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FRV *Alba na Mara*

## **Cruise 1308A**

### **REPORT**

20 November – 1 December, 2008

**Loading:** Fraserburgh, 18 November

**Unloading:** Fraserburgh, 1 December

### **Personnel**

M Gubbins (In charge)

G Slesser

M Rose

M Geldart

**Project codes:** AE11s (out-turn 12 days)

### **Equipment**

Proteus workboat and 100 L unleaded fuel

Sealogger CTD/Rosette

Nutrient analyser

Day grab / wooden table

Zooplankton 'bongo' net

### **Objectives**

- 1) To collect water column hydrographic data from approximately 20 sea lochs in the North Minch and Voes in Shetland to provide validation / forcing data for models of fish farming carrying capacity.
- 2) To continuously monitor T&S and chlorophyll a in surface waters and surface irradiance during the cruise.
- 3) To sample zooplankton from a range of sea lochs to provide further information on sea loch community types.

### **Narrative**

The vessel was loaded on the 18 November in anticipation of starting the cruise on 20 November. Strong winds delayed departure and scientists boarded the vessel on 22 November in hope of imminent improvement in the weather. Final departure for Shetland occurred on the morning of 25 November, arriving in Lerwick at 3 am on 26 November to

a worsening forecast. As a result *Alba na Mara* remained in Lerwick until 12:00 on 27 November, during which time some hydrographic equipment was exchanged with NAFC staff in Scalloway.

Dales Voe , Catfirth and Wadbister Voe were surveyed on 27 November, by CTD/hydrographic sampling and Day grabs were taken at Dales and Catfirth Voes. After dark, the *Alba na Mara* was moored at the pier in Dales Voe overnight. Dury Voe, Vidlin Voe, Collafirth, Swining Voe and Dales Voe North were surveyed on 28 November and the *Alba na Mara* was anchored overnight in Mid Yell Voe.

On 29 November passage was made for Burrafirth in North Unst, which was surveyed, followed by Balta Sound, Basta and Mid-Yell Voe.

Survey work was complete by 16:30 and passage made for Fraserburgh, arriving on 30 November with unloading on 1 December.

## Results

Full surveys by CTD were conducted in 12 lochs/voes as shown in the table below.

<b>Loch</b>	<b>Date</b>	<b>Hydro-stations</b>	<b>Sediment grabs</b>
Dales Voe	27/11/08	3	1
Catfirth	27/11/08	3	1
Wadbister Voe	27/11/08	1	0
Dury Voe	28/11/08	3	1
Vidlin Voe	28/11/08	3	1
Swining Voe	28/11/08	3	1
Collafirth Voe	28/11/08	3	1
Dales Voe North	28/11/08	3	1
Burrafirth	29/11/08	3	1
Balta Sound	29/11/08	3	1
Basta Voe	29/11/08	3	1
Mid Yell Voe	29/11/08	3	1

Continuous logging of surface salinity, chlorophyll and irradiance during the cruise from the on-board TSG, fluorometer and PAR sensor was successful and will provide additional regional background data for modelling purposes.

Zooplankton samples were collected from all the lochs and voes surveyed and will help to expand the sample inventory and enable a better description of Scottish inshore zooplankton communities.

Sediment samples were taken by Day grab from 11 Voes to provide samples for geographic information on the distribution of Alexandrium (potentially toxic dinoflagellate algae) resting cysts.

Matt Gubbins  
18 May 2009.