

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

Cruise Report: CO 4706

Vessel: RV *Corystes*

Date: 21st - 24th November & 28th – 29th November 2006

Area: Irish Sea (north); ICES div. VIIa, VIa

Survey Type: Biological Oceanography & Mooring Service

Personnel:

B Stewart (SIC)	SSO	AFBI	21-24 Nov & 28-29 Nov
C Smyth	SO	AFBI	21-24 Nov
P Irvine	ASO	AFBI	21-24 Nov
I McCausland	ASO	AFBI	21-24 Nov
C McKenna	SO	AFBI	21-24 Nov
A McDougall	RT	QUB	21-24 Nov & 28-29 Nov

Objectives:

- i. To maintain insitu monitoring at the offshore mooring site in the NW Irish Sea.
- ii. To investigate the distribution of dissolved nutrients and phytoplankton in the Irish Sea, Celtic Sea and Celtic Shelf edge.
- iii. To investigate the spatial distribution of dissolved nutrients in the Irish Sea.
- iv. To conduct an underwater camera survey at a dredge spoil disposal site off the Carlingford estuary

<u>Circulation</u>	<input checked="" type="checkbox"/>	<u>Comments</u> <hr style="border: 0; border-top: 1px solid black; margin-top: 10px;"/> <p align="center">Signed Head of Branch</p>
DCSO & CSO	<input type="checkbox"/>	
Ship Managers	<input type="checkbox"/>	
Fisheries Division	<input type="checkbox"/>	
ANIFPO	<input type="checkbox"/>	
NIFPO	<input type="checkbox"/>	

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.
- 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:

Tuesday 21 November

Owing to gale force winds there was a 36 hour delay in the vessel departing Belfast. In preparation for the cruise, all AFBI scientific crew were onboard by 0800 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 0900 hrs and sailed in a strong westerly wind to the North Channel where the work programme commenced at 1026 hrs with the nutrient surface mapping survey. As the vessel travelled south, strong westerly and at times gale force winds meant that only inshore stations could be sampled.

Wednesday 22 November

Surface mapping continued overnight and with winds forecast to decrease for a time, the mapping survey was suspended at 0630 hrs and the vessel sailed towards the mooring site to arrive at 0800 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 0820 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 complete assembly was successfully redeployed at 1000 hrs in depth 93 metres on position $53^{\circ} 46^{\prime} .022\text{N}$ $5^{\circ} 38^{\prime} .027\text{W}$. Following the deployment of the rosette water sampler and zooplankton net the surface mapping survey resumed from station 79. In the early afternoon the weather began to deteriorate and as westerly winds reached gale force, sampling was concentrated along an inshore transect, finishing south of Dublin at 2100 hrs on station 67. With winds gusting to severe gale at times, the Corystes sheltered overnight off the Skerries.

Thursday 23 November

As the westerly gales persisted the Corystes dropped anchor and sheltered throughout the day and overnight in Dundalk Bay.

Friday 24 November

With winds decreasing the vessel lifted anchor at 0800 hrs and sailed to the dredge spoil disposal site off the Carlingford estuary where the camera was deployed at three sites. As winds increased the survey was terminated and the vessel sailed to dock in Belfast at 1930 hrs.

Tuesday 28 November

In an attempt to complete the camera survey off Carlingford the Corystes departed Belfast at 2220 hrs in a fresh southwesterly wind and sailed overnight to the survey site.

Wednesday 29 November

The Corystes arrived on site at 0630 hrs and work for the day commenced after breakfast at 0800 hrs when the camera was deployed at five sites across the dredge spoil disposal site. With the survey

successfully completed at 1200 hrs the ship sailed to dock in Belfast at 1930 hrs. Scientific crew disembarked at 2000 hrs.

Thursday 30 November

Scientific crew returned to the ship at 0930 hrs when equipment and samples were removed and returned to Newforge.

Work Completed:

With persistent strong south westerly winds and gales, sampling in the Celtic Sea and shelf break was ruled out. Work concentrated on the Irish Sea surface mapping survey but severe weather conditions curtailed sampling to Irish coastal regions. A short moderation in winds enabled completion of the mooring service operation while a second attempt was required to successfully complete the camera survey off Carlingford Lough.

