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Cruise Report LF0893

National Monitoring Plan 22-26\03\93

Personnel

M Service	SSO	ASRD	SIC
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C Burns	ASO	"	
D Faughey	PGRA	QUB	
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N Ferris	SO	"	

Objectives

The primary objective of this cruise was to undertake sampling of the National Monitoring Plan Stations. These are located at the mouth of Belfast Lough, the North Channel and off the North Coast.

Secondary aims were to obtain nutrient and salinity data from the North Channel and the North Coast.

Methods

Sediment samples for benthic faunal analysis and sediment chemistry were collected using a standard Day grab fitted with stainless steel jaws. Water samples for metal analysis were collected using a Hydrobios water bottle at 1m depth and water samples for organochlorine analysis were collected using a stainless steel Winchester sinker.

The ships clean seawater supply was used for surface nutrient and chlorophyll analysis.

At CTD profile stations (see cruise track) the rosette sampler was deployed for water column nutrients and chlorophylls.

A standard rockhopper trawl was used to obtain specimens of common dab *Limanda limanda* and addition a 2m beam trawl belonging to ISC deployed at the intermediate site.

Narrative

Day 1

The bulk of day 1 was spent working at the Intermediate NMP site close to the mouth of Belfast Lough (Fig 1). The nine point sampling grid for benthos and sediment chemistry was successfully surveyed. Two tows with a

2m beam trawl and one with the rockhopper trawl were made close to the site and specimens of Dab recovered for heavy metal and pesticide analysis. The vessel then proceeded up the North Antrim coast collecting surface water samples at Stations 2 and 3. The night was then spent at anchor in Carnlough Bay.

Day 2

The vessel began day 2 by moving to station 4 where the surface water sample was collected. Following this the vessel steamed to station 5(the North Channel NMP station) where it was decided that the weather conditions precluded any attempt to use the grab or rosette sampler. One haul of the rockhopper trawl was attempted at this station during which the net was torn. Following this the vessel moved in towards the Clyde to attempt to seek shelter from the westerly winds. Although there was an initial intention to deploy the rosette sampler this was abandoned and the vessel sought anchor off Campbeltown for the night.

Day 3

The vessel returned to station 5. However, after an abortive attempt to obtain grab samples at this location a decision was made to seek a more suitable substratum closer inshore. This was partially successful although the nature of the substratum in this area suggests that future years may have to adopt an alternative sampling techniques. Following this the original cruise programme was re-established and ctd profiles were taken at station 6 and 7. By working through the night it was possible to complete the programme up to station 14 by the morning of Day 4.

Day 4

The grab sampling and water sampling programme at station 15(the North Coast NMP site) was completed by 13.00h. The vessel then moved inshore where a successful tow was made using the video sledge. This was completed around 17.30h and the vessel steamed for Belfast completing the sample programme with a ctd and water sampler profile at station 16. The vessel docked in Belfast shortly after midnight.

