5713

BIOLOGICAL OCEANOGRAPHY CRUISE REPORT

LF 06/97

10 - 14 February 1997

PERSONNEL

B Stewart	(SIC), SSO, DANI.
W Clarke	SSO, DANI.
S Bloomfield	ASO, DANI.
J Livingstone	ASO, DANI.

OBJECTIVES

i. To assess temperature, salinity and nutrient distributions over a grid of stations in the north western Irish Sea.
ii. To recover, service and redeploy the DANI instrument mooring.

CRUISE NARRATIVE

Sunday 9 February 1997

In preparation for the cruise, all DANI scientific crew were onboard by 2000 hrs when monitoring and sampling equipment was tested and confirmed to be functioning properly. With strong gale force winds and following discussions with the ship's officers a decision on sailing was deferred until the following morning.

Monday 10 February 1997

Gale force winds persisting, the vessel was again unable to sail.

Tuesday 11 February 1997

During the morning the wind began to ease and with a further improvement in the afternoon I agreed with the ship's master to sail in the early evening. Following a talk on ship safety and a demonstration of life saving equipment, the RV Lough Foyle departed Belfast at 2000 hrs and sailed slowly overnight in a light to moderate wind to the mooring site.

Wednesday 12 February 1997

The vessel arrived at the mooring site (position 53° 42.16'N 05° 34.61'W) at 0600 hrs. The weather was bright and cold with a light to moderate wind. Work commenced at 0800 hrs, with recovery of the instrument mooring (buoy i.d. No. 2) to ship deck completed at 0900 hrs. Data from temperature/depth sensors was downloaded and sensors were programmed for redeployment. The 'nutrient' water sampler was replaced and the 'biological' water sampler added to the instrument leg of

the mooring. In increasing winds the mooring was eventually deployed at 1130 hrs at position 53^0 42.85'N 05^0 34.04'W. With winds increasing to gale force, service of the remaining toroid and anchor (buoy i.d. No. 3), was rescheduled to a later date. The vessel then sailed to station 38A, the proposed new mooring site, where a depth survey was taken and the CTD/rosette water sampler deployed. At this point the vessel developed an engine fault and drifted for approximately one hour in a strong southerly wind before being repaired. With winds increasing to gale force and severe gale to storm force winds forcast for later, the survey was concluded and the ship sailed to dock in Belfast at 2130 hrs.

Thursday 13 February 1997

Work commenced at 0830 hrs when scientific and mooring equipment was prepared for unloading. Work was completed at 1100 hrs when scientific personnel disembarked from the vessel.

PARAMETERS MONITORED

With poor weather conditions, the CTD/rosette water sampler was deployed only at station 38A to acquire nutrient, chlorophyll a, total carbon /nitrogen, temperature and salinity data from the depth profile; samples were taken at every 10 metres. At station 45, a sample was taken via the ship's clean seawater supply.
The Bowers & Connelly mini-corer was unsuccessfully deployed at station 38A, where the operation was affected by the vessel drifting rapidly in the strong wind.

SUMMARY OF RESULTS

From the CTD data, the sole profile was found to be mixed from surface to bottom. Temperature and salinity was 8.14 °C and 34.3 ppt respectively; inorganic nitrogen values were similar to the same period last year and ranged 6-7 micromoles N l^{-1}.

PROBLEMS ENCOUNTERED

i. Depth counter on hydrographic winch did not work.
ii. Nav-Star GPS, located on the ship's bridge was faulty. This instrument provides a navigational signal to the ADCP.
iii. The nutrient water sampler recovered from the instrument mooring had not sampled during the deployment period. The fault has been traced to a faulty pump.

ACKNOWLEGEMENTS

The ship's master, officers, engineers, catering staff and crew are thanked for their cooperation during this cruise.

B M Stewart

B M STEWART
20 February 1997