

**AGRI-FOOD and BIOSCIENCES INSTITUTE (NI)
Agriculture Food and Environmental Science Division
(Fisheries and Aquatic Systems Branch)**

Cruise Report: CO 2606

Vessel: RV *Corystes*

Date: 25th – 30th June 2006

Area: Irish Sea (north); ICES div. VIIa, VIIg, VIIIh & VIIj

Survey Type: Biological Oceanography & Mooring service

Personnel:

B Stewart (SIC)	SSO	AFBI	25 – 30 June
C Smyth	SO	AFBI	25 – 30 June
R Gilmore	SO	AFBI	25 – 30 June
P Irvine	ASO	AFBI	25 – 30 June
I McCausland	ASO	AFBI	25 – 30 June
E Capuzzo	Student	Napier University	25 – 30 June

Objectives:

- i. To maintain insitu monitoring at the offshore mooring site in the NW Irish Sea.
- ii. To investigate the distribution of dissolved nutrients, phytoplankton and zooplankton along the Irish / Celtic Sea transect.
- iii. To conduct sampling at the AFBI standard stations in the western Irish Sea.

Circulation

DCSO & CSO

Ship Managers

Fisheries Division

ANIFPO

NIFPO

Comments

Signed Head of Branch

Methods:

- Stations 38A and 47D were sampled using a Seabird 911 water sampler and Falmouth Scientific CTD
- Vertical zooplankton net hauls were taken using a 200 micron mesh bongo net with a 500mm diameter inlet.
- Depth profile samples for nutrients and chlorophyll analysis were taken over a grid of 22 stations and 128 surface samples were taken at 30 minutes intervals from the ship's clean seawater supply.
- Throughout the cruise surface salinity and temperature recordings were made using a Sea-bird SBE21Thermosalinograph. For calibration purposes samples were periodically taken for salinity analysis and temperature readings taken manually using a calibrated SIS RTM 4002 digital thermometer.

Cruise Narrative:

Sunday 25 June

In preparation for the cruise, all DANI scientific crew were onboard by 1930 hrs when mooring components and the automated sampler were prepared for deployment. Following a talk on ship's safety and a demonstration of personal life saving equipment, the RV Corystes departed Belfast at 2030 hrs and sailed overnight in a light southerly breeze to the mooring site at station 38A.

Monday 26 June

The vessel arrived on the mooring site at 0500 hrs. The weather was dry and bright with a moderate westerly wind. Work for the day commenced after breakfast with the instrument mooring eventually recovered to ship deck at 0840 hrs. The mooring components were inspected for corrosion and replaced where necessary. The thermistors and Sea-bird CTD were removed from the mooring and data downloaded. The McLane automated water sampler was cleansed and following removal of samples the instrument was rebuilt and reprogrammed for deployment. The mooring components, thermistors and CTD were then reassembled and the instrument mooring was successfully redeployed at 1245 hrs in depth 95 metres on position $53^{\circ} 46' .730N$ $5^{\circ} 38' .040W$. Following the deployment of the rosette water sampler and zooplankton net the vessel sailed to coastal station 47D arriving at 1445 hrs. Following deployment of the rosette water sampler and zooplankton net the vessel sailed in a south easterly direction to station 50 to commence a grid of stations leading to the Celtic Sea shelf edge. A shift working system was agreed to enable 24 hr working and during the latter part of the day stations 62 and B11 were sampled.

Tuesday 27 June

Light winds and calm seas permitted rapid progress along the transect with sampling completed at stations B10, B9, B8, B7, C5, CS01, CS02 and CS03.

Wednesday 28 June

With the continuation of calm seas, sampling was completed at stations CS04, CS05, CS06, CS07, CS08, CS09 and CS10 as the vessel turned for the homeward leg of the survey.

Thursday 29 June

From CS10 the vessel travelled in a north easterly direction to join the original transect at station B8 sampling every 30 minutes from the ship's clean seawater supply.

Friday 30 June

Work continued along the transect with surface mapping and the survey was completed with depth profile samples taken at stations 26, 16 and 4. The vessel sailed to dock in Belfast at 1400 hrs. All Scientific staff had disembarked by 1700 hrs

Monday 3 July

Work for the day commenced at 0900 hrs when scientific staff returned to the ship and prepared equipment for unloading. Equipment was transferred to Newforge and stored when work for the day finished at 1700hrs.

Work Completed:

The calm seas and good weather during the survey enabled scientific staff to comfortably complete all work objectives.

Results:

Detailed results of the hydrographic data collected during the cruise will be made available as the data is worked up and interpreted by the laboratory. Samples taken for nutrient analysis were returned to the laboratory and processed for ammoniacal nitrogen, phosphate, total oxidised nitrogen, silicate, nitrite and chlorophyll. Results will be available when the data is fully worked up by the laboratory.

