

**CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE
SCIENCE
LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK NR33 0HT**

2009 RESEARCH VESSEL PROGRAMME

PROGRAMME: RV CEFAS ENDEAVOUR: 05/09

STAFF:

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Marine Mammal and Seabird Observer

DURATION: 16 March – 5 April.

LOCATION: Western Channel (ICES area VIIE)

AIMS:

1. To carry out a multidisciplinary survey of the Western Channel waters for the purposes of stock assessment monitoring, examining the effectiveness / capabilities of multidisciplinary monitoring on Endeavour, the stratified random survey design and collecting ecosystem level information.

a) to carry out a beam trawl sampling survey of the Western Channel for stock assessment purposes using standardized 4m beam trawls in order to obtain information on:

- Distribution, size composition and abundance of all fish species caught.
- Age – length distribution of selected species.
- Distribution of fish in relation to their environment.
- Distribution of macrobenthos and anthropogenic debris.
- Length weight & maturity information using individual fish measurements, in support of the EU Data Regulation.

- To collect fisheries acoustic data at two operating frequencies (38 kHz , 120 kHz, 200 kHz) continuously throughout the cruise.

b) habitat discrimination will be carried out continuously during the cruise using the EK600 system (QTC-analysis) and the multibeam system. Station data will be correlated to catches and video footage from the Bowtech Explorer Extreme mounted on the beam. In addition on 10 stations the drop camera will be deployed to collect video footage to the MESH standard.

c) sediment and benthos at a station. Five sediment samples will be collected along the trawl transect preferably using the NIOS corer, but at those sites where this is not possible due to the sediment type the mini-hammond grab will be deployed. These samples will be used for collecting the following data.

The benthic macro infauna (5mm sieve)
Sediment Oxygen Profile (NIOZ)
Pore water exchange (NIOZ)

At the first NIOZ site or the last Hammond site
Benthic infauna (1mm sieve), secondary aim
Sediment particle size analysis
Bulk Chlorophyll
Bulk Nutrients
Meiofaunal sample / core (NIOZ) secondary aim

d) Sediment redox. Five SPI camera dips with 5 replicates at each dip. This data will be linked to the sediment and benthic samples so should occur at an equivalent site to those samples

e) Water column sampling. Water column profile and water samples will be collected at each station, providing profile information for chlorophyll, oxygen salinity temperature, nutrient samples and the relevant QAQC samples for calibration of the equipment. Water samples will be collected and fixed on board for analysis post-hoc. The sonde will also provide a sound velocity profile for calibrating / QAQC of the acoustic information.

f) Collect water samples for tritium and caesium contamination (22 litres) at eleven stations at graduated distances around the nuclear dumping grounds at the western end of the Hurd deep. These will be mostly collected in transit near the requested sites, though the station at the actual dumping ground will be sampled with greater precision.

g) Seabird and Marine Mammal. Locations, species and numbers observed will be recorded as encountered by SIC and crew as per the usual fisheries division protocol. In addition, a berth and space on the bridge will be made available to the JNCC or one of its consultants to collect information on seabirds and marine mammals between stations in accordance with the relevant standard practices for this kind of observation (e.g. ESAS).

PLAN:

Provisionally RV CEFAS Endeavour will sail from Portland on the 16th of March, where staff will join the vessel after travelling down from Lowestoft by hire car. The survey will fish with two 4 m beam trawls, one fitted with a blinder the other without. The survey will aim to sample a minimum of 70 randomly chosen stations and to collect acoustics data on route. On completion of the work the ship will return to Lowestoft.

GEAR:

List distributed separately and marked to relevant individuals for action.

Sven Kupschus
30/01/09

DISTRIBUTION:

Basic list +

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