

P17/6

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

FRV *Clupea*

Cruise 0805C

## **PROGRAMME**

3–17 June 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**

\*E Hatfield (In charge)

R Campbell

O Goudie

M Stewart

C Wylie

### **Sampling Gear and Equipment**

Modified PT154 with 6 mm cod end

Scanmar (height and spread units)

Simrad EK500

Reson SEABAT

Seabird CTD

1 m plankton net (vertically towed)

Licor light level unit

### **Objectives**

1. To carry out detailed acoustic surveys in selected lochs and bays on the mainland side of the North Minch and southern Skye using the EK 500 and SEABAT to determine the distribution and abundance of juvenile 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, *Ichthyophonus* 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. For each haul from which stomachs are taken a vertical plankton net dip will be carried out.
3. A series of CTDs will be carried out through each loch and bay sampled.

### **Survey Areas**

The survey areas will overlap with the inner end of transects to be surveyed in the Minch on the west coast herring acoustic survey charter. Candidate survey areas (not definite yet) – Summer Isles/Loch Broom; Lochs Carron, Duich, Hourn, Nevis; Soay to Point Sleat/Lochs Scavaig and Slapin; Sound of Arisaig/Loch Ceann Traigh.

### **Procedures**

*Clupea* will load on 31 May. Scientific staff will join the ship prior to sailing on Friday 3 June. *Clupea* will proceed to the Summer Isles area where work will begin by carrying out a calibration of the acoustic transducers (likely close to Ullapool). Acoustic surveying will commence, using a systematic transect lay-out, on Saturday 4 June within the Summer Isles area and will continue until the area, including Little Loch Broom and Loch Ewe, is completed. *Clupea* will then move down to the lochs to the mainland side of Skye and survey in Lochs Kishorn, Duich, Hourn and Nevis, following the usual transect pattern. Time and weather depending, *Clupea* will either then move to the coastal area of Skye outside Lochs Scavaig, Slapin and Eishort and survey that area, or to the coastal area to the west of Mull including Lochs Tuath, na Keal and Scridain. The trip will concentrate on pelagic species and the acoustic survey in the selected bays/sounds and sea lochs.

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 Fraserburgh at the start of the cruise. Scientific staff will return with the ship to Fraserburgh, on 16 June.

### **WTD**

The weekend of 18/19 June will cover the cruise and no rest days will be due.

Normal contact will be maintained with the laboratory.

J A Morrison  
1 June 2005

## Circulation List: Cruise Programmes and Reports

### CLUPEA VESSEL

Programmes - Mr J A Morrison for approval. Reports - Mr J A Morrison for approval.

Issue two copies of Record of Haul and Station Numbers pro-forma with Scientist-in-Charge's copy of *Scotia* and *Clupea* programmes.

Two xerox copies of track chart for reports to be sent to Dr L Rickards.

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### PROGRAMMES ONLY

#### Lab staff

Mr J T M Hunter  
Mr T Reid  
Mr P J Copland  
Mr J Dunn  
Mr A Beaton  
Mrs J Petrie  
Security

#### Non-lab staff

~~Island Cmdr Faroes (Faroes only)~~  
~~Flag Officer, Denmark (Danish part of N Sea only)~~  
Coastguard  
G Lees

### PROGRAMMES AND REPORTS

#### Lab staff

Mr J A Morrison  
Capt R Denholm  
Mr R S T Ferro ) Fish Man team  
Mr C Hall ) progs only  
Dr R M Stagg  
Dr C Moffat  
Mr M R Heath  
Mr A Macdonald  
D Lichtman (+ additional copy of track chart  
of reports only)  
Mrs E Morrison  
CO/OIC of Vessel (*Scotia*) (to be faxed)  
Library (2)  
File

#### Non-lab staff

~~Library, Danmarks Fisk (reports only)~~  
~~Mr J Mortensen (Faroes only)~~  
~~Mr A Souplet (Fishing Cruises only)~~  
~~Dr S Ehrich (Entering German Waters) (reports only)~~  
W J McCurdy, Belfast  
Technical Director, SFIA (J E Tumilty)  
Dr L Rickards  
Dr I Joint  
Director – Havfor Inst, Norway  
Dr S Ehrich  
Monsieur le Chef du dépt, Nantes  
Mr J C Brabant  
Mrs van Duyvenvoorde  
Dr J G Gordon  
G Kane  
R de Clerck  
Mr B Stewart  
Capt J Cannan (*Scotia* and *Clupea* only)  
Controller Coastal Ops - A Stewart  
Dr P Grieg-Smith  
Mr H C Boyar  
Dr R J A Atkinson  
Mr H i Jákupsstovu  
Mr C Bullimore (To be faxed: 01923 846392)

#### Laboratory Personnel on Vessel

E Hatfield  
R Campbell  
O Goudie

M Stewart  
C Wylie

#### Fishery Officers at

Fraserburgh