

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

FRV *Scotia*

Cruise 0411S

## **PROGRAMME**

6 April - 3 May 2011

### **Ports**

**Loading:** Aberdeen, 4 April 2011

**Sailing:** Aberdeen 6 April 2011

**Half Landing:** Ullapool (flexible)

**Unloading:** Aberdeen, 3 May 2011

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**

C Davis	(SIC)
R Kynoch	
J Drewery	
L Ritchie	
M Gault	(Part 1)
A Edridge	(Part 1)
N Collie	(Part 1)
M Stewart	(Part 1)
O Goudie	(Part 2)
L Morley	(Part 2)
L Allan	(Part 2)
C Hale	(Part2)

### **Fishing Gear**

Anglerfish Trawl BT 195 ; Morgere Ovalfoil OF12 trawl doors.

### **Other gear**

Seatronics TV chariot.

## **Objectives**

1. To undertake a nationally co-ordinated demersal trawling survey of anglerfish.
2. To undertake counts of anglerfish and determine coral density using the Seatronics TV chariot.
3. To undertake counts of anglerfish (using the Seatronics TV chariot) in two areas regarded as unsuitable for towing the fishing trawl.
4. To obtain temperature and salinity profiles at each trawling station.

## **Procedures**

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.

A map of the sampling area giving the locations of the co-ordinated surveys is appended as Figure 1 with a more detailed map showing the sampling locations and the Scotia track in red, appended as Figure 2. Trawling in Irish waters will take place as necessary. Part 1 of the survey will cover the Rockall and southern section of the 'West' sea areas, with Part 2 assigned to covering the North Sea grounds.

## **Trawling**

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. Daily start times for survey stations undertaken on Part 1 at the Rockall sea area will be at approximately 0700 and continue until approximately 1900. Fishing operations on Part 2 of this survey, on grounds to the west of Scotland and the North sea, will require 24 hrs fishing capability with scientific staff being split into two 12 hour watch periods. The Scanmar system will be used to monitor wing spread, door spread 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 which are similar in principle to Marine Scotland's standing instructions.

## **TV operation**

The Seatronics TV chariot will be deployed to check for the presence of coral on trawl sampling sites where coral may potentially be present (as defined by WGDEC potential closed areas). In the event that coral are present, trawling sites will be moved by approximately one nautical mile and the ground will be inspected again. Outside of these deployments, and in due consideration of staff working hours, the TV sled will be operated between the hours of 1900 and 0700 each night, weather permitting, at sites where coral and or hard ground occurs and at sites where trawl samples will be or have been taken. The objective in these deployments will be to count anglerfish and to determine coral density. In these cases, the chariot will sample for a time as required by the operators. The vessel must be at the location of the next new trawl station at 0600 the following morning.

On travelling to and from the survey area, the Seatronics TV chariot will be deployed to undertake counts of anglerfish on grounds deemed unsuitable for fishing. These positions

will be conveyed to the vessel prior to sailing but will be in the regions of NW Scotland and west of the Hebrides.

