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

**2008 RESEARCH VESSEL PROGRAMME**

**PROGRAMME: RV CEFAS ENDEAVOUR: CRUISE 3/09.**

**STAFF:**

S. Milligan (SIC)
M. Eade(2IC)
S. Pitois
N. Taylor
C. Crisp
C. Stewart
A. Brown
J. van der Kooij
O. Williams
K. May
S. Pearson
C. Fox (SAMS)
A. Albaina (Bangor University)
A. Lewis (University of Southampton)
C. Mangan (National University of Ireland – Galway)
P. Tuffy (Irish whale and dolphin group)

**DURATION:** 19 – 28 February 2009

**LOCATION:** Irish Sea

**AIMS:**

1. To conduct a series of plankton surveys using a 76cm Gulf VII plankton sampler, Bioness multinet and hyperbenthic sledge to estimate the abundance and distribution of plaice eggs and larvae in the plaice spawning area in Liverpool Bay.
2. To use various trawls and acoustics to estimate the abundance and distribution of predators of plaice eggs and larvae in the plaice spawning area in Liverpool Bay.
3. To sample potential predators for detection of plaice eggs and larvae prey, using genetic probes.
4. To collect 60 live plaice for return to Lowestoft.

**PLAN:**

RV Cefas Endeavour will sail from Belfast on the morning tide of 19 February 2009 and proceed to the east of Anglesey in Liverpool Bay (Fig 1). At the first opportune moment calibration of the 38, 120 and 200 KHz echo-sounders will be undertaken. This will require good sea conditions and a minimum water depth of 30m. Work will commence with a 12-18 station plankton survey grid, which will be repeated at the end of the cruise (Aim 1). Acoustic data will be collected concurrently. A fine resolution acoustic and multi-beam grid will then be conducted over the area of highest egg densities or where the course acoustic grid

shows concentrations of plankton or fish. A fishing survey of the potential predators of plaice egg and larvae will be sampled with various trawl gears over the next few days using a variety of trawl gear (Aim 2). The stomachs of fish predators will be dissected and frozen, and whole animal samples of non-fish predators will be frozen for genetic probe work (Aim 3) up to a total of 3000 samples. Further samples of plankton and predators will be collected using a variety of gears (Bioness multi-net, Hyper-benthic sledge, beam trawl). Towards the end of the cruise the fine resolution acoustic grid and the plankton grid will be repeated. Before leaving the working area, a series of short beam trawl tows will be conducted to collected live plaice (*P. platessa*) for return to Lowestoft by road. RV Cefas Endeavour will dock in Swansea on 28 February. Scientific gear, samples and live fish will be offloaded on 1 March and Cefas staff will return to Lowestoft the same day.

**GEAR:**

List distributed separately and marked to relevant individuals for attention.

Stephen Milligan (Scientist In Charge) and
Ewan Hunter (contract leader)
23 January 2009

INITIALLED:

DISTRIBUTION:
Basic List +
Clive Fox (SAMS, Dunstaffnage)
FCO (for Republic of Ireland)
Sea Fisheries Committees:
- Cumbria
- North Western and North Wales
- South Wales

Figure 1. Cefas Endeavour 3/09, Predation Studies:
Proposed working area in Irish Sea
19 – 28 February 2009