

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

1973 RESEARCH VESSEL PROGRAMME

REPORT: R V CORELLA: CRUISE 8

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

STAFF J W Talbot
J Wooltorton (part time)
S R Jones
Mrs M J Boon (part time)
T V Parsons } (part time, UKAEA)
D G Humphreys }

DURATION: Left Lowestoft 0900 h 3 May
Arrived Lowestoft 0800 h 16 May
All times are Greenwich Mean Time

LOCALITY: East Anglian coast and Thames Estuary

AIMS:

- 1 To make diffusion measurements off Mundesley
- 2 To make diffusion measurements for both soluble and particulate matter in the outer Thames Estuary
- 3 To use the underwater television system to observe the seabed in the Barrow Deep.

NARRATIVE

- 3 May: On leaving Lowestoft CORELLA proceeded to the Mundesley area where she laid a moored current meter at position 52° 52.9'N, 01° 27.4'E.
- 4 May: R V TELLINA made a release of Rhodamine WT from a position near the moored meter. The plume of dye was surveyed by CORELLA. As with the next two releases dye discharge took place during a slack water period and then continued during the run of the tide.
- 5 May: Second Rhodamine WT release from TELLINA and survey by CORELLA.
- 6 May: Third Rhodamine WT release and survey. On completion of this release Mrs Boon transferred to TELLINA and CORELLA then lifted the moored meter rig before proceeding to the Thames Estuary.
- 7 May: Laid moored current meter at position 51° 43.7'N, 01° 17.1'E. Worked underwater television system near this position.
- 8 May: Joined by R V TELLINA who made release of Rhodamine WT at a position close to the moored current meter. This release was surveyed by CORELLA.
- 9 May: A second release of Rhodamine-WT in the Thames Estuary was made by TELLINA and surveyed by CORELLA.
- 10 May: A fresh SW-W breeze prevented TELLINA from working in the outer estuary. CORELLA met her at the mouth of the Orwell and transferred Mr Wooltorton and items of radioactive-survey equipment. Then proceeded to Lowestoft.

- 11 May: Messrs T V Parsons and D G Humphreys of UKAEA joined the ship and equipment needed for release of radioactivity was loaded. Mrs M Boon rejoined the ship. Sailed for Thames Estuary at 1600h.
- 12 May: Weather good. CORELLA released radioactive tracer on the flood and ebbs tides and made hydrographic measurements. TELLINA surveyed the distribution of radioactivity in the water.
- 13 May: Weather too bad for TELLINA to work. Postponed the third release.
- 14 May: Weather very good. Made the third release of radioactivity on the early morning flood tide. Then transferred Messrs T V Parsons and D G Humphreys to TELLINA. J Wooltorton rejoined CORELLA. The moored current meter was lifted and we made a survey of the distribution of radioactivity on the sea bed.
- 15 May: Discontinued the survey of sea-bed activity to go to Ostend to collect the current meter buoy that was held there. Survey resumed on return from Ostend.
- 16 May: Sea bed survey completed and ship returned to Lowestoft.

RESULTS

- 1 The work off Mundesley was carried out as planned. All the results need to be analysed before useful comment can be made.
- 2 Measurements were made of the rates of diffusion of both soluble and particulate matter in the East Swin area of the outer Thames Estuary. In both cases the work was limited in its effectiveness by technical difficulties with the equipment. The towed depth fluorometer proved to be unserviceable and of the three radiation probes on the ships only one could be used for the greater part of the surveys.
- 3 The underwater TV system was used on one occasion but useful pictures could not be obtained. At the time it was assumed that this was due to the turbidity of the water but subsequent examination of the TV system revealed that this was not focussing correctly.

J W Talbot
23 May 1973

SEEN IN DRAFT: J E M B (Master)
E B (Skipper)

A J L

DISTRIBUTION:

Basic List

Mr Talbot
Mr Wooltorton
Mr S R Jones
Mrs Boon
Mr Parsons
Mr D G Humphreys