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MRV *Scotia*

Survey 1413S

PROGRAMME

18 October – 5 November 2013

Ports

Loading: Aberdeen, 16 October
Sailing: Aberdeen 18 October
Half Landing: Ullapool 28 October
Unloading: Aberdeen, 5 November

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 Marine Scotland's 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 I Gibb and the Cruise Summary Report (old ROSCOP form) to M Geldart, within four weeks of a cruise ending. In the case of the Cruise Summary Report a nil return is required, if appropriate.

Personnel – part 1

C.G.Davis (SIC)
R.Kynoch
F.Neat
J.Drewery
T.Regnier
L.Ritchie
R Cairns
E Barretto
N Scully – visitor.

Personnel – part 2

F Neat (SIC)
R Kynoch
C Davis
T Regnier
M Kinghorn
E Lines
P Copland
R Kilburn
C Pinto – visitor.

Project Codes: Pt 1: SU02ND (20155) 10 days
Pt 2: SP004 (20100) 9 days

Gear

- Jackson BT 195 monkfish bottom trawl
- Rockhopper ground gear with tickler chain
- Ground-gear bag nets (2 sets)
- Morgere Ovalfoil OF12 1700 Kg trawl doors.
- Net sensors; standard Scanmar sensors, bottom contact sensor and depth / temperature logger (DST).
- Swathe multibeam echosounder, sound-velocity profiler.

Objectives - Part 1

1. To undertake a nationally co-ordinated demersal trawling survey of anglerfish on the Rockall Plateau and to the west of the Hebrides.

2. To obtain temperature and salinity profiles at each trawling station.

Objectives - Part 2

1) Carry out paired, 'bagged' comparative trawls (n = 20 pairs = 40 hauls) with and without the tickler chain to assess the effect on by-catch of skate and ray species.

2) Tag and release Common Skate with electronic data storage tags for studies of their movement.

3) Collect fin clip sample from Common Skate for genetic analyses of population structure.

4) Map seabed in the Stanton Banks area using Swathe MBES

Procedure

Part 1

This is a nationally co-ordinated trawl survey to estimate the abundance and distribution of anglerfish. The survey follows a set of protocols drawn up by an industry / science survey planning group made up of Marine Scotland scientists and fishing representatives. These protocols share much in common with the sampling regimes described in Marine Scotland's standing instructions for demersal trawl surveys.

The survey track and sampling locations (randomly selected) will be delivered to the Captain and Fishing Master prior to departure and giving as much notice as possible. An approximate map of the sampling area giving the locations of all of the co-ordinated surveys is appended as Figure 1. Trawling in Irish waters will take place as necessary.

Trawling:

Fishing operations will take place on a 24 hours a day basis, with scientific teams split into two teams working 12 hours on, 12 hours off.

One haul of 60 minutes duration will be made at each sampling station; trawling operations will occur in waters up to a maximum of 1000 m. The Scanmar system will be used to

monitor wing spread, door spread, headline height and distance covered during each haul. A bottom contact sensor will be mounted on the footrope to record the distance of the trawl off the seabed.

Catches will be worked up according to the protocols for the anglerfish surveys.

Hydrography & Acoustics:

A CTD will be deployed on the trawl at each station. The ships thermosalinograph will be operated throughout the survey. The ships EK60 scientific echosounder will be operated throughout the cruise to investigate the relationship between ground type and anglerfish distribution.

Normal contacts will be maintained with the Laboratory. The other vessels (charters) on the survey will be contacted each day at approximately 18:00hrs by medium frequency radio.

Procedure

Part 2

Scotia will work the area around the Stanton Banks south of Barra (see Map). Allowing a day's steam from Ullapool to the Stanton Banks and a day to get back to Aberdeen, 6 full days and nights are expected. Fishing operations will be generally carried out during daytime and MBES mapping will at night.

