

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

**Cruise Report:** LF 1604

**Vessel:** RV *Lough Foyle*

**Date:** 15<sup>th</sup> – 17<sup>th</sup> April 2004

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

**Survey Type:** Biological Oceanography & Mooring Service

<b>Personnel:</b>	B Stewart(SIC)	SSO	DARDNI
	C Smyth	SO	DARDNI
	S McCracken	Temp ASO	DARDNI
	J Hill	Student	QMUL

**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:**

Thursday 15 April 2004

As strong winds subsided a second attempt was made at the mooring service operation.

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.

#### Friday 16 April 2004

The vessel arrived on the mooring site at 0600 hrs. The weather was dry with a light southwesterly wind when work for the day started at 0800 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 96m on position  $53^{\circ} 46' .853N$   $05^{\circ} 38' .030W$ . 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 inshore mooring station 47D where the vessel drifted overnight in proximity to the mooring station.

#### Saturday 17 April 2004

Work for the day commenced at 0800 hrs when the instrument mooring was recovered to ship deck at 0815 hrs. Following a thorough service the mooring was redeployed at 0915 hrs in depth 24m on position  $53^{\circ} 44' .500N$   $06^{\circ} 03' .996W$ . Following deployment of the rosette water sampler and zooplankton net the vessel sailed to dock in Belfast where scientific crew disembarked at 1730 hrs.

#### Monday 19 April 2004

Scientific crew returned to the ship at 0900 hrs when samples and equipment were removed from the ship and transported to Newforge Lane.

#### **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