

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

Cruise 0907S

PROGRAMME

6-26 June 2007

Personnel

A McLay*	(In Charge)
A Weetman	
N Campbell	
L Allan	
M Burns	(Part 1)
J Drewery	
C Shand	
J Elson	Visitor CEFAS (Part 1)

Loading: Aberdeen 3 and 4 June 2007

Sailing: Aberdeen 6 June

Half landing: Killibegs (15/16 June)

Unloading: Aberdeen 26 June

Estimated days by project: 21 days RV0707 10471

Gear

Scotia BT175 60mm prawn trawls

Day grab

Towed UWTV sledge and UWTV drop frame

Umbilical towing cables and cameras (including back up)

Visual works hard ware (PC and monitors)

Prawn sorting table

Objectives

1. To obtain estimates of the abundance and distribution of *Nephrops* burrows in the Fladen Ground, The North Minch, the South Minch, Stanton Banks, and the Firth of Clyde. If time permits stations in the Sound of Jura, the Noup and at Devil's Hole will also be surveyed.
2. To use the TV footage to record occurrence of other benthic fauna and evidence of commercial trawling activity.
3. To collect sediment samples at each station
4. To carry out *Nephrops* trawling, one haul in each sediment stratum in each of the main survey areas, and to obtain samples for size composition analysis and biological features

5. To collect samples of *Nephrops* for comparison of reproductive condition and morphometrics in different survey areas (functional units)
6. To conduct video transects in the Buzzard Field site as part of data required baseline data for the Serpent Project.
7. To further test the Visual Works software and recording equipment for future use in *Nephrops* UWTV surveys.

Procedures

The main areas in which the survey will take place, which are known as functional units, have been surveyed before and are shown in Figure 1. It is planned that the vessel will first steam to the Buzzard Field Site (objective 6 above) to conduct up to 4 TV survey tows, before starting the *Nephrops* burrow TV survey at the SW edge of the Fladen ground. A stratified random survey design will be used to derive survey positions at the Fladen in the first part of the cruise. The vessel will then steam to the west coast and survey stations in the North and South Minch, Stanton Banks and the Firth of Clyde. Details of the survey positions will be made available in advance of sailing. Time permitting, stations in the sound of Jura, the Noup, the Devils Hole and additional stations at Fladen will be surveyed on the return leg of the journey

TV observations will be made throughout a 24 period by three teams working 8 hour shifts. At each station a camera mounted on the sledge will be towed along the seabed for approximately 10 minutes – dynamic positioning control will be required for this. Records of *Nephrops* burrows, *Nephrops* and other benthic fauna will be recorded onto DVD and hard drive for further analysis. The distance travelled by the sledge, depth and camera height will also be recorded. Where practical sediment samples will be taken using the mini Van Veen grab mounted on the sledge. It may be necessary to use the Day Grab on occasion.

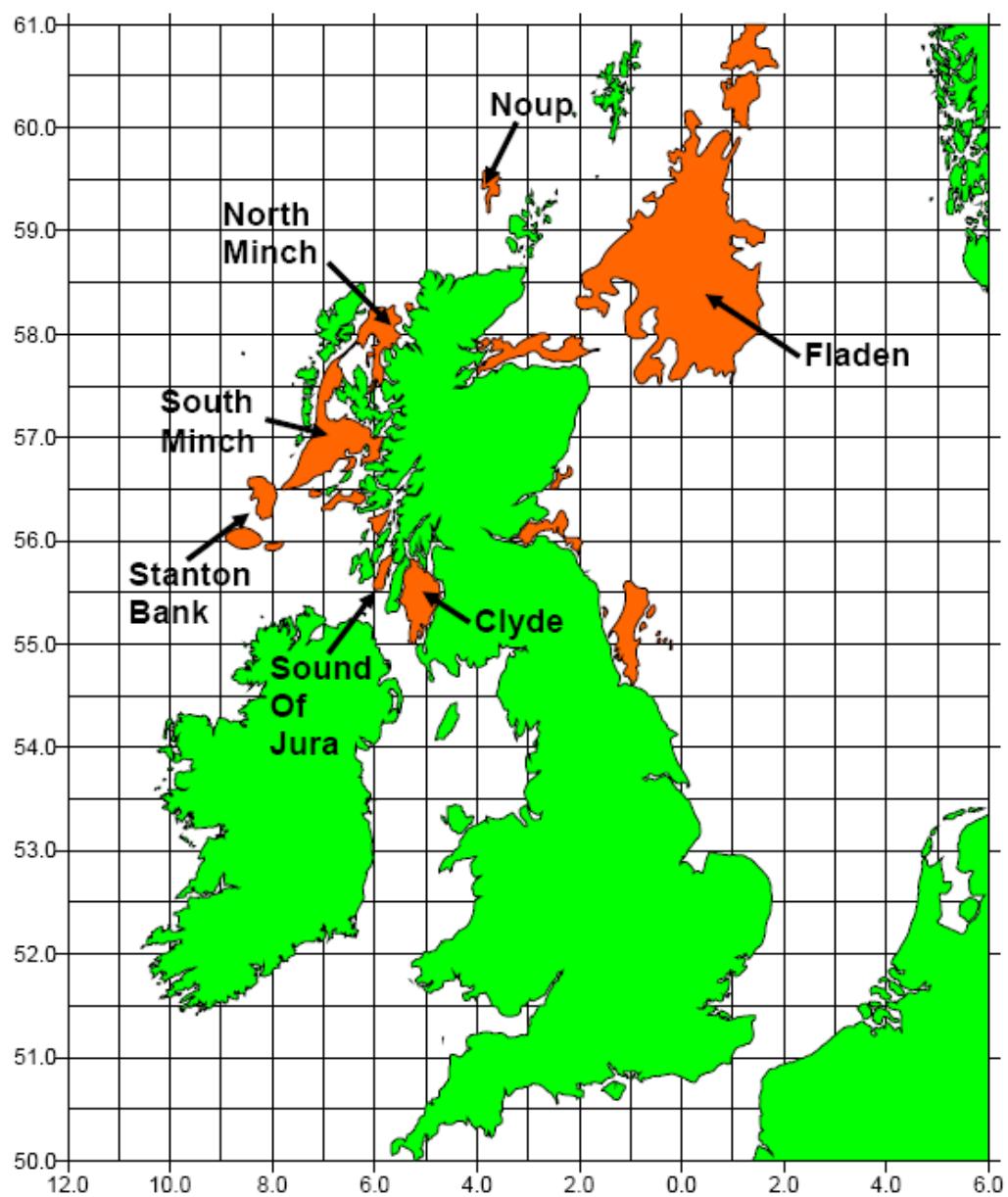
Trawl caught samples of *Nephrops* will be collected and data on size composition, maturity and morphometrics will be recorded. Up to four trawls will be made in each of the main grounds (functional units) surveyed.

M Burns and J Elson will leave the vessel at the half landing.

Normal contacts will be maintained with the Laboratory.

J A Morrison
16 May 2007

Fig. 1. Areas in which it is planned to undertake UWTV surveys.



Stanton Bank TV Survey 2006