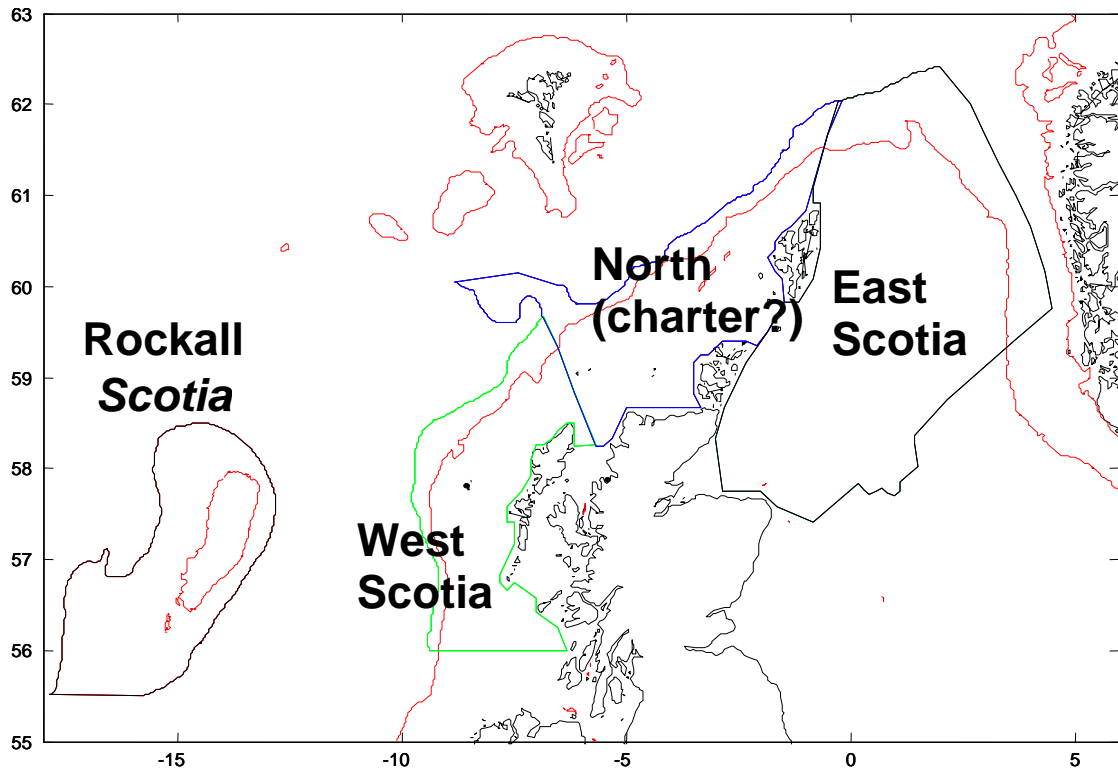
### **Hydrography & Acoustics**

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

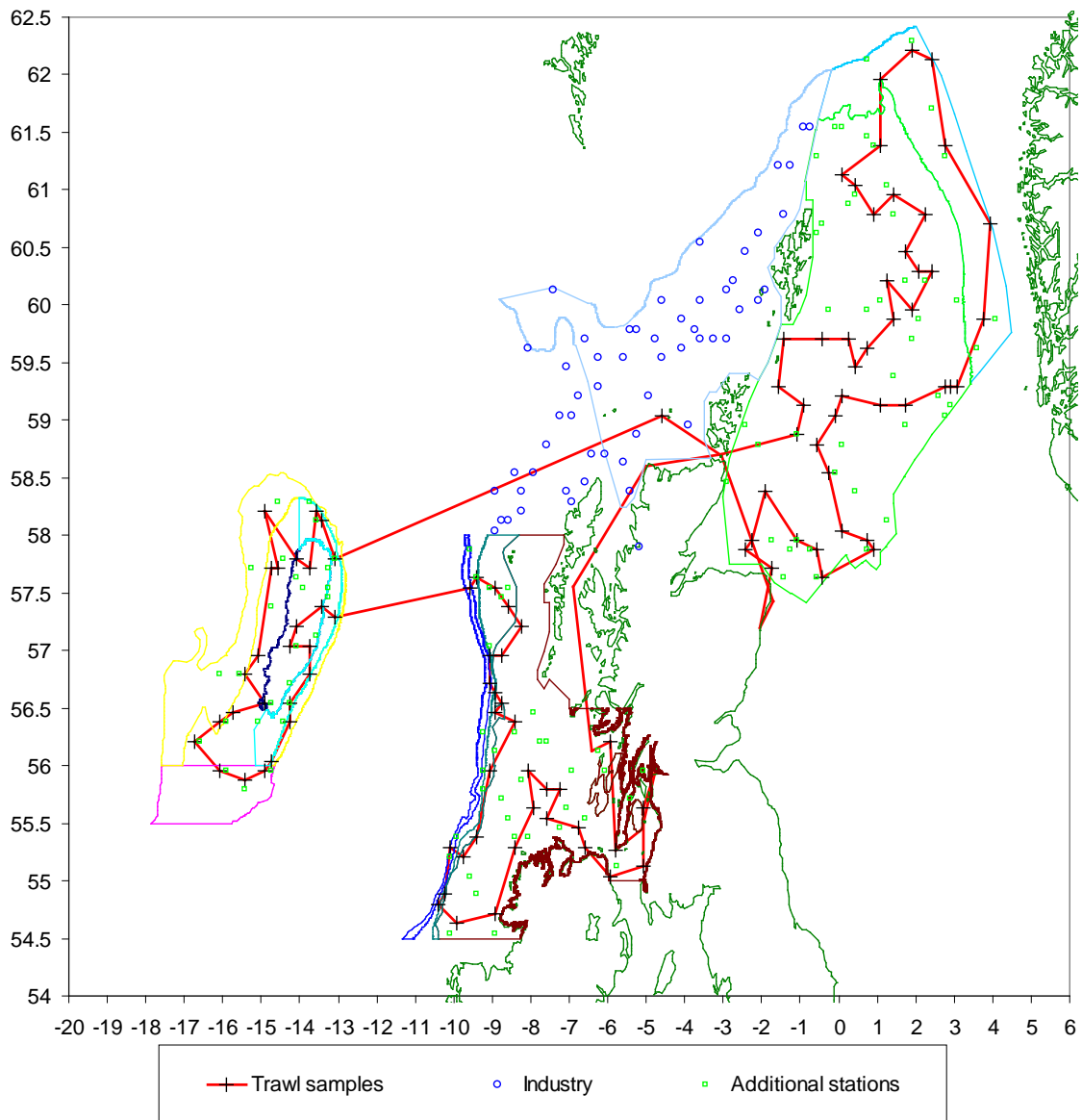
Normal contacts will be maintained with the Laboratory. The other vessel (charter) on the survey will be contacted each day at approximately 1800 by medium frequency radio.

Submitted:  
*C G Davis*  
30 March 2011

Approved:  
*I Gibb*  
5 April 2011



**Figure 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, North Sea and the southern section of the 'West' area are shown in Figure 2.



**Figure 2:** Details of stations assigned to the Rockall, southern section of the 'West' area and North Sea. Scotia cruise track shown in red.