

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

1986 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: Cruise 11a
(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF:

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DURATION:

12-20 September 1986 Left Lowestoft 1400 h 12 September
Arrived Fleetwood 1135 h 19 September

LOCATION:

Eastern Irish Sea

AIMS:

1. To service 7 current meter moorings (M, P, Q, R, S, V; Y).
2. To recover and redeploy the Near Bed Velocity Recorder and guard-buoys.
3. To make DRCM measurements and collect water samples at hourly intervals for one tidal cycle.
4. To undertake CTD sections between the Isle of Man and the Scottish/English/Welsh coast.
5. To release seabed drifters at two locations east of the Isle of Wight.
6. To collect water samples for Caesium analysis.

NARRATIVE:

Sailing on the afternoon tide of 12 September, RV CLIONE set course for the Irish Sea. Fifty seabed drifters were released at two positions east of the Isle of Wight the following morning. The first Irish Sea station was reached at 0537 h 14 September when the CTD was lowered at position Z off Anglesey. Moving to station Y the CTD was again lowered, after which the current meters were recovered and a grapnel search conducted for an earlier mooring here which had not been retrieved. Despite three drags through the mooring position no instruments were recovered and the station was relaid by 1305 h. Two further CTD profiles were obtained at positions W and V, completing the Anglesey/Isle of Man section and by 1728 h a current meter mooring was established at the latter. At 1957 h a CTD section between the Isle of Man and the English coast began, five stations being occupied (S, R, Q1, Q and P). Completing the final station at 0002 h 15 September RV CLIONE headed for Whitehaven to collect members of the laboratory diving team who would help to recover the Near Bed Velocity Recorder, the recovery wire of which had parted during an attempted retrieval in August. A new recovery wire was attached by the diving team and, after obtaining a CTD profile at the position, AA,

the NBVR and one of its guard buoys was recovered. An examination of the NBVR equipment disclosed severe corrosion, particularly to the NBVR battery pack end plate and to the PARTEC transmissometer which made them unsuitable for use without major repair. Corrosion had also occurred on the screws holding the end plates of the Back Scatter Probe, but this and other units were stripped and repaired during the next twenty-four hours. By fitting the batteries in the main pressure case the NBVR was made to function and was redeployed in its new position BB with one guard buoy at 1253h 17 September. The two remaining guard buoys were then retrieved and placed in position approximately two cables from the NBVR.

Whilst the NBVR was being serviced an anchor station, CC, was occupied for thirteen hours when CTD profiles and water samples were collected at hourly intervals. DRCM and surface and near bottom turbidity measurements were made continuously.

After the NBVR had been deployed the current meter mooring at position P was recovered and relaid. With darkness approaching RV CLIONE made for position A, north of the Isle of Man, and at 2058 h completed a CTD profile in poor weather conditions. By 2142 h when position M was reached the conditions had deteriorated to 20 knot winds and a confused swell, which made deployment of the CTD from the after deck difficult. Rather than risk damage to the instrument it was decided not to deploy the CTD, but surface samples were taken at both this and position N.

At 0609 h 18 September the current meter mooring at position M was recovered and relaid by 0703 h. The remaining current meter moorings at S, R and Q were successfully recovered and relaid, when RV CLIONE made for Fleetwood to facilitate the change of scientific staff, docking at 1135 h GMT 19 September.

RESULTS:

1. Six current meter moorings were recovered and relaid; a seventh mooring (V) was deployed. Although detailed processing of the current meter data was not possible, a translation of the twelve data tapes suggest a data return as follows:

<u>Mooring</u>	<u>Sampling level</u>	<u>% Good data</u>	
M	Top	100	
Bottom	Bottom	40	Weed prevented rotor turning for remainder of record
P	Top	100	but rotor loose
	Bottom	100	
Q	Top	100	
	Bottom	60	battery failure
R	Top	100	
	Bottom	50	many zero speeds
S	Top	10	zero speeds for remainder of record
	Bottom	100	
Y	Top	70	zero speeds for remainder of record
	Bottom	100	

2. The Near Bed Velocity Recorder was recovered with two full data tapes and relaid at its new position west of Whitehaven, protected by three guard buoys.
3. A thirteen hour anchored station was completed with CTD profiles and water samples for particle size analysis being taken at hourly intervals. DRCM and surface and near bottom turbidity measurements were made continuously.

4. CTD sections were worked between Anglesey and the Isle of Man and the Isle of Man and English coast. Samples were taken for salinity analysis and temperatures measured with reversing thermometers to enable the CTD to be calibrated.
5. Seabed drifters were released at two positions east of the Isle of Wight.
6. Fifty litre surface water samples were collected at positions M, N, P, Q, R, S, V, W and Y and twenty five litre near bottom samples at P, Q, R, S, V, W and Y for caesium analysis.

The co-operation and assistance of the officers and crew of RV CLIONE in pursuing the aims of this cruise is gratefully acknowledged.

K J Medler
19 September 1986

SEEN IN DRAFT: G Sinclair
R C Newrick

INITIALLED: H W H
R R D

DISTRIBUTION:

Basic List +
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