Day 5

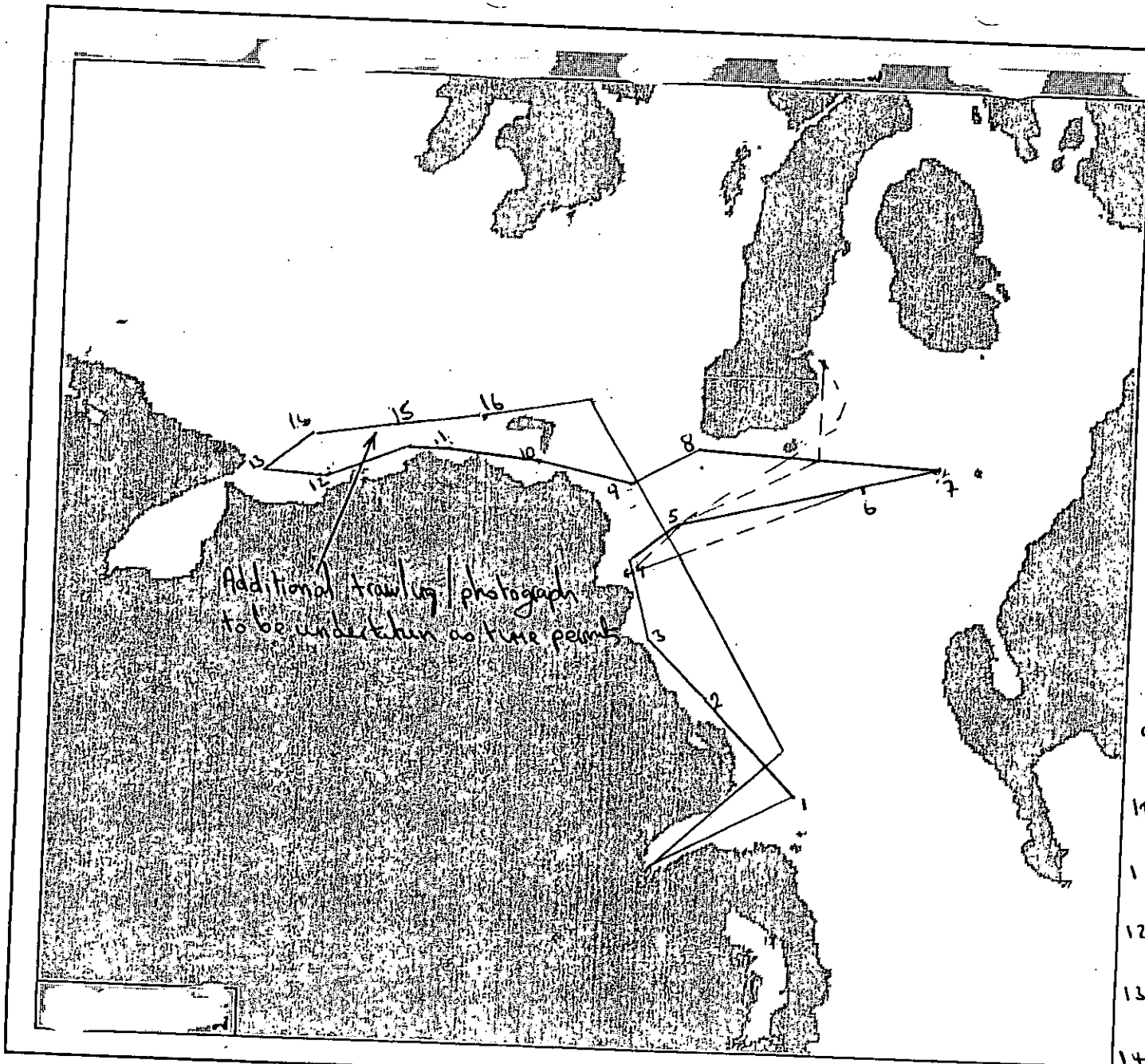
All scientists and scientific equipment were disembarked by mid-day.

Conclusion

This cruise passed of relatively successfully and without major problems. However, it should be noted in planning future National Monitoring Plan exercises that the time taken to survey the nine point sampling grid often exceeds first estimates, this is especially true where the site is dominated by strong tidal movements necessitating frequent repositioning. The situation and sampling of the North Channel NMP station is not satisfactory at present and a combination of dredge and beam trawls surveys at this location may produce better results.

M Service

——— Planned cruise track
– – – amended track



1	54 40 00 05 30 00		WATER SAMPLE
2	54 52 48 05 43 00		WATER SAMPLE
3	55 00 00 5 51 30		WATER SAMPLE
4	55 05 11 05 57 00		WATER SAMPLE
5	55 05 30 5 43 70		NMP (SEE ATTACHED)
6	55 11.00 5 28.00		CTD/ROSETTE PROFILE
7	55 15.00 05 23.00	"	"
8	55 16 00 5 53 00	"	"
9	55 13 00 5 60 00	"	"
10	55 14 00 6 14 00		WATER SAMPLE
11	55 14 50 06 30 60		WATER SAMPLE
12	55 14 00 06 46 00		WATER SAMPLE
13	55 12 23 6 53 00		WATER SAMPLE
14	55 20 00 06 51 00		PROFILE
15	55 20 00		NMP