

2021 RESEARCH VESSEL PROGRAMME

RV CEFAS ENDEAVOUR

Survey: CEND 5/21

STAFF:

Name	Role
I Holmes	SIC
B Hatton	2IC
G Eastley	Deckmaster
C Jennings	Deckmaster
M Eade	Deckmaster
T Woods	Sampler
R Forster	Sampler
H Close	Sampler
G Thomas	Sampler
R Harmer	Benthic

DURATION: 8th March – 3rd April 2021 (27 days at sea)

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

AIMS:

PRIMARY:

- 1) To carry out a beam trawl survey of the Celtic Sea, South Western Approaches and Western Channel. Deploying standardised 4m beam trawls (x2) and water column profiler. Station selection will be based on a fully random stratified approach with 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.
- Biological parameters of selected species.

The data obtained from processing the trawl catches is collected in support of the UK fisheries data collection (previously the EU DCF) and will be submitted to ICES working groups and will also support other Cefas biological studies.

SECONDARY:

- 2) To collect fisheries acoustic data at three operating frequencies (38, 120 & 200 kHz) and multibeam data continuously throughout the survey.
- 3) Collect information on;
 - a. Distribution of macrobenthos
 - b. Distribution and classification of anthropogenic debris.
 - c. Distribution of fish in relation to their environment.
- 4) To collect full depth, conductivity, temperature and depth profiles at each trawl station alongside surface and near-bottom water samples.
- 5) To continuously log sub-surface (3m) salinity, temperature, fluorometry and other environmental data using the 'Ferrybox'.
- 6) To record details of surface sightings of any marine mammals, sea turtles and large pelagic fish, and record observations on jellyfish aggregations.
- 7) Collect water samples for caesium & tritium analysis under SLA22 (T Bailey – Cefas, Lowestoft).
- 8) To tag and release specimens of Plaice, *Pleuronectus platessa* as part of a Cefas plaice tagging project. (S Roslyn - Cefas, Lowestoft)
- 9) To collect biological samples and information for Lesser weever, *Echiichthys vipera* as part of a Cefas study on species growth and biology. (S Barnett – Cefas, Lowestoft).
- 10) To carry out fieldwork testing of new motion-compensating marine balance(s) provided by Lorrimar Weighing Ltd with a view to purchasing replacements for the current POLS balances.
- 11) Collect samples of selected benthic invertebrate species for analysis of contaminants. (K Dean/A Turner – Cefas, Weymouth).

OPPORTUNISTIC:

- 12) To tag and release specimens of various commercially exploited skates (Rajidae) and other select elasmobranches.
- 13) Collect specimens of selected species for ID purposes as well as length-weight measurements where still required.
- 14) All diadromous species (including allis shad *alosa alosa*, twaite shad *alosa fallax* and lampreys (*Petromyzontidae*)) found dead on capture are to be frozen and returned to

the lab for analyses, marking samples with the survey, station and date to support DiadES project.

- 15) Collect a vertical ring net sample at the west Gabbard smartbuoy, contributing to the Lifeform project (Defra) as part of the UK monitoring network for zooplankton.

PLAN:

Staff will join the vessel in Lowestoft on around 6 March to undertake pre-sailing Covid-19 testing and after receipt of a full set of negative results, sailing will take place early on the 8 March 2021.

A shake-down tow will be carried out off the east coast at a known clear towing location to fully test all survey sampling gear, equipment and software systems. Following this, the vessel transit to the western Channel to begin survey operations. At each sampling location, survey operations will involve the deployment of two 4m beam trawls, with a CTD profile and surface and bottom water samples taken twice a day. Upon completion of 81 sampling locations in this area, a further 50 sampling locations in the Celtic Sea and the South-West approaches will be sampled.

Upon completion of the entire survey, the Cefas Endeavour will transit back to Lowestoft with a planned docking date of 3 April 2021. Unloading of equipment will likely be carried out the same day.

GEAR:

The gear requirements for this survey will be available on the associated gear list.

Ian Holmes
Scientist in Charge
18th January 2021

INITIALLED: B Hatton

DISTRIBUTION:

Survey personnel +	Cornwall IFCA
P Falconer (Portfolio Lead)	Crown Estate
D Pettengell (Project Manager)	Welsh Government (WG)
Cefas Fisheries/MPA Survey SICs/2ICs	States of Jersey
G Burt (Data Steward)	Bailiwick of Guernsey
T Bailey/S Roslyn/S Barnett/K Dean	FCO (for France & Ireland)
Southern IFCA	Marine Management Organisation (MMO)
Devon and Severn IFCA	AW Ship Management
Isles of Scilly IFCA	Master/First Officer (Cefas Endeavour)