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.

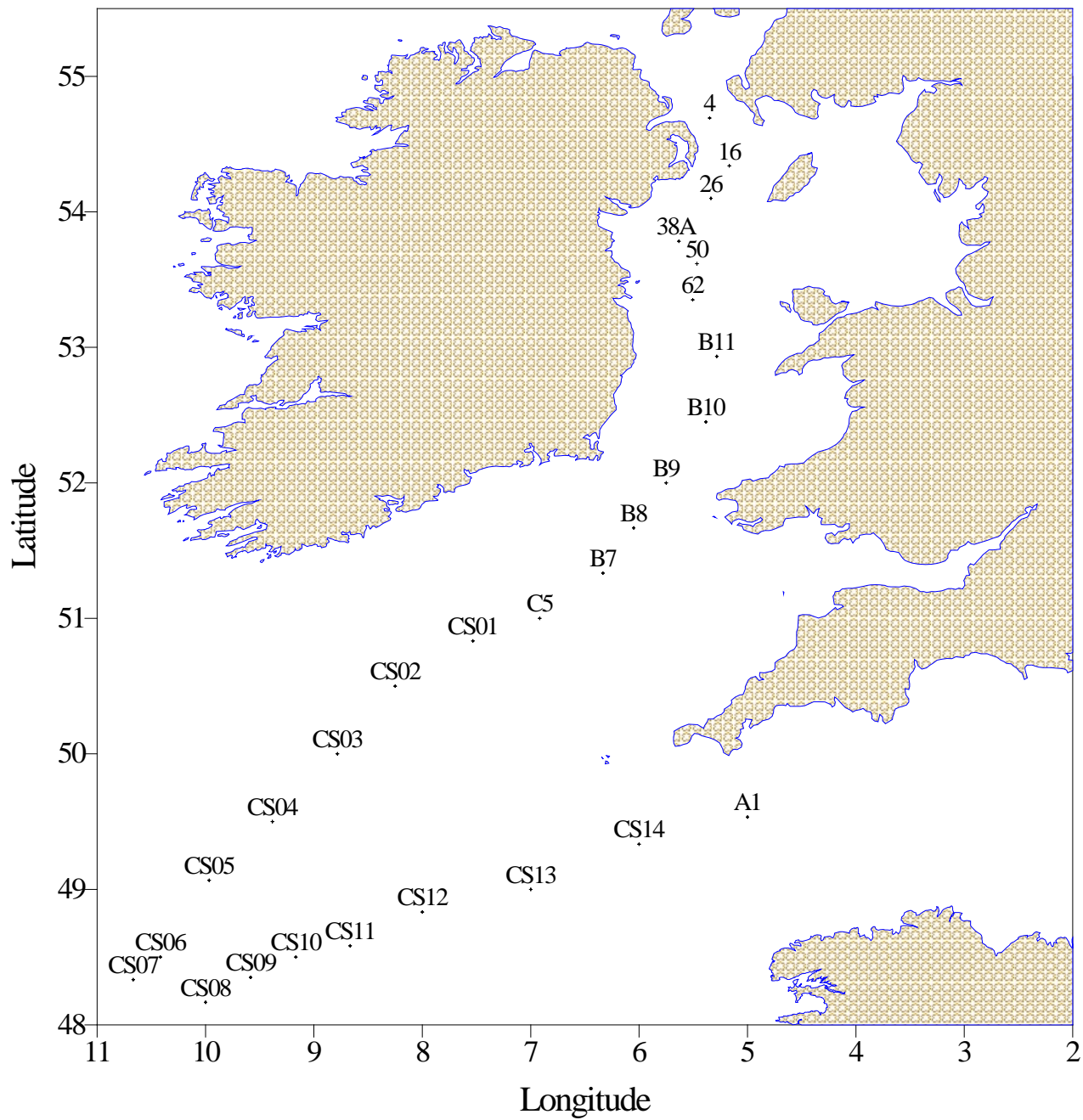
Acknowledgements:

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: 6 December 2006

Master (seen in draft)

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



Survey Transect CO 2606