



Agri-Food and Biosciences Institute
 Agriculture, Food and Environmental Science Division
 Fisheries and Aquatic Ecosystems Branch

Cruise Report: CO 0210

Vessel: RV *Corystes*

Date: 4th – 15th January 2010

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

Survey Type: Biological Oceanography, CSSEG & NIEA Survey

Personnel:

B Stewart	SSO	AFBI	3 – 14 Jan 2010
R Gilmore	SO	AFBI	3 – 14 Jan 2010
G Brady	TSO	AFBI	3 – 14 Jan 2010
C Beer	SO	NIEA	3 – 14 Jan 2010
A McDougall	SO	AFBI	3 – 8 Jan 2010
M Service	PSO	AFBI	8 – 14 Jan 2010

Objectives:

- i. To maintain an insitu monitoring programme in the Irish Sea and Celtic Sea.
- ii. To investigate the distribution of dissolved nutrients and phytoplankton in the water column in the Irish Sea, Celtic Sea and Celtic shelf edge.
- iii. To investigate the distribution of dissolved nutrients over a grid of stations in the Irish Sea
- iv. To monitor chemical and biological trends in the marine environment (CSSEG)
- v. To conduct a nutrient survey within 1 nautical mile of the Northern Ireland coast (NIEA survey)

Circulation

DCSO & CSO

Ship Managers

Fisheries Division

ANIFPO

NIFPO

Comments

Signed Head of Branch

Methods:

- Stations were profiled using a Seabird SBE 32 water sampler and SBE 911 CTD
- Vertical zooplankton net hauls were taken using a 200 micron mesh bongo net with a 500mm diameter inlet.
- Seabed sediment was sampled using Day grab.
- Seabed sediment sieved through a 1000 micron mesh

Cruise Narrative:Sunday 3 January 2010

Following a talk on ship's safety and a demonstration of personal life saving equipment, the RV Corystes departed Belfast at 2200 hrs and sailed overnight to the mooring station 38A

Monday 4 January 2010

The vessel arrived on station 38A at 0630 hrs. The weather was dry and bright with a light westerly wind when work commenced at 0800hrs with recovery of the instrument mooring to ship deck. Data from thermistors, CTD and water sampler were down loaded. Samples were removed from the water sampler and following a detailed inspection of mooring components the instruments were reprogrammed and mooring components reassembled. The instrument mooring was then successfully redeployed at 1040 hrs in depth 92 metres on position $53^{\circ} 46^{\prime} .938\text{N}$ $005^{\circ} 38^{\prime} .139\text{W}$. Following deployment of the rosette water sampler, CTD and Day grab the Corystes sailed to sample at Irish coastal stations 37, 36 and 47D before sailing south overnight to the Celtic Deep mooring site.

Tuesday 5 January 2010

The vessel arrived at the mooring site at 0820 hrs and in a fresh northerly wind the SmartBuoy was deployed without incident at 0845 hrs in depth 100 metres on position $51^{\circ} 15^{\prime} .016\text{N}$ $006^{\circ} 04^{\prime} .704\text{W}$. Following deployment of the rosette water sampler and CTD the vessel sailed in a southerly direction sampling at stations B7, C5, and CS01 before sailing to shelter from a northerly gale off the Cork coast

Wednesday 6 January 2010

Throughout the day the Corystes remained at shelter.

Thursday 7 January 2010

Given that it was no longer viable to survey the shelf stations and have sufficient time to complete other aspects of the work programme, the Corystes sailed for Belfast sampling at stations B8, B9, B10, B11, 62 and 50.

Friday 8 January 2010

The vessel docked in Belfast at 0730 hrs when Andrew McDougall was replaced by Matt Service. The Corystes departed Belfast at 2230 hrs and sailed overnight in light winds to CSSEG station 5.

Saturday 9 January 2010

Work for the day commenced at 0800 hrs on CSSEG station 5 with the deployment of the rosette water sampler and CTD followed by deployment of the Day grab. Water and sediment sampling continued at CSSEG stations 4, 3 and 2 before the Corystes sailed to drift overnight in Belfast Lough.

Sunday 10 January 2010

A coastal nutrient survey was completed between Belfast Lough and Carlingford Lough. Samples were automatically taken every 3 minutes from the ship's clean seawater supply and analysed directly by an onboard nutrient analyzer. On the return leg to Belfast Lough the rosette water sampler and CTD were deployed at NIEA profile stations 89, 85, 70 and 67.

Monday 11 January 2010

A coastal nutrient survey was completed between Belfast Lough and Lough Foyle when again samples were automatically taken from the ship's clean seawater supply and analysed directly by the nutrient analyser. During the transect the rosette water sampler was deployed at NIEA stations 62 and 13. Work for the day was completed with deployment of the rosette water sampler and Day grab at CSSEG station 6 off the north coast.

Tuesday 12 January 2010

Work for the day commenced at 0800 hrs and continued with deployment of the rosette water sampler and CTD at NIEA stations 14, 15, 22, 23, 24 and 25.

