

Department of Agriculture and Rural Development (Northern Ireland)
Agriculture and Environmental Science Division

Cruise Report: LF 2204

Vessel: RV *Lough Foyle*

Date: 30th – 2nd June 2004

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

Survey Type: Biological Oceanography & Mooring Service

Personnel:	B Stewart(SIC)	SSO	DARDNI
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	P McShane	ASO	DARDNI
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Objectives:

- i. To maintain a nutrient and remote monitoring programme at mooring stations 38A and 47D.
- ii. To assess temperature, salinity and nutrient distributions over depth at stations 38A and 47D.
- iii. To assess surface temperature, salinity and nutrient distributions throughout a grid of stations in the north western Irish Sea.
- iv. To assess sediment, epifauna and *Nephrops* samples for isotopic and pigment content.
- v. To assess temperature, salinity and nutrient distributions over depth along an east-west Irish Sea transect at latitude 54 degrees.

Cruise Narrative:

Sunday 30 May 2004

In preparation for the cruise, all DANI scientific crew were onboard by 2000 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 Lough Foyle departed Belfast at 2100 hrs and sailed overnight in a light southerly breeze towards the mooring site at station 38A.

Monday 31 May 2004

The vessel arrived on the mooring site at 0600 hrs. The weather was dry with a light south-westerly wind when work for the day started at 0745 hrs with the complete instrument mooring eventually recovered to ship deck at 0815 hrs. The mooring components were serviced, instruments downloaded and reprogrammed before redeployment at 1100 hrs in depth 93m on position $53^{\circ} 46' .818N$ $05^{\circ} 38' .053W$. The rosette water sampler and zooplankton net were then deployed.

After lunch the rosette water sampler was again deployed, followed by the sediment multi-corer and the beam trawl to acquire water, sediment, epifauna and *Nephrops* samples. The vessel then sailed to arrive at the inshore mooring station 47D at 1800 hrs where the rosette water sampler and zooplankton nets were deployed. Work for the day finished at 2100 hrs and the vessel drifted overnight in proximity to the mooring station.

Tuesday 1 June 2004

Work for the day commenced at 0745 hrs when the instrument mooring was recovered to ship deck at 0800 hrs. Following a thorough service the mooring was redeployed at 0840 hrs in depth 29 m on position $53^{\circ} 44' .796N$ $06^{\circ} 03' .793W$. The vessel then sailed towards the Strangford coast to commence sampling along the 54 degree latitude line. Work along the transect stations commenced at 1030 hrs when the rosette water sampler was deployed at approximately hourly intervals finishing in Morecambe Bay at 2200 hrs. The vessel then sailed overnight to dock in Belfast at 0900 hrs next day.

Wednesday 2 June 2004

Work for the day commenced at 0800 hrs when samples and equipment were prepared and removed from the vessel for return transportation to Newforge Lane. The scientific crew disembarked at 1030 hrs.

Parameters Monitored:

The CTD/rosette water sampler was deployed at stations 38A, 47D and at positions along the 54 degree latitude transect from Strangford to Morecambe Bay to acquire nutrient, chlorophyll *a*, temperature, light and salinity data from the depth profile. Three zooplankton net hauls were taken at stations 38A & 47D.

Moored Instrumentation:

The McLane water sampler deployed at depth 20 metres functioned as programmed with the exception of the 10 May and 31 May deployments where programming errors were suspected. Aside this, duplicate samples, for nutrient analysis, were taken every second day during the period 1 April – 9 May 2004. Temperature data recorded at 3 hourly intervals was recovered during each mooring service from seven thermistors positioned at intervals throughout the water column.

Temperature, salinity and fluorescence data recorded at 15 minute intervals was recovered during each mooring service from CTD's positioned at near surface and near bottom at station 38A.

Currently no instruments are deployed on the station 47D mooring.

Hotel Report & 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 Lough Foyle 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.

B M STEWART

19 July 2004