

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1976 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 7

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF

I C White (NIC)
M S Rolfe
R A Eagle
P A Hardiman
J M Everett

DURATION

Left Lowestoft 1415 h 21 April

Arrived Lowestoft 1030 h 4 May

All times are Greenwich Mean Time

LOCALITY

North Sea (N.E. Coast)

AIMS

- 1 To investigate by a programme of grabbing, trawling, hydrographic and underwater camera observations the disposal grounds off the Tyne, Tees and Humber (2.6.2)
2. To collect samples of sediment, benthos and fish from these areas for chemical analysis (2.6.2, 2.7.5).

NARRATIVE

CLIONE left Lowestoft at 1415 h 21 April and proceeded to Tees Bay where four Granton trawl hauls were made in order to collect fish and benthos for chemical analysis. A transect of 9 stations was then worked, with a minimum of three 0.1 m² Day grab hauls at each; two samples being retained for laboratory analysis of the benthos and one for particle size and metals analysis of the sediment. Two Agassiz and one anchor dredge stations to collect sufficient Turretella communis and Apporhais pes-pellicani for chemical analysis completed the initial programme of work in this area. Adverse weather conditions prevented successful grabbing off the Wear and so CLIONE steamed to the Tyne where 16 grab stations were worked in order to collect samples of sediment for particle size and metals analysis. Seven Granton trawl hauls were also made in this area and in the vicinity of the proposed new sewage sludge dumping ground and samples of fish and benthos preserved for chemical analysis. Attention was then turned to the disposal ground off Blyth where 21 Day grab stations were worked and two Agassiz hauls provided sufficient Turretella and Aphrodite for chemical analysis. A station was then worked for Mr Talbot at the site of the current meter in the vicinity of the proposed Tyne sewage sludge dumping ground. Water samples were obtained and temperature measured

at 1, 10, 20, 30 and 45 m depth and a batch of drifters released. After working 22 grab stations off Lynemouth 3 Agassiz hauls were made to collect sufficient Calocaris for chemical analysis.

The first of the anchor stations, at which observations of surface (5 m) and bottom water movements (1 m from the bottom), bottom and surface suspended solids and surface temperature and salinity were to be made, was begun off the Wear but had to be abandoned after only 11 hours due to adverse weather conditions. The opportunity was taken to replenish the ship's freshwater supplies at Sunderland before completing the 16 grab stations off the Wear and making further observations of water movements and suspended solids off the Tyne and Humber. The underwater camera was also deployed at the various dumping grounds as the opportunity arose and the cruise was completed with trawling and rod and line fishing for samples of fish and benthos in the Humber estuary and its vicinity. The cruise ended earlier than planned in order to effect engine repairs but the major aims of the cruise were completed successfully.

RESULTS:

No detailed results will be available until after Laboratory analysis of the samples. However, the following is a breakdown of the work completed:

1. Approx. 255 0.1 m^2 Day grab hauls were made at 88 stations; samples of benthos and sediments were retained for laboratory analysis.
2. 16 Granton trawl hauls and 7 Agassiz hauls were made and samples of benthos and fish from each area worked were preserved for chemical analysis. All samples of in-fauna were kept in clean water for at least 24 hours prior to freezing to remove sediment from the guts.
3. The $\frac{1}{2}$ hourly observations of water movements, suspended sediments, temperature and salinity carried out off the Wear (11 hours), Tyne (27 hours) and Humber (27 hours) yielded much information that will be useful in predicting the transport of sediment and dumped material.

SEEN IN DRAFT JRF
 GFL

I C White

8 May 1976

INITIALLED AJL

DISTRIBUTION

Basic List

Dr White
Mr Rolfe
Dr Eagle
Mr Hardiman
Mr Everett
Mr Talbot
Mr Ramster
Dr Portmann
Dr Norton