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

FRV *Alba na Mara*

Cruise 0111A

PROGRAMME

10 -24 January 2011

Ports

Loading: Fraserburgh, 17 December 2010
Sailing: Fraserburgh, 10 January 2011
Unloading: Fraserburgh, 24 January 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

A Weetman SIC
C Shand
A Tait
C Hepple

Gear

TV drop frame, 300m armoured umbilical towing cable and cameras (plus backup)
Konesberg digital stills camera
50 mm prawn trawl
Day grab and table

Estimated Days per Project: 15 Days MF01TA/10066

Objectives

- To obtain estimates of the *Nephrops* habitat distribution in West Coast Sea Lochs, using sediment grabs and underwater cameras.
- To obtain estimates of the distribution and abundance of *Nephrops* within these lochs using underwater video cameras.
- To use the video footage to record occurrence of other benthic fauna and evidence of commercial trawling activity.
- To collect trawl caught samples of *Nephrops* for comparison of reproductive condition and morphometrics.

Procedure

This survey continues on from the work begun in February 2010 (0110A).

For each area within the survey, a position outwith the suspected *Nephrops* habitat boundary will be nominated as the start point for a search path across the length or breadth of the area, which will typically be a loch or bay. Along this search path the drop frame will be deployed to provide a visual record of the seabed type, followed by a Day grab at a suitable point along the track (if appropriate). Sediment samples will be frozen. The distance between these deployments will vary between each specific area surveyed.

The search path will continue in one direction until it appears that the presence or absence of muddy sediment becomes apparent. All significant observations will be recorded on DVD as well as manually, including the muddy sediment boundary, the point where *Nephrops* burrows begin to appear and any signs of fishing activity.

Once an area has been surveyed to establish the extent of the muddy habitat, depending on time and weather a selection of stations will also be surveyed for *Nephrops* abundance, whereby the drop frame will be deployed over known *Nephrops* grounds for 10 minutes and the number of *Nephrops* burrow complexes will be recorded. The number of TV stations to be completed will be determined by the extent of the muddy grounds and available time. Although using the TV sledge is the preferred method of video capture for abundance purposes, due to the high probability of creels present in the proposed survey areas the drop frame is more appropriate.

The latitude and longitude of the proposed start points for each survey area will be made available to the ship's complement prior to the cruise.

Weather permitting, the highest priority areas to be covered in this survey are:
Loch Ewe, Gair Loch, Outer and Upper Loch Torridon, Shieldaig Bay, Loch Kishorn, Loch Carron, Loch Alsh and Loch Duich.

Some further work maybe required at Gruinard Bay and Eddrachillis Bay but this is dependant on weather and available time.

It is hoped that at least two trawls can be carried out to the North of Rona, each one hour long; one within the Trawl Only area and one outwith this area. A range of biological data will be collected on *Nephrops* and other shellfish. The trawl gear to be used is under construction at present but will be similar to previous prawn trawl gear used on Alba na Mara, although six and eight inch disks will be incorporated on the ground rope. All enquiries relating to the gear should be directed to R Kynoch at Marine Scotland Science.

General

TV work will take place during daylight hours. There will be a requirement for some trawling to take place in the evening. On days where trawling will take place, work patterns will be arranged so as not to exceed WTD recommendations.

Submitted:
A Weetman
1 December 2010

Approved:
I Gibb
6 December 2010.