Operational Aspects of the Ship:

During the cruise the A-frame, main trawl winches, both hydrographic winches and the ship's clean seawater supply were used. No problems were encountered with any of the ship's equipment nor indeed with any of the scientific equipment. The hotel and catering service was of the usual high standard and there was a good working relationship between the scientists and the ship's crew. Prior to the ship departing Belfast a comprehensive and detailed safety briefing was delivered to the scientific crew.

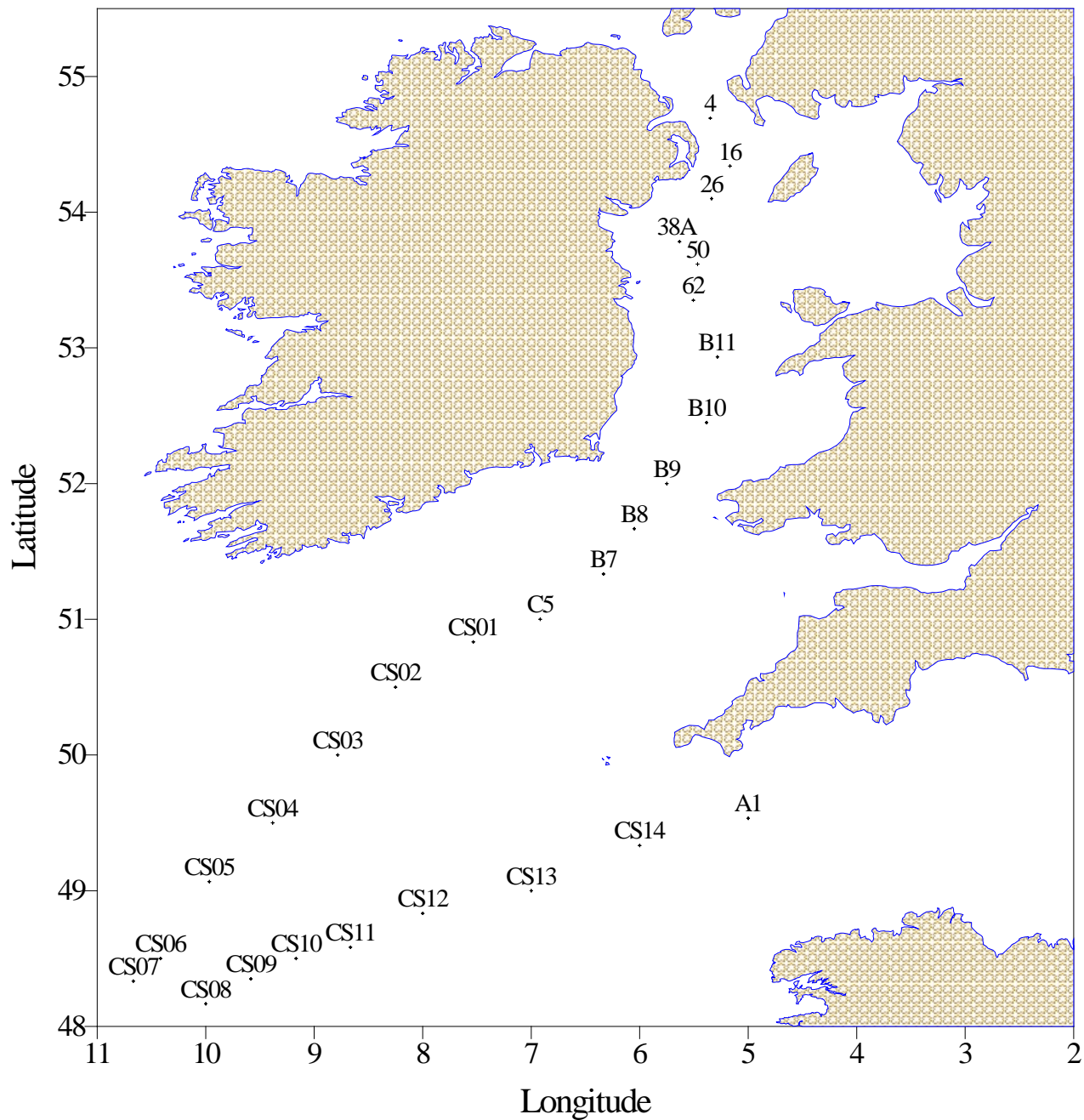
Acknowledgements:

I am indebted the deck crew of the RV Corystes for their co-operation and assistance during the mooring recovery and deployment operation. The ship's master, officers, engineers and catering staff are also thanked for their co-operation during this cruise.

Scientist in Charge
Date 10 July 2006

Master (seen in draft)

Not to be cited without prior reference to AFBI (Fisheries & Aquatic Ecosystems Branch)



Survey Transect CO 2606