5699

② Dr McMurray achieved its objectives in increasing our knowledge of Irish Sea benthos. In addition samples were collected at

my request, to obtain better quantitative estimates of biomass/abundance of macrofauna in the Irish Sea. These may be significant for summer production of ecosystem.

Dun 18/1

Department of Agriculture for Northern Ireland
Agriculture and Environmental Science Division

Cruise Report: LF2695
Vessel: RV *Lough Foyle*
Dates & area: 20 -23 August 1995

Personnel:			
	R Hensley	DANI	SIC/HSO
	C Gibson	DANI	SPSO
	S Bloomfield	DANI	ASO
	J Peel	DANI	ASO

Objectives:

To obtain 20 quantitative macrobenthic samples from two soft mud locations in the north-western Irish Sea (40 samples in total). In addition, three redox profiles and one sediment sample for granulometric analysis were to be taken from each station. Water samples were required from station 38 for pico-plankton analyses.

Cruise narrative

Sunday 20 August

Lough Foyle departed Belfast at approximately 2130 and steamed overnight to oceanography station 38.

Monday 21 August

Box coring commenced at 0830. The weather was hot and the sea very calm. A number of problems were encountered with the box corer which resulted in relatively slow progress during the day. By 1630, eleven box samples had been retrieved. After dinner however, the box corer functioned perfectly and the remaining 9 samples were obtained by the end of the working day at 2030. The vessel remained on station overnight.

Tuesday 22 August

At 0830 the CTD rosette was deployed twice to collect samples from 20 m depth (at the chlorophyll maximum). Sub samples of 1 L volume were filtered and the residues

retained on the filters frozen pending chlorophyll extraction in the Belfast laboratory. After the CTD deployment was completed *Lough Foyle* steamed to the second benthos station (station 54)

Box coring started after lunch at 1330. The weather was cooler and the wind had freshened slightly. As with the first day, initial progress was slow. Minor running repairs were effected with limited success. The main problem stemmed from the deployment warp deviating from the vertical so as to prevent the trigger mechanism from firing. This problem was overcome when the vessel was turned to head into the wind enabling the ship to maintain position and reducing drag on the corer when in the water column and on the sea bed. Sampling success became more consistent as the day progressed with the result that all 20 macrofauna samples (and associated cores) were obtained by the end of the working day at 2110.

The vessel remained at anchor off Grey Point, Belfast Lough, overnight and docked in Belfast at 0800 the following morning.

Methods

Each box core sample was photographed and, where appropriate, measurements taken to ascertain the depth of penetration into the sea bed. Macrofauna samples were obtained by inserting one 13 cm diameter perspex tube into the box core sample. The unwanted material was then washed away and the perspex tube removed. This tube of sediment was then photographed and the depth at which the sediment changed colour from brown to grey measured. The top 20 cm of sediment was then extruded and washed through a 0.5 mm mesh sieve. The fraction retained on the sieve was preserved in 4% formaldehyde and stored in a labelled container. Sediment samples were obtained in the same way but were frozen entire at -20°C. Cores for redox potential profiles were obtained using modified 13 cm diameter perspex tubes. These have holes at 5 cm intervals through which the redox probe is inserted. After a reading is taken from the water over the sediment, the material is pushed up with a plunger until it is level with the top of the tube. Readings are taken sequentially down the core. A maximum of two perspex cores were inserted into any one box core sample.

Results

Results will be reported following analysis of the material in the laboratory.

Acknowledgements

The SIC would like to thank all Scientists, Officers and Crew who participated on the cruise. The good atmosphere (and good weather!) on the boat made it one of the most pleasurable cruises I have undertaken - despite all the mud!

Signed

SIC: Date: 24/8/95

Master: Date:

Section Head: Date: 31/8/95