Objective 1

Trawling will be carried out at stations between depths of 100-200 m in areas where Common skate have been caught in the past. Some known trawling positions will be covered (see map 1); other new tows may need to be sourced. At each station a pair of tows will be sequentially made in parallel approximately 0.5 km apart, one tow will be made with the tickler chain on and one with it off (the order will be randomized). The trawl will be fitted with 3 ground-gear bags that will catch fish that escape underneath the rockhoppers. The aim is to quantify not just what is caught by the main net, but also what would have escaped. Four separate catches for each haul will need to be quantified. Trawl duration will be 30 minutes. All skate and ray species will be identified, weighed and measured. In addition commercial species including cod, saithe, haddock, monk and megrim will be weighed and measured. Any additional sampling will take place concurrently.

Objective 2

Large Common skate in good condition will be measured, tagged and released. Electronic data storage tags (n = 29) will be attached externally.

Objective 3

All common Skate will have small piece of dorsal fin removed and placed in ethanol for genetic analyses.

Objective 4

MBES survey will take place at night. The target areas have been defined according to requirements set out by JNCC and will be between depths of 60-180m (see map 2).

Normal contacts will be maintained with the laboratory.

Submitted:
C.G.Davis / F Neat
20 August 2013

Approved:
I Gibb
8 October 2013

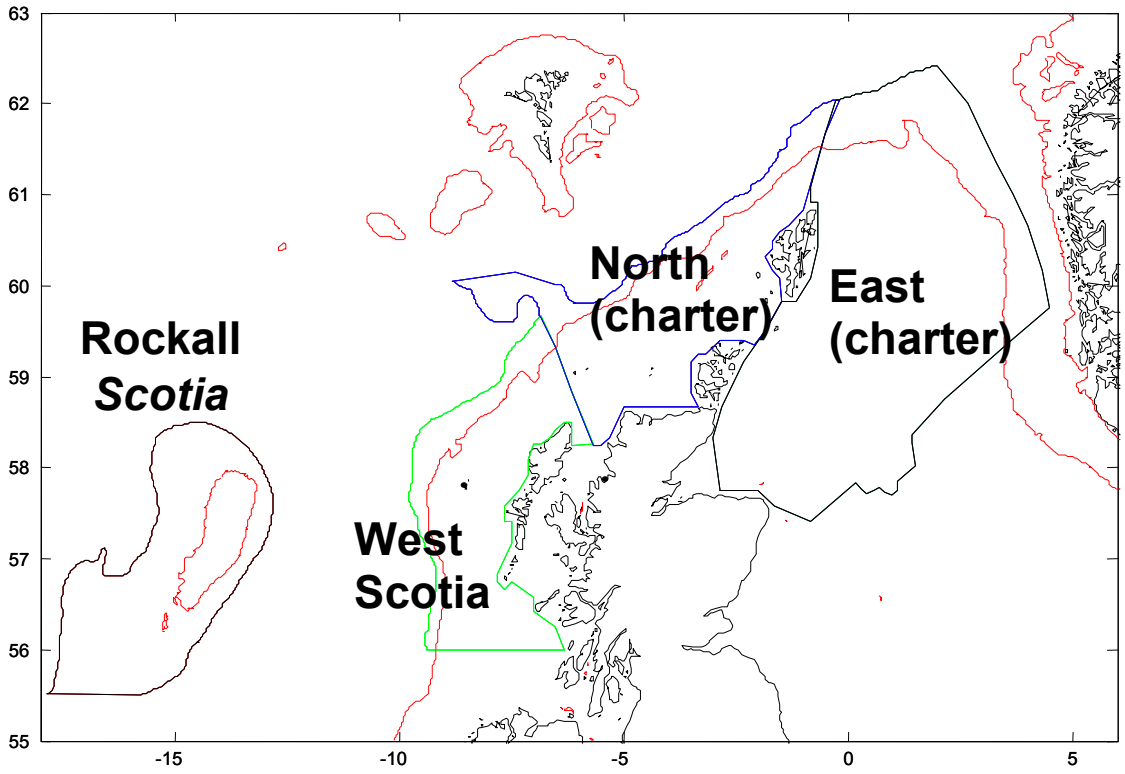

Figure 1: 1413S Part 1

Map of the Northern Shelf of the North East Atlantic with the areas to be surveyed by the vessels (in italics) in the forthcoming anglerfish survey. (The red lines indicate the approximate position of the 200 m depth contour). Details of stations assigned to the Rockall and 'West' area will be conveyed to the vessel prior to sailing