

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

1974 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 4

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

STAFF

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DURATION

Left Lowestoft 1045 h, 8 March

Arrived Lowestoft 0540 h, 18 March

All times are Greenwich Mean Time

LOCALITY

North Sea

AIMS

1. To establish a triangle of moored recording current meter stations in the vicinity of JONSIS station A, and to track the drift of a parachute drogue released within the triangle for a period of 50 hours.
2. To repeat the above experiment at a site approximately 25 miles north-east of the Humber Estuary.
3. To establish a moored current meter station approximately 6 miles North East of the river Tyne entrance for the Tyneside Joint Sewerage Board.
4. To release Woodhead sea bed drifters at an array of stations to the North East of Flamborough Head.

NARRATIVE

RV CLIONE sailed from Lowestoft at 1045 h, 8 March, and in a freshening easterly wind anchored in Corton Roads. Here the gear for the first triangle of moored stations was rigged before the vessel weighed anchor at 1745 h, and steamed towards the position of JONSIS station A. On arrival at station A the weather was unsuitable for laying current meter stations, and the vessel spent the following day releasing the sea-bed drifters to complete aim 4 of the cruise by 2100 h, 9 March. The easterly gale continued and the vessel dodged until 1330 h, 12 March when the 3 moored current meter stations comprising the first triangle were laid in quick succession. The stations were established by 1815 h that day and two hours later the parachute drogue had been rigged and was in the water. By this time the wind was dropping rapidly and the following two days were spent tracking the drogue in almost perfect weather. At 2000 h, 14 March the wind started to freshen and with a southwesterly gale forecast the drogue was recovered in the early hours of the following morning. At first light an attempt was made to recover the current meter rig at station A. No response

was obtained from the acoustic release and the rig was therefore recovered in the conventional way. The vessel then proceeded to station B. The acoustic release on this rig responded to the switch on, switch off and cut signals, but the guillotine did not cut the wire. By now the weather was too bad to recover the rig in the normal way and the vessel dodged at this position until 1410 h, when course was set for station C. The surface buoy at C was found to be approximately $\frac{1}{4}$ mile out of position, and the pellet line marking the sub-surface buoy could not be seen. The acoustic release responded to the switch on and switch off signals, but with the pellet not visible it was thought safer not to attempt to cut the meter wire. The rig was recovered in the conventional way and the meter wire was found to be chopped below the bottom meter, possibly by one of the minesweepers which were exercising in the area. Neither the meters nor the subsurface float were recovered from this station. The vessel then returned to station B. By 2300 h the weather had moderated sufficiently for this rig to be recovered without incident.

The weather was clearly unsuitable for a DRCM station and the vessel set course for the Tyne, anchoring outside the piers at 0800 h, 16 March. During the morning the three rigs recovered the previous day were dismantled, and the Tyne rig assembled. Two representatives from the Tyneside Joint Sewerage Board joined the ship via the pilot boat at 1240 h and the vessel proceeded to the Tyne station position. The rig was laid without incident and 100 sea bed drifters were released. The Sewerage Board representatives were taken off by the pilot boat at 1452 h. The vessel then returned to the centre of the triangle and anchored at 2124 h. DRCM measurements commenced at 2200 h and continued until 0330 h, 17 March when the weather conditions prevented the ship from remaining at anchor. The ship moved to a sheltered anchorage in Filey Bay whilst gear was stowed and set course for Lowestoft at 1600 h, docking at 0540 h the following morning.

RESULTS

1. A triangle of moored current meter stations was established in the vicinity of JONSIS station A. The drift of a parachute drogue was tracked in near perfect conditions for a period of 52 hours. Unfortunately the loss of the meters from the most northerly station of the triangle considerably reduces the value of the results.
2. The easterly gale for the first $4\frac{1}{2}$ days of the cruise left insufficient time for the experiment to be repeated at the second site.
3. The moored current meter station near the river Tyne entrance was successfully established and 100 sea bed drifters released.
4. Woodhead sea bed drifters were released at an array of stations to the North East of Flamborough Head.
5. D.R.C.M. measurements were made at the centre of the triangle of moored stations but because of unsuitable weather conditions the readings do not span a tidal cycle of $12\frac{1}{2}$ hours.

J A Durance
2.4.74

SEEN IN DRAFT: JAF; AHB

INITIALLED: AJL

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