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FRV *Alba na Mara*

Cruise 0911A

PROGRAMME

15-24 July 2011

Loading: Fraserburgh, 11/13 July

Unloading: Fraserburgh, 24 July

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

| | |
|--------------|-----------------------------|
| MGubbins | (SIC) |
| G Hermann | |
| S Kinnear | |
| D Lichtman | 15 -19 July |
| Prof R Raine | 16 -21 July (Visitor, NUIG) |

Project codes: ST004 (10 days)

Equipment

Proteus workboat and 100 L unleaded fuel
Sealogger CTD/Rosette
Autosampler mooring
Day grab
Light microscope
Plankton nets and hoses

Objectives

- 1) To conduct plankton and hydrographic surveys in Shetland (focusing on SW area at first) to locate any areas where *Alexandrium* dinoflagellates are present in the plankton.
- 2) To deploy autosampler mooring in Busta Voe (or other location if *Alexandrium* are found to be present by initial survey).

- 3) To deploy and recover multiple (maximum 10) SPATT moorings adjacent to shellfish farms throughout the surveyed area.
- 4) Conduct repeated plankton and hydrographic sampling in St Magnus Bay and Busta Voe to provide background data for models of harmful algal occurrence in relation to hydrographic conditions.
- 5) To collect sediment samples for phytoplankton cyst identification from a range (approximately 12) of different voes.
- 6) To continuously monitor T&S and chlorophyll a in surface waters and surface irradiance during the cruise.

Procedure

Scientific staff will board the vessel on the morning of 15 July in Fraserburgh. Passage will be made to Shetland and Professor R Raine (visitor from NUIG, Ireland) collected from Scalloway on the morning of 16 July. Survey work will then commence in the St Magnus Bay areas with hydro stations being worked in voes by CTD and plankton sampling. Day grab samples will be taken from muddy areas within each voe surveyed to provide a set of samples to compare harmful phytoplankton cyst density in sediments to voe hydrography.

An autosampler mooring will be deployed in Busta Voe at the first opportunity and recovered at the end of the cruise. SPATT bags (passive samplers) will be deployed on small moorings adjacent to shellfish farms throughout the survey area and either recovered at the end of the cruise or left for shellfish farmers to collect after two weeks deployment.

On 19 July scientist D Lichtman will disembark at Scalloway and on the morning of 21 July visitor R Raine will disembark at Scalloway. During this period it is anticipated that voes in the Scalloway area will be surveyed by CTD/plankton sampling to facilitate staff transfers.

If plankton samples do not reveal the presence of *Alexandrium* in SW Shetland survey work may be moved North or East to voes on the East coast mainland and Yell/Unst.

For stations in voes that Alba na Mara cannot access, such as Browland Voe at the North end of Gruting Voe, the workboat Proteus will be launched to undertake the required survey work. Proteus may also be used for staff/visitor transfer and for small mooring deployments.

Following the completion of survey work in Shetland, the Alba na Mara will return to Fraserburgh for unloading on the 24 July.

Submitted:
M Gubbins
27 June 2011

Approved:
I Gibb
7 July 2011