February 2009
Unloading: Aberdeen, 6 March 2009

In setting the cruise programme and specific objectives, etc the Scientist-in-Charge needs to be aware of the restrictions on working hours and the need to build in adequate rest days and rest breaks as set out in FRS' Working Time Policy (Lab Notice 34/03). In addition, the Scientist-in-Charge must formally review the risk assessments for the cruise with staff on-board before work is commenced.

In the interest of efficient data management it is now mandatory to return the Cruise Report, to Iain Gibb and the Cruise Summary Report (old ROSCOP form) to Dougal Lichtman, within four weeks of a cruise ending. In the case of the Cruise Summary Report a nil return is required, if appropriate.

Personnel

P Wright (SIC)
I Gibb (20 – 28 February)
F Neat
M O'Sullivan
J Augley
D Demain
D Tobin (University of Aberdeen)
A Cook (CEFAS)

Project: MF760 – 15 days

Fishing Gear

BT186 trawl with 20mm blinder
SCANMAR

Other Equipment
40 cm Bongo nets (x2)
1m Plankton net
Minilogger
4 fish tanks
Seabird 19 CTD

Objectives

1. To conduct an ichthyoplankton survey of the north west North Sea. This survey will form part of the ICES co-ordinated PGEGGS 2009 survey.

2. To biologically sample all cod (whiting and haddock from two areas) for length, sex and maturity. Otoliths, genetic samples and ovary sections will be extracted at sea and preserved in vials for later analysis.

3. To tag spawning cod from one area for investigations of their movements. Tagging will involve both conventional and data storage tags.

4. To screen cod for haemoglobin types from a coastal and offshore site.

5. To sample male cod for the CODEND project.

Procedure

All gear and scientific equipment will be loaded onto the vessel in Aberdeen on Tuesday 17 February. The vessel will depart on 20 February and, weather permitting, will begin plankton stations off the east coast, heading north then west. A chart showing the main 49 stations to be sampled and the 11 additional stations is given in Figure 1.

The daily working plan for the vessel will be to carry out as many plankton hauls per day as possible with occasional trawling at stations when appropriate. Plankton samples will be taken throughout the day and night with a double oblique tow of the Bongo net at 2.0 knots. The vertical profile of the tow will be monitored using the Scanmar system. Volume filtered will be determined using a flow meter inside the net mouth. Eggs will be separated from zooplankton and then eggs will be sorted. Cod like eggs within the range 1.1-1.7 mm will be sorted whilst fresh and a sub-sample of 50 will be fixed in 100% ethanol for later molecular identification using the approach of Taylor et al. (2002). Remaining eggs in samples will be fixed in formalin and transferred to observation fluid. Fish larvae will also be separated at sea.

Trawls will be of approximately 20 - 60 minute duration, depending on quantity of catch on the grounds and will be carried out during daylight hours. A minilogger will be attached on the net headline to record water temperature throughout the tows. The Scanmar system will be used to monitor net dynamics during each haul. All cod (haddock and whiting from two areas) will be sampled for length, sex and maturity. Otoliths, genetic samples and ovary sections will be extracted and preserved at sea.

I Gibb will disembark the vessel at a suitable port on 28 February.

All gear will be unloaded in Aberdeen on 6 March.

Normal contact will be maintained with the Marine Laboratory.

Submitted:
P Wright
22 January 2009

Approved:
I Gibb
30 January 2009

Figure 1. Proposed Scottish Ichthyoplankton stations. Black and grey stars refer to main and additional stations, respectively. Trawl areas are identified by red boxes. Coloured lines refer to past catches of cod in trawl areas.