Wednesday 13 January 2010

The NIEA nutrient survey continued sampling at stations 26, 29, 31, 32, 33, 35, 36, 41, 37, 38, 39, 40 before docking in Belfast at 2330 hrs.

Thursday 14 January 2010

Work continued on the Corystes when NIEA inshore and estuarine samples, delivered to the ship, were analysed on the automated analyzer.

Work Completed:

Favourable weather conditions during the early part of the survey enabled a successful service of the AFBI and SmartBuoy mooring in the Celtic Sea. As the weather quickly deteriorated and the ship spent time at shelter, there was insufficient time to continue the survey to the Celtic shelf break. Sampling of CSSEG stations was completed and careful manipulation of the work programme around the weather enabled the successful completion of the NIEA coastal nutrient survey. .

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 the ship's equipment. However a faulty sewerage pump meant an earlier than planned return to Belfast for repair and change of scientific crew. The hotel and catering service was of an acceptable standard and there was a reasonable 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.

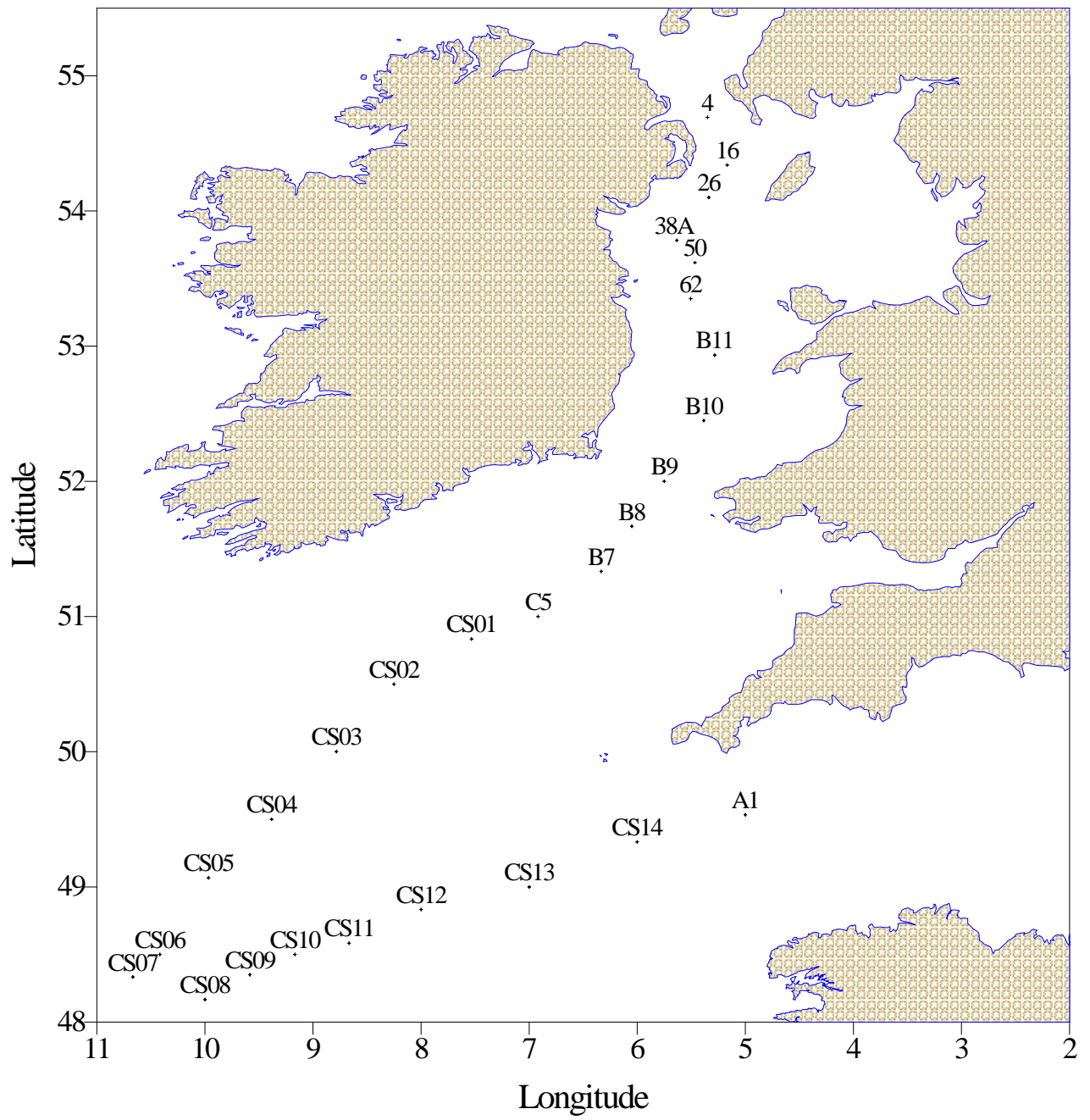
Acknowledgements:

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: 19 March 2010

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



Survey Transect CO 0210