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① Prof Lowe
② Dr McMurray
This short cruise was part of the DETR/MAFF funded JONUS project which is now nearing conclusion. The result obtained & described here is interesting and not what I expected.
Dawn H 16/7

Biological Oceanography Cruise : LF2798

Cruise Report
(July 02-03)

Personnel

R. Gowen (SIC)	SSO	(DANI)
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Cruise Objectives

1. to determine rates of oxygen consumption and denitrification at the sediment-water interface at the DANI mooring site in the central Irish Sea.

2. to collect data on water column structure at the DANI mooring site and standard station in Irish coastal waters.

3. to collect water samples for determination of phytoplankton biomass and dissolved inorganic nutrients.

4. to collect zooplankton samples from the two stations.

Cruise Narrative

R.V. Lough Foyle departed Belfast at 2100 on Thursday July 02 and sailed for the DANI mooring station in the central Irish Sea. On Friday July 03, bottom sediments were collected and used in ship-board experiments to determine rates of sediment oxygen consumption, sulphate reduction and nutrient efflux. A CTD profile was recorded and waters samples collected from a range of depths. Zooplankton samples were collected using a 0.6 m 280 μm mesh ring net (vertical hauls). On completion of the work at the mooring station the ship sailed for the standard DANI station in Irish coastal waters. The CTD work and collection of zooplankton was repeated at this station. On completion of the work, Lough Foyle steamed for Belfast and docked at 1930.

Preliminary Results

All of the experimental work was undertaken successfully and counting of the isotope labeled sediment samples is on schedule.

This cruise was the last in a series to investigate the response of the benthos to the input of phytodetritus during the course of the spring bloom. Initial results indicate that sediment oxygen demand remained low during the bloom. This suggests that there was a relatively constant but low input of carbon rather than a pulsed supply. The small changes in sediment pigment concentration (Figure 1) support this view.

Acknowledgments

I would like to thank the captain, officers and crew of the R.V. Lough Foyle for their assistance during the cruise. I also wish to express my thanks to the scientific staff who participated in the cruise.

Richard Gowen

July 16, 1998

Figure 1

Changes in sediment chlorophyll and pheopigment (mg m^{-2}) during the 1998 spring bloom at the DANI mooring station in the western Irish Sea