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

MRV Alba na Mara

Survey 2014A

### **PROGRAMME**

4-16 November 2014

### **Ports**

Loading: Greenock 02 November 2014

Departure: Greenock 04 November 2014

Unloading: Fraserburgh 16 November 2014

In setting the cruise programme and specific objectives, 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)

M O'Malley M Inglis L Ritchie

J Lawrence (Visitor, Aberdeen University)

**Project:** SU02NP – 13 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.
- 4. To gather passive acoustic data using a towed acoustic array to assess the presence of cetaceans.

## **Procedure**

Fishing and scientific gear will be transported to Greenock by lorry on 02 November and loaded onto the vessel. Scientific staff will travel by mini-bus to Greenock on 4 November to join the vessel and will commence the survey on completion of the set-up of the equipment.

The survey will be carried out within an area bounded by approximately 55°N to 56°N and 04° 40' W to 05° 40' W. Echointegration will be carried out at 38, 120 and 200 kHz. 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 Icthyophonus infection will also be recorded.

The track will be similar to that carried out during the same survey in 2012 (Figure 1) with modifications being made to target areas where herring are likely to be, based on information obtained from MS Compliance during the survey. The survey will involve following a pre-set survey pattern, at a steaming speed between six and eight knots.

The acoustic array will be deployed throughout the survey, unless the vessel is in an area of short transects requiring tight manoeuvrability.

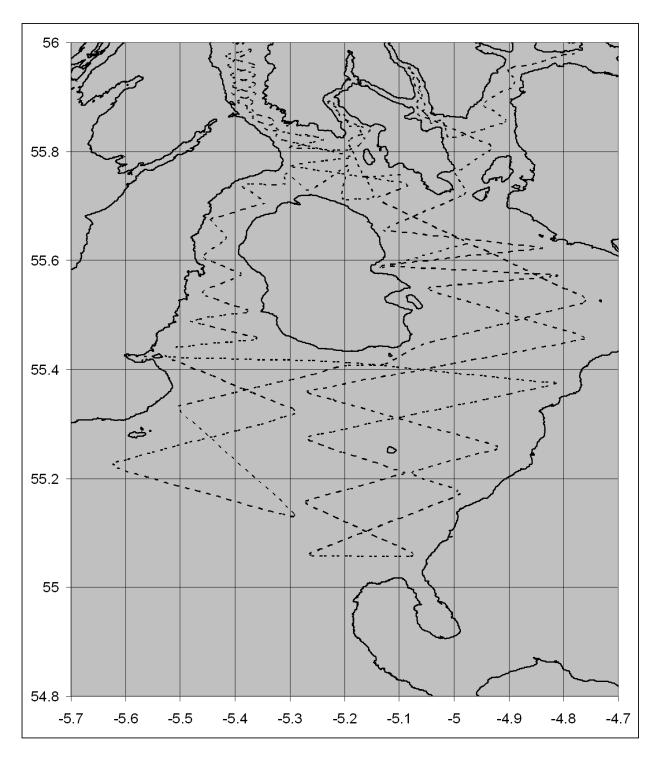
At the end of the survey the vessel will make passage to Fraserburgh, aiming to be in port for the morning of 16 November.

Unloading will take place on the morning of 16 November. Staff will return to the laboratory by minibus on the same day.

Normal contact will be maintained with the Marine Laboratory throughout the survey.

Submitted: E Armstrong 7 October 2014

Approved: I Gibb 29 October 2014



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