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MRV *Alba na Mara*

Survey 1613A

## **PROGRAMME**

1 - 14 November 2013

### **Ports**

**Loading:** Fraserburgh, 22 October 2013

**Departure:** Fraserburgh, 1 November 2013

**Unloading:** Greenock, 14 November 2013

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**

*E Armstrong (SIC)	3 – 14 Nov.
S Lusseau	3 – 14 Nov.
M Inglis	3 – 14 Nov.
L Ritchie	3 – 14 Nov.

**Project:** SU02NP – 14 days

### **Objectives**

1. To conduct an acoustic survey designed to survey both the open and enclosed areas of the Clyde to ultimately provide an estimate of the abundance and distribution of herring and sprat.
2. To obtain samples of herring and sprat for biological analysis, including age, length, weight, sex, maturity and ichthyophonus infection.
3. All other species caught will be measured for length and weight to establish a length weight relationship.

## Procedure

Fishing gear will be transported to Fraserburgh by lorry on 22 October and loaded onto the vessel. The vessel will make passage on 1 November to a suitable harbour in the Clyde. Scientific staff will travel by mini-bus to the Clyde to join the vessel on 4 October when the vessel will commence the survey.

The survey will be carried out within an area bounded by approx. 55°N to 56°N and 04° 40' W to 05° 40' W. Echo integration will be carried out at 38, 120 and 200 kHz. Data gathered in the hours of darkness will not be used for stock assessment. Trawling operations will be carried out as and when marks are identified. Otoliths will be collected from a sub-sample of the herring and sprat to determine age. The maturity state and presence of *Ichthyophonus* infection will also be recorded.

The track will be similar to that carried out on the same cruise in 2012 given below (Figure 1). The survey will involve following a pre-set survey pattern, at a steaming speed of 8 knots. At the end of the survey the vessel will aim to be in Greenock for the morning of the 14 November

Staff will return to the laboratory on 14 November by minibus. Normal contact will be maintained with the Marine Laboratory.

Submitted:  
E Armstrong  
1 October 2013

Approved:  
I Gibb  
25 October 2013.

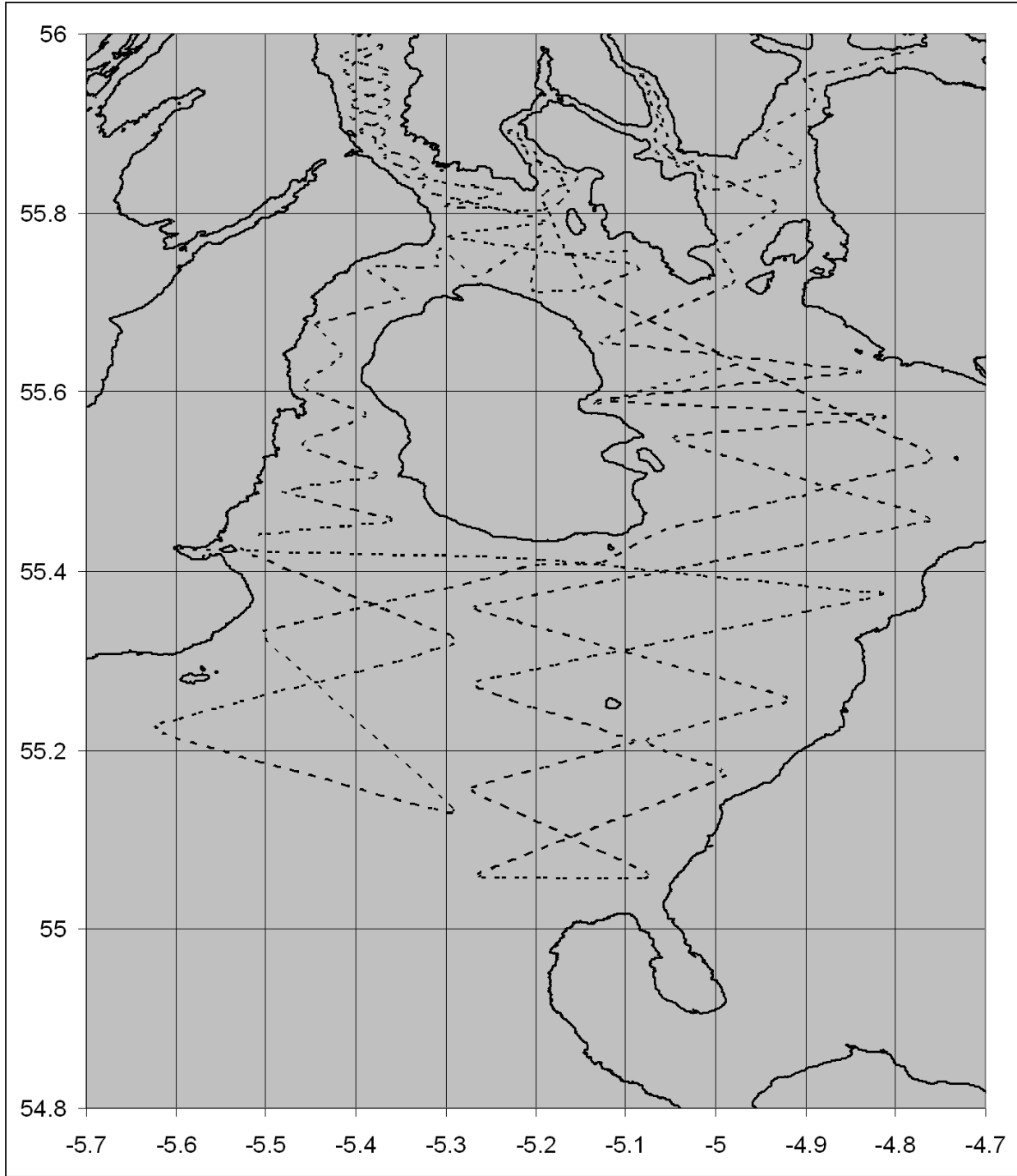


Figure 1. Track executed by MRV Alba na Mara on the Clyde Herring Acoustic Survey October 2012.