

P17/15

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

FRV *Scotia*

Cruise 1304S

PROGRAMME

10-29 September 2004

***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

*Ian Tuck	(In charge)
Jim Kinnear	10-19 September
Rory Campbell	19-29 September
Charlie Shand	
Adrian Weetman	
Jim Drewery	
Barry Ward	
Beth Mouat	SNH
Aimee Oakham	UCNW Bangor

Loading: Aberdeen

Half-landing: Greenock

Unloading: Aberdeen

Objectives

- a) To obtain estimates of distribution and abundance of *Nephrops* in the Fladen Ground, Firth of Clyde, North Minch, South Minch and Stanton Banks using underwater television. If time permits the survey will also include stations in the Sound of Jura and Noup.
- b) To make use of the TV survey to estimate the densities of other shellfish species and benthic organisms and to record evidence of trawling activity.
- c) To collect samples of the sediment at each TV station.
- d) To carry out *Nephrops* trawling in each stratum throughout the survey areas for size and sex composition analysis and examination of biological features.
- e) To collect samples of *Nephrops* for comparison of reproductive condition and morphometrics in different areas. Information on size at maturity collected will contribute to EU data gathering regulation requirements.

- f) To collect samples of *Arctica islandica* for studies of shell chemistry and age.
- g) Conduct video transects of the Buzzard Field site to collect baseline data for Serpent project.

Estimated Days per Project: 20 days MF01tc (RV0410, 10325)

Procedure

The main areas in which the survey will take place have been surveyed before, and are shown in Figure 1. It is expected that the vessel will first steam to the Buzzard Field site (approx 57°50'N 1°W) to conduct a brief survey there, and then commence at the *Nephrops* survey at the south western end of the Fladen Ground. A stratified random sampling approach will be used to draw up the initial station positions and a detailed list of the positions (paper and electronic form) will be made available prior to sailing.

1. TV observations will continue throughout the 24 hour period. At each station a TV camera mounted on a sledge will be towed across the bottom for about 10 minutes - DP control will be required for this. Observations of *Nephrops*, *Nephrops* burrows, other benthic organisms and anthropogenic effects will be recorded using a video. Distance travelled and camera height will be monitored. Where practical, samples of the sediment will be taken at each station using a Day Grab.
2. Where possible, unsorted samples of trawl caught *Nephrops* (for length composition and biological parameter analysis) will be obtained in the immediate vicinity of selected TV stations. There will be no more than three trawl hauls per day. Trawling will be with a Scotnet prawn trawl using shortened sweeps in the first instance. Up to three or four trawl hauls will be made on each of the main grounds surveyed.

General Arrangements

If sampling proceeds well in the early part of the cruise, work will take place in the Sound of Jura after leaving the Firth of Clyde. If time permits, the Noup will be visited during passage towards Aberdeen.

Normal contacts will be maintained with the Laboratory.

J A Morrison
16 August 2004

Figure 1. Areas in which it is planned to undertake surveys.

