

## 2019 RESEARCH VESSEL PROGRAMME

### PROGRAMME: RV CEFAS ENDEAVOUR: C END 3 - 2019

#### STAFF:

##### Part 1 (5 February – 19 February)

Louise Straker Cox (SIC)  
Ben Hatton  
Jim Ellis  
Joana Silva  
Gary Burt  
Matt Eade  
Tom Woods  
Mary Brown  
Sally Songer  
Caterina Maia  
Liseve Fierens  
Silvia Rodriguez Climent  
Hayden Close  
Luke Aislabie

##### Part 2 (21 February – 13 March)

Louise Straker Cox  
Ben Hatton  
Brian Harley  
Charlotte Jennings  
Stephen Shaw  
Ruth Hicks  
Kate Downes  
Samantha Elliott  
Samantha Barnett  
Sam Roslyn  
Nicola Hampton  
Charlotte Reeve  
Zachary Radford  
Rebecca Skirrow

**DURATION:** 5 February – 13 March 2019 (37 days).

**LOCATION:** Celtic Seas/western English Channel (ICES areas 7e, 7f, 7g, 7h, 7j)

#### AIMS:

1. To carry out an otter trawl survey of the demersal fisheries resources in the Celtic Sea and western English Channel to assess stock identity and to provide more robust data to improve commercial fish stock assessments using a Jackson 19 otter trawl, standardised for fisheries monitoring purposes.

The main aims are to examine:

- a) Distribution, size composition and abundance of all fish species caught.
- b) Age – length distribution of selected species.
- c) Distribution of fish in relation to their environment.
- d) Distribution of macrobenthos and anthropogenic debris.
- e) Surface and bottom temperature and salinity data using CTD.
- f) Length weight & maturity information using individual fish measurements consistent with requirements of the EU Data Regulation.

2. To collect multibeam data and fisheries acoustic data at three operating frequencies (38, 120 & 200 kHz) and continuously throughout the survey if this does not result in interference between the two systems – multibeam data acquisition takes priority over acoustic data that being the case. These data will be used to determine the spatial scale of various habitats. All data will be stored as raw files, but also maintained individually in Olex to aid the subsequent beam trawl survey fishing the same stations on the following survey (CEND 4/19).

#### **SECONDARY AIMS:**

3. All dead shad (allis and twaite) and all dead lampreys are to be frozen and returned to the lab for analyses, marking samples with the survey, station and date.
4. Tag and release rays where possible (e.g. undulate, cuckoo, and blonde rays and common skate).
5. To report on cetaceans and seabird observations, in conjunction with the SeaWatch Foundation and MarineLife.
6. 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.

#### **OPPORTUNISTIC AIMS:**

7. To electronically tag and release specimens of Starry smooth-hound for Defra project \*N.B. project still to be confirmed\*.
8. Collect dead specimens of selected species for ID purposes as well as length-weight measurements where required.
9. Test the feasibility of using the CALPS system to collect microplastic samples from the Ferrybox water supply.

#### **PLAN:**

The survey will be equipped with a Jackson 19 trawl and Morgere doors in a standard survey setup, including net geometric sensors. The survey will operate 24/7 and aim to sample a minimum of 138 randomly selected stations, whilst collecting acoustic data on route (see aim 2).

Two potential plans have been formulated, which of these plans is followed will depend on when in relation to the start of the survey we are granted permission to fish in French waters:

**Plan A – with French permissions in place before the survey commences:**

RV Cefas Endeavour will sail from Lowestoft early on the 5 February and sail around to the Celtic Sea stratum, working western English Channel locations en-route to ensure that the gear is functioning as expected. The Celtic Sea strata will be prioritised, as weather permits, with the aim of having these completed by the end of the first half of the survey. A mid-survey break and staff changeover will take place on day 15 of the survey in Portland, Dorset. The survey will then resume in the western English Channel, targeting English strata working east first, then French working west. Once all strata have been sampled and if time permits, the survey will aim to sample additional stations in the Celtic sea in order to further increase coverage within the perceived data gap. The survey will end on 13 March, docking in Portland.

**Plan B – no permission to work in French waters is in place when the survey commences**

As Plan A until the second half. Upon leaving Portland, work will continue east, concentrating on strata 3, 4 and 5. When these are complete, work will then proceed into stratum 6, then work west through strata 7, 13, 8 and 1. With the primary stations of the survey complete, and if time permits, the survey will aim to sample additional stations in the Celtic sea in order to further increase coverage within the perceived data gap. If permission to work in the French sector is received, the survey should be in prime place to move into Stratum K and continue the primary stations. The survey will end on 13 March, docking at Portland.

**GEAR:**

List to be distributed separately and marked to relevant individuals for action.

Ben Hatton  
30 Nov 18

**DISTRIBUTION:**

All Cefas staff on survey plus:

Sally Songer (Principle Investigator [PI])  
Leah Winpenny (Project Manager [PM])  
Ian Holmes (Fisheries Surveys Manager)  
Ross Jolliffe (Portfolio lead)  
Sven Kupschus (Survey designer)  
James Maitland (P&O)  
Brian Salter (P&O)  
Cefas Endeavour Master (P&O)

