



Cruise Report: CO 4911

Vessel: RV *Corystes*

Date: 9th – 11th December 2011

Area: Irish Sea (north); ICES VIIa

Survey Type: Biological Oceanography

Personnel:

B Stewart	SSO	AFBI	9 – 11 Dec 2011
R Gilmore	HSO	AFBI	9 – 11 Dec 2011
C Smyth	SO	AFBI	9 – 11 Dec 2011
N McAuley	Temp	AFBI	9 – 11 Dec 2011

Objectives:

- i. To maintain an *insitu* monitoring programme at the Irish Sea, Liverpool Bay and Celtic Sea mooring sites.
- ii. To investigate the distribution of dissolved nutrients and phytoplankton in the water column over a standard transect of stations in the Irish Sea

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

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
- Temperature, salinity and position were continuously recorded using a Seabird SBE 21 salinometer

Cruise Narrative:Friday 9th December 2011

Following a pre-cruise safety talk Corystes departed Belfast at 2200 hrs and sailed overnight in a strong westerly wind to the Liverpool Bay mooring site.

Saturday 10th December 2011

The weather was dry and bright with a strong westerly wind when Corystes arrived at the Liverpool Bay SmartBuoy. Weather conditions were on the limit for the mooring recovery procedure and following two unsuccessful attempts the operation was eventually abandoned. Following the deployment of the rosette water sampler and CTD, sampling continued at station LB01 and proceeded in a westerly direction along the remainder of the Liverpool Bay transect stations finishing on LB08 at 2230 hrs. In a strengthening westerly wind the vessel sailed to shelter overnight off the Irish coast.

Sunday 11th December 2011

Overnight the winds moderated and the Corystes sailed to arrive on the AFBI mooring station at 0800hrs. Work for the day commenced with recovery of the instrument mooring to ship deck at 0845 hrs. Data from thermistors, CTD and water samplers were downloaded, 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 1130 hrs in depth 91.7 metres on position $53^{\circ} 46^{\prime} .881\text{N}$ $005^{\circ} 38^{\prime} .169\text{W}$. Following deployment of the rosette water sampler and CTD the Corystes sailed to sample at Irish coastal stations 37, 36 and 47D. With winds forecast to increase to gale force and a further outlook for storm force winds the survey was terminated and the Corystes returned to dock in Belfast at midnight.

Work Completed:

During a lengthy period of westerly gales a weekend 48 hour weather window was seen as an opportunity to achieve at least some of the cruise objectives. Unfortunately conditions were not suited for the service of the Liverpool Bay SmartBuoy but sampling was completed at all stations along the Liverpool Bay transect. Favourable weather conditions on Sunday enabled a successful service of the AFBI mooring and a smooth passage when sampling at Irish coastal stations 36, 37 and 47D. With gales forecast as imminent and increasing to storm force, servicing the Celtic Deep SmartBuoy was postponed until the January survey. 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 the ship's equipment or indeed ant

of the scientific equipment. The hotel and catering service was of an acceptable 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.

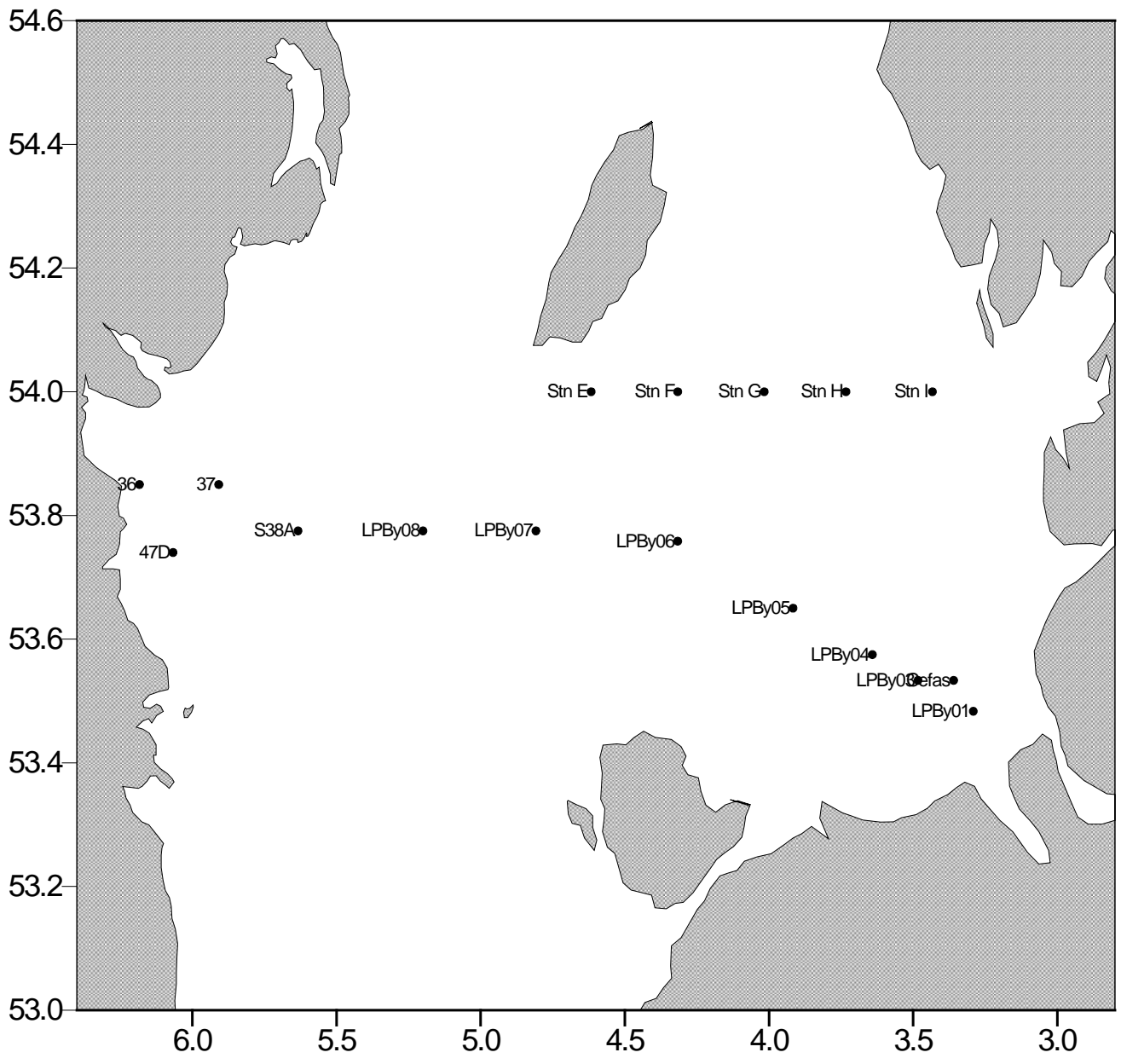
Acknowledgements:

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

Signed: B M Stewart

Scientist in Charge

Date: 16 December 2011



Irish Sea, Liverpool Bay and Isle of Man transect stations