5667 file H1743

LOUGH FOYLE CRUISE REPORT 9.12.91 - 11.12.91

CAMERA SLEDGE TRIALS



PERSONNEL

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|---|---|---|---|
| M Service | SSO | DANI | SIC |
| W Clarke | SSO | DANI | |
| R Hensley | HSO | DANI | |
| P Moorehead | SO | DED (ISC) | |

OBJECTIVES

The primary objective of the cruise was to provide further trials for the ASRD camera sledge with a view to applying the equipment in a real survey situation around the North Channel disposal grounds. Secondary objectives were the collection of grab samples from the National Monitoring Plan Station in the North Channel and the Beaufort Dyke area as part of the benthic ecology programme.

NARRATIVE

Day 1

The morning of 9 December 1991 was spent at berth in Belfast Harbour setting up equipment. Departure was delayed until 11.45 am due to the late arrival of fuel. The afternoon was then spent with trial runs of the sledge immediately south of the Copeland Isles. Despite problems in reducing the tow speed to manageable levels some good video footage was obtained and the ability of the sledge to traverse rocky uneven ground illustrated. Underwater visibility was, at best, mediocre with high levels of suspended material present.

The evening was spent at anchor within Belfast Lough while modifications to the sledge camera brackets were undertaken.

Day 2

During day 2 a number of deployments of the sledge were made in and around the licensed sewage sludge disposal grounds, including areas surveyed using similar techniques in 1986. Despite problems in maintaining low towing speeds due to the strong tidal currents in the area, good footage was obtained on a number of tows. The results confirmed those of the previous survey of an area of hard rocky ground in the immediate vicinity of the disposal ground with firm current rippled sands in the inshore tows. The number of large fish observed during the operation was notable. In general visibility appeared to decrease as the ebb tide built up in strength. There was no real evidence of sewage sludge impacting the seabed. However, the video tapes await more detailed examination. Following the last camera tow at 17.45 hours, the ship steamed north to sample the NMP station where, despite difficulties in obtaining an adequate sample material for sediment analysis was obtained. Following this the ship steamed south to the first

station on the Beaufort dyke transect, where, due to the nature of the seabed, samples could not be obtained.

The remainder of the night was spent dodging until morning.

Day 3

Four further stations were grab sampled during day 3, three in the Beaufort Dyke, including one at 315 metres and one in the mid North Channel.

Following this the ship returned to port at 13.00 hours, where scientists and equipment disembarked.

During the entire period of the cruise the information obtained on video and by grab was used to provide calibration for the ROXANNE ground discrimination system.

The enclosed figure illustrates the ship's track during the cruise and the areas surveyed.