

R1/10

In confidence: Not to be quoted without prior reference to the Laboratory

Cruise Report

JR

FRV 'Goldseeker' 9/83

22 August - 9 September 1983

Personnel: I M Davies SSO  
J C McKie SO

Objectives:

1. Collection of sediment for chemical analysis between Grangemouth and Aberlady.
2. Collection of water and suspended matter for heavy metal analysis.
3. Investigation of the accumulation of cadmium by invertebrates to the east of Leith.
4. Collection of fish and shellfish for Joint Monitoring Programme, and other monitoring projects.
5. Collection of a water sample for radio-caesium analysis off Arbroath 56°32'N, 20°20'W.

Narrative

'Goldseeker' was loaded and left Buckie on 22 August. She arrived at Granton in the evening on 23 August, and was joined by the scientific staff, who had meanwhile established shore-based laboratory facilities at Port Edgar. On 24 August, live crabs were collected from Eyemouth and deployed in cages east of Leith. From 25 August until 6 September sampling of water and sediment for chemical analysis was carried out between Grangemouth and Cockenzie.

Results

Objective 1: Approximately 50 samples of bottom sediments were collected and await analysis.

Objective 2: Half or full-tide stations were worked at four positions in the estuary, and samples taken for suspended solids, mercury, particulate carbon and chlorophyll, together with measurements of current velocity, temperature and salinity. Although current velocities were comparable to those observed in March 1983, the suspended solids concentrations were lower, and consequently it is anticipated that mercury transport rates to be calculated from concentration and current velocity data, will be considerably lower than in March 1983.

Objective 3: It had been intended to recover, sample, and redeploy the caged crabs during the final week of this cruise. The weather conditions did not allow this, and it is planned to recover the cages during 'Clupea' Cruise 10/83.

Objective 4: Agassiz trawl sampling in the area of the Seafield sewer outfall provided crab samples for analysis.

Objective 5: The radio-caesium sample was successfully collected.

I M Davies  
11 October 1983

Seen in draft by: W B Reid OIC "Goldseeker"