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

FRV *Clupea*

Cruise 1504C

## **PROGRAMME**

8-22 October 2004

### **Ports**

**Start Point:** Fraserburgh

**End Point:** Fraserburgh

**Staff Change:** to be decided

**\*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.**

### **Personnel**

\*J Kinnear (In Charge)

I Gibb

F Neat

K Urquart

F Burns

C Pert

S Wallace 14-22 October

R Kilburn 14-22 October

### **Gear**

Young gadoid trawl BT158 with bobbins and 10 mm codend plus live fish codend.

### **Other Equipment**

Minilogger

Handlines

Live fish tanks

Seabird CTD

Day grab and sieves

### **Objectives**

1. To investigate the distribution of juvenile commercial gadoids in the inshore grounds on the west coast of Scotland, with particular reference to habitat preference.

2. To collect samples of cod, haddock and whiting for analysis of reproductive development , genetics and otolith chemistry.
3. To tag cod, haddock and whiting, when time allows.
4. To take samples of various fish species throughout the cruise to determine the prevalence of IPNV in wild fish. Samples will also be taken at each location for bacteriology, parasitology and virology to test for the presence of disease agents.

**Estimated Project Time:** 15 Days MFO465

### **Procedures**

Scientific equipment will be loaded onto *Clupea* on 4 October. Scientific staff will join the vessel in Fraserburgh on 7 October and the vessel will proceed to the west coast. Selected trawling will take place in the North Minch, Skye, and South Minch. There will be a change over of staff on 14 October (port to be determined).

### **Sampling**

Tows of 30 minutes duration will be conducted at selected sites using the BT158 net. A mini logger attached to the trawl will be used to collect data on sea temperature. Fish will be measured and sorted at sea according to standing instructions. Where necessary sub samples will be taken from appropriate species and worked up according to the relevant protocols associated with each project. Three grab samples will be taken at each trawl site for sediment analysis and benthic organisms. Tagging will be conducted at suitable sites when time permits.

Normal contact with the laboratory will be maintained.

J A Morrison  
16 August 2004