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FRV *Alba na Mara*

Cruise 1008A

PROGRAMME AMENDMENT

24 September – 2 October, 2008

Loading: Fraserburgh, 19 September

Unloading: Fraserburgh, 2 October

Summary of Working Areas:

Hydrographic, seabed sampling, plankton sampling between Catterline and Porthlethen

***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 (which is published on the Intranet). 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 James Hepburn 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

Mike Heath (In charge)
John Dunn
Natalia Serpetti
Chris Beattie (Univ. Aberdeen)
Emma Hazard (Univ. Aberdeen)

Project Codes: MF0758 (5d), AE11q (4d)

Equipment

MiniMuc corer
IOS box corer
Seabird CTD
Water bottles
Day grab / wooden table
Lowered camera frame
Zooplankton 'bongo' net
On-deck incubation tanks

Roxann hydroacoustic system
Thermosalinograph system

Objectives

- 1) To collect seabed sediment cores from a range of sediment types in an area up to 10km offshore between Catterline and Porthlethen off the east coast of Scotland.
- 2) Conduct experiments on the collected cores aboard the ship, involving incubating cores in a tank on deck, and measurements in the laboratory.
- 3) Collect hydrographic, water and plankton data and samples at each core collection site, and at the routine Stonehaven monitoring site.
- 4) Deploy a vertical dip camera frame at core collection sites to obtain images of the seabed.
- 5) Carry out Roxann and thermosalinograph surveying within the study area
- 6) To re-lay a Datawell wave rider buoy just off Aberdeen beach.

Procedure

The vessel if weather permits re-lay a Datawell wave rider buoy as it makes passage from Fraserburgh to the Stonehaven working site.

Sediment types in the study area have been thoroughly surveyed by previous surveys and 5 sampling sites have been established at which the Minimuc corer is used each month from RV Temora to collect high quality samples. Each of these sites will be occupied during this survey. In addition, there is an extensive area in the south and southeast of the region where the seabed consists of coarse gravel mixed with sandy mud, which has proved difficult to sample with the Minimuc from Temora. Obtaining cores from 4 sites where these sediments occur with the IOS box corer will be a top priority for this cruise. In addition, there are sediment types at the offshore edge of the study region, from which we require to obtain Day grab samples.

Table 1: List of intended coring locations

1.	57° 00.960' N	002° 05.223' W	Minimuc corer
2.	57° 00.151' N	002° 07.204' W	Minimuc corer
3.	56° 58.802' N	002° 07.204' W	Minimuc corer
4.	56° 57.452' N	002° 07.204' W	Minimuc corer
5.	56° 57.722' N	002° 10.177' W	Minimuc corer
6.	56° 55.833' N	002° 03.737' W	IOS box corer
7.	56° 54.457' N	002° 05.173' W	IOS box corer
8.	56° 54.457' N	002° 06.362' W	IOS box corer
9.	56° 55.564' N	002° 10.672' W	IOS box corer

Deployment of the Minimuc and IOS box corers requires the ship to be as stationary as possible above a given location on the seabed. During slack water and suitable wind conditions this is typically manageable by manual control of the vessel. However, to date we have not been able to collect core samples under peak tidal flow conditions. Hence, it is likely that core sampling will have to be confined to periods of slack water.

A number of replicate cores will be required from each sampling site. Once the required number of cores have been collected, a CTD cast and water bottle deployment, and a camera dip will be required at the sampling site.

Each day, the vessel will occupy the routine Stonehaven monitoring site to collect water and zooplankton samples and a CTD profile, the purpose of which will be to obtain a measure of variability in these parameters and assign confidence intervals to the monitoring data.

The sediment material collected from 2 or 3 sampling sites will generate enough laboratory work to fully occupy the scientific team, working in shifts, for between 12 and 24h. Hence there may appear to be periods of down-time for the ship, with regard to over-side deployment of equipment, whilst the material is worked up. During this period, the ship can either lie at anchor or undertake underway Roxann surveying along a series of survey tracks, or if the weather is unsuitable, enter port.

Following the completion of survey work, Alba na Mara will return to Fraserburgh for unloading on the 2 October.

J W Hepburn
5 September 2008