

Biological Oceanography Cruise : LF 19 2001

Cruise Report
(May 7-11)

Personnel

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Cruise Objectives

1. to service the DARD mooring
2. to collect zooplankton and phytoplankton samples at the two DARD stations.
3. To map the surface distribution of near surface variables in the vicinity of the western Irish Sea front.
4. To work a CTD section and collect zooplankton samples across the western Irish Sea front

Cruise Narrative

Lough Foyle departed Belfast at 2100 on Monday May 7 and steamed for the DARD offshore mooring site. Sampling commenced at 0700 on Tuesday May 8 with a CTD profile, collection of water samples (for dissolved inorganic nutrients, chlorophyll, seston and microplankton) and zooplankton samples. On completion of the sampling the DARD mooring was recovered and serviced. The mooring was redeployed at 1100 and Lough Foyle then worked a transect of 5 stations across the western Irish Sea front. The ship anchored overnight at the DARD inshore station. This station was worked (CTD, water and zooplankton samples) at 0700 on Wednesday May 9, before Lough Foyle steamed the lower section of a grid (Fig 1) during which underway sampling was conducted. On Thursday May 10 sampling at the DARD offshore mooring station was repeated before the second leg of the surface mapping survey was undertaken. Lough Foyle docked in Belfast at 0830 on Friday May 11.

Preliminary results

The spring bloom was well underway at the time of sampling at the DARD offshore mooring site. Near surface concentrations of chlorophyll ranged from 5 to 9 mg m⁻³, which is typical for the location. Data from surface mapping (Fig. 1) shows that the

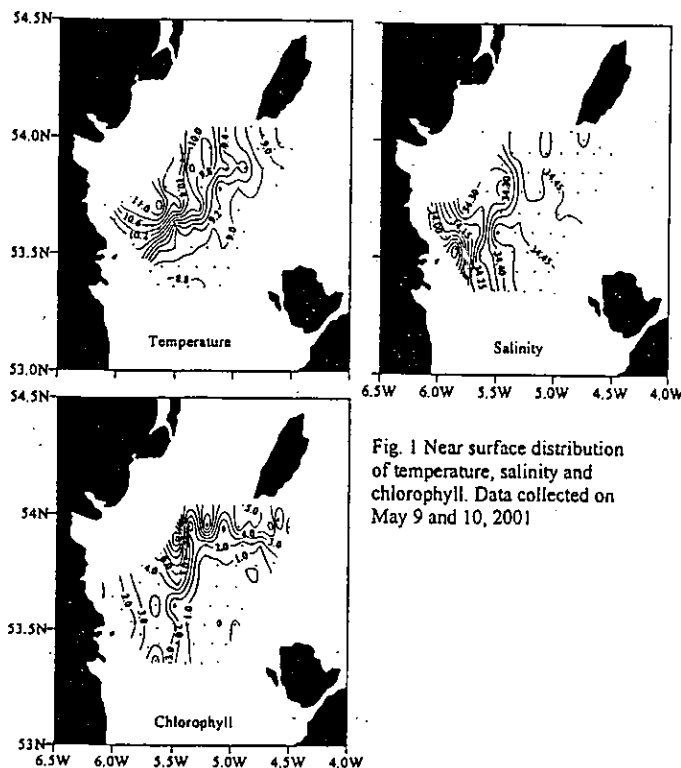


Fig. 1 Near surface distribution of temperature, salinity and chlorophyll. Data collected on May 9 and 10, 2001

western Irish Sea front was well established in early May. However there was little evidence of enhanced biomass at the front. Rather, the front appeared to mark the boundary between the western stratified region where the spring bloom was well underway and the vertically mixed eastern Irish Sea where chlorophyll levels were close to pre spring bloom levels.

Acknowledgements

I would like to thank the Captain, Officers and Crew for their assistance during the cruise.

R Gowen

May 29 2001