

LOIS RACS(C) Core Programme
Sea Vigil 9
Cruise Report
16th-20th May 1994

Personnel:

Duncan Plummer (PML/Hull)	
Bek Bellerby (PML)	
Marie-Claire Robinson (U.of Plymouth)	
Jack Hardisty (U.of Hull)	17/05/94
Helen Rouse (U.of Hull)	17/05/94
Jeremy Hoad (U.of Hull)	17/05/94
Ivan Logan (U.of Hull)	17/05/94
Rhu Nash (U.of Southampton)	18/05/94
Gang Pan (U.of East Anglia)	19/05/94

Monday 16th: *Sea Vigil* traveled from Hull Marina to Grimsby Fish Docks.

Tuesday 17th: The scientific party mustered on board *Sea Vigil* at 0630 and departed Grimsby Fish Docks at 0645 and headed for Hale Sand Fort. At the Humber mouth 14 transects of the Flux Curtain were undertaken. A towed instrument, measuring conductivity, temperature, suspended particulate load and depth, was deployed. Concomitant readings from a EM current meter, located in the moonpool, were recorded. The transects started at 0850 and ended at 2115. Throughout the day measurements of conductivity, temperature, pH, dissolved oxygen, suspended particle load were recorded using the NRAs system. On returning to Grimsby the equipment of the U.of Hull was unloaded and the scientific party departed at 2245.

Wednesday 18th: The scientific party assembled at the Portland Hotel Hull at 0600 and traveled to Grimsby and boarded the *Sea Vigil* around 0700. The team from the BBC arrived at around 0730. Due to accommodating the needs of the BBC to film loading and setting up of equipment we did not lock out of Grimsby until 0900. Filming of UOR and CTD rosette deployments and laboratory equipment commenced and on completion the BBC team disembarked at the Royal Dock Steps at 1120. From 1150 and throughout the day measurements of conductivity, temperature, pH, dissolved oxygen, suspended particle load were recorded using the NRAs system. The nutrient (nitrate, nitrite, silicate and phosphate) survey commenced at 1215 (station 25) continued to 1306 (station 29). Samples were collected for gravimetrics, C/N, Al, chlorophyll, phytoplankton identification and particle size analysis. The UOR was deployed at 1320 (station 29) and towed eastwards until 1440. Inclement weather shortened the tow. A seawater sample was collected for UEA. The UOR was then towed westwards and recovered at 1517 at station 30. Stations 30-36 and 21-24 were visited and the nutrient analyser was offline at 1803. The *Sea Vigil* was along side Royal Dock Steps at 1850 were the scientific party disembarked. The party arrived back in Hull at around 2030.

Thursday 19th: The party departed Hull 0700 and arrived at Grimsby Fish Dock at 0800 and boarded the *Sea Vigil*. The U.of Southamptons equipment was unloaded and the boat locked out of the dock at 0900. The UOR was deployed at 0958 and the upstream nutrient survey commenced at 1006 (station 21). The underway analysis and sample collection was as on Wednesday. The UOR was recovered at station 16 at 1105. An estuarine sample was collected for UEA here. The nutrient survey continued to station 3, the Aire confluence at 1353. A river water sample was collected for UEA. The nutrient survey was repeated back down stream to station 11 and stopped at 1605. Grab sampling commenced for UEA. A total of 5 samples were collected between 1634 and 1819. *Sea Vigil* came along side Admiral Steps near Hull Marina at 1840 and the scientific party disembarked. The LOIS van was collected from Grimsby and the party arrived back in Hull at around 2100.

Friday 20th: 0930-1030 unloaded all scientific equipment and samples. LOIS van returned to Plymouth.

Notes: The fifth LOIS Core Programme field trip was relatively successful..

A meeting was held in the evening of the 17th May between the scientific group and the BBC to discuss the following day. This meeting ensured that the filming for the BBC was completed as planned.

The nutrient survey visited all of the stations over the two days. Although the programme covering the overflight work and nutrient surveys was flexible over the Wednesday to Friday. As a result of the weather no flights took place. The weather on Wednesday was 6/8th cloud cover and 3/4 northeasterly winds, on Thursday 8/8th cloud cover and 4/5 northeasterly winds and on Friday 8/8th cloud cover and rain. As a result of the cloud cover and sea state it was not possible to do the depth profiling work of the U.of Southampton.

On the Wednesday an accident occurred. Duncan Plummer slipped and caught his foot in the top of the moonpool and fell to the deck. There was a suspicion of some hydraulic oil on deck. Due to the presence of the large plastic tubing connected to the PML pump the guard to the moonpool could not lie flat in place. Hence for future cruises a second guard should be provided. This cover should allow the deployment of the pump (and similar apparatus) while lying flush to the deck.

The help, advice and flexibility of Peter Sarjeant and Tim Rhodes of the NRA is acknowledged. Their contributions greatly helped.

Duncan H Plummer

2th May 1994