

CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE,
LOWESTOFT, SUFFOLK, ENGLAND

DRAFT 2005 RESEARCH VESSEL PROGRAMME

PROGRAMME: RV Endeavour: CRUISE 6

STAFF:

Dr Liam Fernand (SIC)	Mr Paul Hudson
Dr Naomi Greenwood (Part time)	Mr Suihaimi bin Suratnam (UEA)
Mr Paul McCloghrie (CRP)	Dr Johan van de Molan
Mr Neil Needham	Mr Stewart Cutchey
Ms Olga Andres	Ms Al Joyce (part time)
Mr Marc Childs	

DURATION: Thursday 21st April – Sunday 1st May

Approx Sailing Time 9:00 BST (HW 8:02 GMT)

Approx Docking Time 14:00 BST on 1st (HW 14:30 GMT)

LOCALITY: Central North Sea, Dogger Bank region and Oyster grounds

Change over of personnel by sea rider on the North East coast (Berwick?)

AIMS:

The project is generally aimed at achieving a better understanding of the dynamics of the circulation processes of the seas around the UK. In order to characterise the extent and nature of density driven and seasonal jet-like circulation which acts as a direct and rapid pathway for transport of material.

The aim of this cruise is provide greater understanding of the role of buoyancy flux generated by riverine discharge in determining pathways of contaminants and nutrients. This will concentrate on the late spring - early summer period when river flow and transport might be expected to be of greatest concern.

This will be accomplished by scanfish, CTD observations, drifters and the deployment of a thermistor chain and ADCP.

As well as the thermohaline structure, the phytoplankton structure and nutrient uptake will be investigated. Regular samples will be taken for particulate organic Nitrogen and Particulate organic carbon. PON, POC.

The main sampling aims of the cruise are:

1. To characterise the hydrographic structure associated with the buoyancy plume down the NE coast and onto the Dogger Bank. By use of towed undulating CTDs (scanfish).
2. Deploy ARGOS drifting buoys to quantify the Lagrangian circulation.
3. Deploy Mooring (ADCP and thermistor chain) to study the mixing processes in the transitional region.

4. Conduct experiments for phytoplankton production both by Nitrogen uptake method and by Carbon14 labelling.
5. Take samples for POC and PON analysis.
6. Trial an Optical Nutrient analyser.

PLAN (all times GMT):

RV Endeavour will sail at approximately 0800 21st. A scanfish line will be commenced from approximately 54 N 0 15 E and head North returning to lay a mooring and thermistor chain at on 54 34.37N 00 35.86 W on the morning of the 22nd. CTDs for productivity will be undertaken at approximately 6 am each morning and further scanfish sections taken along the North East coast. Exact legs will be weather and oceanographic conditions dependant. There will be a change over of Al Joyce for Naomi Greenwood on either Tuesday 26th or 27th on the North East coast (perhaps, Berwick). Subsequent to the change over, sections to the East onto the Dogger Bank will then be completed with possible work in the Oyster ground region if time permits. Return to Lowestoft will be for the 14:30 tide on Sunday 1st May.

Liam Fernand
(Scientist-in-Charge)
30 March 2005

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