

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

2013/14 RESEARCH VESSEL PROGRAMME

PROGRAMME: RV CEFAS ENDEAVOUR Survey 4/14

STAFF:

Part 1	Part 2
S Kupschus (SIC)	S Kupschus (SIC)
B Harley (2IC)	S McCully (2IC)
I Holmes	A Tidd
J Silva	J Ellis
M Whybrow	M Nicolaus
D Brown	J Pettigrew
C Firmin	P Whomersley
G Burt	P Nelson
D Brown	R Ayers
C Garcia	R Bush
R Beckett	M Eade
	P Bouch
	S Ware
	M Whybrow

DURATION: Part 1 11th February to 22nd February (short turn around / small boat exchange)
Part 2 23rd February to 10th March

LOCATION: Celtic Sea, South Western Approaches (ICES Division VII f,g,h), Western English Channel (ICES Divisions VIIe,h)

PRIMARY AIMS:

1. To carry out a multi gear ecosystem survey of the Celtic Sea, South Western Approaches and Western Channel. Deploying standardised 4m beam trawls (x2), ring nets, Hammond grabs. Station selection will be based on a fully random stratified approach with the gears deployed at each station where appropriate.

Catches from the trawls will be processed to obtain information on:

- Distribution, size composition and relative abundance of fish, cephalopods, and benthic invertebrates.
- Age-length distribution of selected fish species.
- Biological parameters of selected species.

The data obtained from processing the trawl catches is collected in support of the EU Data Collection Framework (DCF) and will be submitted to ICES working groups and other biological studies.

2. To collect fisheries acoustic data at three operating frequencies (38, 120 & 200 kHz) and multibeam data continuously throughout the cruise.

SECONDARY AIMS

3. Collect information on;
 - a. Abundance and Distribution of macrobenthos
 - b. Distribution and classification of anthropogenic debris.
 - c. Distribution of fish in relation to their environment.
4. To collect zooplankton samples at each station using ringnets
5. To collect full depth conductivity, temperature and depth profiles at each trawl station alongside surface and near-bottom water samples using a Niskin Rosette with ESM2 logger.
6. To collect sediment and infaunal samples using a Hammond or alternatively a Day grab on each station.
7. To continuously log sub-surface (3m) salinity, temperature, fluorometry and other environmental data using the 'Ferrybox' and phytoplankton size spectral analysis using flowcytometry.
8. To record details of surface sightings of any marine mammals, sea turtles and large pelagic fish, and record observations on jellyfish aggregations
9. Collect water samples for caesium and tritium analysis under SLA22 (Trevor Baily to put on board prior to sailing from Lowestoft.

Opportunistic Aims, these will be undertaken if survey progress and weather allow.

10. In muddy sediments where possible it is intended to collect key parameters from Sediment Profile Imagery and grabs to assess PSA (sediment type), Total organic carbon, pigments and redox depth (aRPD).
11. To tag and release specimens of various commercially exploited skates (Rajidae) and other select elasmobranchs.
12. To deploy a Baited Remote Underwater Video System (BRUVS) for 2 hours at each station, but is dependent on student availability and student dependent.
13. Collect frozen specimens of Sepiolidae.
14. Collect histological specimens and photographs of gonad states for selected gadoid species for submission to WKMSGAD.
15. Collections of micro plastics using the Manta trawl during the beam trawl operations to correlate historic sampling to the current ferry box based collections.

PLAN:

It is anticipated that RV CEFAS Endeavour will sail from Swansea in the early hours of the 11th of February; staff will travel to join the vessel 1 day prior to sailing. The survey is split into 2 distinct areas with a single shift working the first part concentrating only on the fisheries work. The second part in the Celtic Sea will operate 24 hours (requires extra deckie)

GEAR:

List distributed separately and marked to relevant individuals for action.

Sven Kupschus
Scientist In Charge
10-Dec-2013

INITIALLED:

Brian Harley
Stock Monitoring Survey Manager

DISTRIBUTION:

S. Kupschus

Map of randomly selected stations for the 2014 sampling program (blue = intended; green = alternate stations)

