

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

1973 RESEARCH VESSEL PROGRAMME

REPORT: R V TELLINA: CRUISE 7(a)

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

STAFF

J W Talbot
Mrs M J Boon

DURATION

Left Lowestoft 10.00 hours 24 May
Cruise ended in Falmouth 18.00 hours 7 June
All times are Greenwich Mean Time

LOCALITY

Fal Estuary

AIMS

To make a hydrographic survey of the estuary with particular reference to those features relevant to the dispersal of oyster larvae. The work to include:-

- (a) A number of small releases of Rhodamine B designed to measure the water movements in various parts of the estuary.
- (b) The use of 2 moored current meters.
- (c) The working of a station off Messack Point over both a spring and a neap tidal cycle to measure salinity, temperature and water velocity.
- (d) The measurement of the salinity and temperature distributions along the length of the estuary.

NARRATIVE

28 May The Scientific staff joined the ship in Falmouth. Equipment installed.

29 May Faulty starter of ships engine taken to local firm and repaired.
Faulty Direct Reading Current Meter taken to Dartmouth by road, repaired by manufacturers, and returned to ship.

30 May 2 Moored current meters laid and survey made of surface salinity along the length of the estuary.

31 May 1st (low water) release of Rhodamine B made near East Narrows buoy and followed for the duration of the flood tide.

1 June 2nd (low water) release of Rhodamine B made near Governor buoy and followed for $3\frac{1}{2}$ hours; survey then abandoned because the patch, now highly diluted, had swung into Falmouth harbour.

2 June (Spring tide)

- 3 June 3rd (low water) release of Rhodamine-B made near the Vilt buoy and followed for the duration of the flood tide. Moored current meter stations inspected and seen to be in order.
- 4 June 1st (high water) release of Rhodamine-B made off the mouth of Pill Creek and followed for the duration of the ebb tide.
- 5 June 2nd (high water) release of Rhodamine-B made at Malpas and followed for the duration of the ebb tide.
- 6 June 3rd (high water) release of Rhodamine-B made near Turnaware Bar and surveyed for the duration of the ebb tide. Both moored current meter stations recovered.
- 7 June Hydrographic station worked over a Neap tidal cycle off Messack Point for salinity temperature and water velocity.

RESULTS

1. The tidal excursion in various parts of the estuary over Flood and ebb tides, has been measured by the six Rhodamine releases.
2. The two hydrographic stations worked off Messack Point provide a comparison of the circulation in the estuary under conditions representing different tidal ranges.
3. It appears that the estuary was stratified although to compare this feature quantitatively with results obtained previously for winter conditions it will be necessary to analyse the salinity samples in the laboratory.

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DISTRIBUTION

Basic List +

J W Talbot
Mrs M J Boon

J W TALBOT
13 June 1973