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Not to be cited without prior reference to the FRS Marine Laboratory, Aberdeen

FRV *Clupea*

Cruise 0105C

PROGRAMME

28 January – 11 February 2005

Ports

Loading: Fraserburgh

Unloading: Fraserburgh

***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 John Morrison 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

*P Copland (In charge)

J Drewery

J Mills

M Stewart

C Wylie

Sampling Gear and Equipment

Modified PT154 with 6 mm codend

Scanmar (height and spread units)

Simrad EK500

Seabird CTD

Objectives

1. To carry out detailed acoustic surveys in selected lochs, the Sound of Sleat and North Minch (if time allows) using the EK 500 to determine the distribution and abundance of herring and sprat. Concentrations of pelagic fish will be sampled using the PT154. Species composition and length-frequency distributions of the fish caught will be determined. Sub-samples will be weighed and otolithed to establish age-length and length-weight relationships. Herring samples will be analysed for sex, maturity, *Ichthyophonous* and *Cryptocotyle lingua* infection. Sprat samples will be analysed for *Lernaeenicus sprattae*, *L. encrasicoli* and *Cryptocotyle lingua* infection. Stomach samples will also be taken from both herring and sprat.

2. A line of CTDs will be carried out through each loch.

Survey Areas

Main survey areas - Loch Carron, Loch Duich, Loch Hourn, Loch Nevis.

Secondary survey areas - Sound of Sleat, North Minch.

Procedures

Clupea will load on 24 January. On sailing, on 28 January, *Clupea* will proceed to Kyle where scientific staff will join the ship. The survey will work within the sea lochs in a pattern determined by tides. The trip will concentrate on pelagic species and the acoustic survey in the selected sea lochs. If time allows at the end of the trip, zig-zag transects and fishing will be carried out across the North Minch.

Where possible contact with commercial fishermen working in the lochs will be made before the start of the cruise to establish the distribution and shooting patterns of the static gear in an effort to avoid damage.

Staff

Scientific staff will join the ship at Kyle at the start of the cruise. Scientific staff may return with the ship to Fraserburgh, on 11 February. If time allows work to be carried out in the North Minch. In the case of inclement weather staff will leave the ship at Kyle.

WTD

The weekends of 22/23 January and 12/13 February will cover the cruise and no rest days will be due.

Normal contact will be maintained with the laboratory.

J A Morrison
17 January 2005