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

FRV *Clupea*

Cruise 1804C

PROGRAMME

7-20 December 2004

Ports

Loading: Fraserburgh, 1 December 2003
Unloading: Fraserburgh, 20 December 2003

***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

*A Weetman	In Charge
C Shand	
R Campbell	
J Adey	(University of Glasgow), dates to be confirmed

Out-turn Days: 14 - RV0412

Gear

50 mm prawn trawl 149B (plus Scanmar)
Day Grab
Towed TV sledge, drop frame, umbilical towing cable and cameras (plus back up)
Framed creel and appropriate video equipment
Prawn sorting table

Objectives

1. To obtain estimates of distribution and abundance of *Nephrops* in Loch Torridon and the Inner Sound areas, as part of the Torridon project.

2. To collect sediment samples at each station.

3. To use trawl caught samples of *Nephrops* to examine biological features at different sites throughout the survey areas.

4. To establish the suitability of using video techniques to ascertain crab and lobster stock abundance's, along the North West Coast of mainland Scotland.

5. To record the habits of *Nephrops* around a creel, *in situ*.

Procedure

Where possible, a random stratified approach will be adopted to investigate *Nephrops* density in the two main study areas. Crab and lobster sites will be based on known fishing grounds.

TV Observations: At each suitable station a TV mounted on a sledge will be towed across the seabed for approximately 10 minutes. Observations on *Nephrops*, their associated burrows, edible crab and other benthic shellfish will be recorded on video film. Distance travelled and camera height will be monitored. Samples of the sediment will be taken at each station using a modified Day grab attached to the sledge, which will be operated remotely from the dry laboratory. Where the seabed is unsuitable for the towed sledge, a drop frame will be used (e.g. harder ground, crab and lobster survey), and the normal Day grab will be used to collect sediment samples. Observed data will be verified on return to the laboratory.

Trawling: At selected stations trawl hauls of about 15 to 30 minutes duration will be made; net parameters will be monitored using Scanmar. Morophometric and biological data will be collected on *Nephrops* and other shellfish.

In situ creel work: a commercial *Nephrops* creel will be 'housed' in a frame allowing video footage to be taken using cameras and lights attached to the frame. The creel will be used in Loch Torridon in depths ranging from 20 m to 150 m. Once deployed it will be left in place for 3–4 hours, when it will be recovered, the camera film renewed and then deployed again in a different location. This will only be carried out in the hours of daylight, and whilst the standard TV survey is being completed in that area.

General

TV work will normally take place during daylight hours. There will be a requirement for some trawling to take place in the evening.

Mr J Adey will join the ship at a viable port (e.g. Gairloch) when time and conditions are suitable. He will be aboard for a short period of time, as an observer to the techniques used and to assist in the use of the creel work.

The framed creel will be loaded on *Clupea* to travel to the West Coast. However, once this aspect of the work is completed, it will be put ashore along with Mr Adey, for the framed creel to be transported back to the Marine Laboratory.

WTD

There will be no scheduled half landing on this cruise.

Normal contact will be maintained with the Laboratory.

J A Morrison
22 November 2004

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.

PROGRAMMES ONLY

Lab staff	Non-lab staff
Mr J T M Hunter	~~Island Cmdr Faroes (Faroes only)~~
Mr T Reid	~~Flag Officer, Denmark (Danish part of N Sea only)~~
Mr P J Copland	Coastguard
Mr J Dunn	G Lees
Mr A Beaton	
J Petrie	
Security	

PROGRAMMES AND REPORTS

Lab staff		Non-lab staff
Mr J A Morrison		~~Library, Danmarks Fisk (reports only)~~
Capt R Denholm		~~Mr J Mortensen (Faroes only)~~
Mr R S T Ferro	) Fish Man team	~~Mr A Souplet (Fishing Cruises only)~~
Mr C Hall	) progs only	~~Dr S Ehrich (Entering German Waters) (reports only)~~
Dr R M Stagg		
Dr C Moffat		W J McCurdy, Belfast
Mr M R Heath		Technical Director, SFIA (J E Tumilty)
Mr A Macdonald		Dr L Rickards
D Lichtman (+ additional copy of track chart of reports only)		Dr I Joint
		Director – Havfor Inst, Norway
Mrs E Morrison		Dr S Ehrich
CO/OIC of Vessel (*Scotia*) (to be faxed)		Monsieur le Chef du dépt, Nantes
Library (2)		Mr J C Brabant
File		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	Fishery Officers at
A Weetman	Fraserburgh
C Shand	
R Campbell	
J Adey, c/o A Weetman	