

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

1975 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 13 PARTS A AND B

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

STAFF

Part A

J W Ramster
G C Baxter
B Riches
S Rusby) Institute of Oceano-
D Gaunt) graphic Sciences (IOS),
N Kenyon) Wormley
Lt Cdr C Gobey MOD (RN).

Part B

J W Ramster
G C Baxter
S R Jones
J W Read
B Q Braithwaite
H W Riepma, (KNMI,
The Netherlands)

DURATION

Part A Left Lowestoft 0800h, 5 September
Docked Lowestoft 0850h, 7 September

Part B Left Lowestoft 0920h, 7 September
Docked Lowestoft 1215h, 11 September

All times are Greenwich Mean Time

LOCALITY

Southern and Central North Sea

AIMS

- Part A (1) To make a reconnaissance via the sector scanner
and/or the IOS sidescan sonar of sea-bed
profiles at and near the Data Buoy's planned
position (DB1).
- (2) To mark the eventual positions of the 3 data
buoy anchors with surface buoys.
- Part B (1) To service JONSIS stations 1 and 2 and make a
hydrographic survey of the region between and
around them.

NARRATIVE

The ship sailed for the Smith's Knoll area at 0800h,
5 September without Mr Kenyon. During the passage the tasks
to be done were discussed, new plans made partly in the light
of Mr Kenyon's absence and these relayed back to Lowestoft.
The region lying within 2 miles of the proposed site for the
Data Buoy (DB.I) was surveyed in the period 1245-1755h via a

9-leg rectangular grid. Both the MAFF sector scanner and the IOS transit sonar were used in this operation. On completion of this survey some tests of the IOS acoustic release systems were made and then the ship steamed to the Yarmouth area in order to demonstrate to Lt Cdr Gobey RN the capability of the sector scanner in relation to a known wreck. By 2256h the ship was moving to its anchorage in Corton Roads.

The following morning the ship put into Lowestoft, Mr Riches and Lt Cdr Gobey disembarked and Mr Kenyon came on board. Once back at the DBI site a small grab survey was made along one of the lines run the previous day and from the two sets of results the final position for the Data Buoy decided. Three marker buoys were then got ready and during the afternoon an abortive attempt was made to launch the first of them at an eventual Data buoy anchor position: the tide was simply too strong for the ship to be held "on station" for a long enough period. By 1550h, however, the tidal stream had waned and in the next two hours 3 dahn buoys were launched in an equilateral triangle of side circa 300 yards to mark the eventual positions of the data buoy's anchors. The ship then moved off 6 miles to the south-west and some acoustic release tests were done and moored buoy gear rigged before the ship lay for the night.

At 0850h, 7 September, the vessel was alongside the North Quay of the Outer Harbour: Messrs Rusty, Gaunt and Kenyon left whilst Jones, Read, Braithwaite and Riepma joined her. By 0920h she was again heading for the data buoy site and this time a moored current meter rig was laid to the north of the triangle of stations and an anchored DRCM (Direct reading current meter) station completed over a 12 $\frac{1}{2}$ hour period in the immediate vicinity.

At 0300h, 8 September the anchor was hove in and the ship set course for JONSIS station 1 which was serviced between 1545-1800h that same day. (The ship had to lie on station for an hour of this period waiting for a fierce Spring tidal stream to wane). By 2250h the vessel had reached the vicinity of JONSIS station 2 but no surface buoy was visible. At first light however the pellet was seen a little way from its original position lying on top of the water. An hour later as the ship moved in to recover the rig it was lost for some time before being spotted by a crew member at a distance of 50 metres lying just under the swell. Attempts were made to fire the acoustic release with both MAFF and IOS transducers but were unsuccessful. The grapnel was rigged, towed round the pellet once and on retrieval was found to have caught the eye of the weight-stop; the exact point on the rig that was needed at the ship's side. The instruments were quickly brought inboard and by 1045h a new rig had been laid and the ship was heading for Ijmuiden.

At 0630h, 10 September Mr Riepma left via a Pilot Cutter and the ship moved off to the Smiths Knoll area. This was reached by 1540h just as the tide was turning and so it was possible to bring in the current meter rig launched three days before. An attempt was made to warn the MFV Moise B3143 (Boulogne) of the presence of 3 Dahn buoys in the vicinity of the line along which she was towing but no obvious indication that the message had been understood was received. The ship moved on to an anchorage off

Southwold and by 2130h measurements were being made of mid-depth tidal stream conditions in both the horizontal and quasi-vertical planes. These were continued for 12½ hours. At 1000h, 11 September the anchor was hove in and the vessel steamed to Lowestoft docking at 1215h.

RESULTS

1. An acoustic survey of sea-bed in the region around the proposed site for the Data buoy was carried out. It confirmed the main findings of an earlier IOS (Wormley) survey and provided additional details of bottom configuration and depositional patterns. The results were assessed at sea and the final choice made of the actual anchorage site.
2. Three surface buoys were laid in the form of an equilateral triangle of side 300 yards to mark the eventual positions of the Data buoy anchors.
3. Three recording current meters were anchored close to the marker buoys for 3 days during Spring tides in order to measure near "worst-case" conditions as far as knock-down of the sub-surface float is concerned and the general tidal stream profile. The detailed structure of the stream was measured over 12½ hours by means of a DRCM. Maximum rates of about 160 cms/sec were recorded in the near-surface zone.
4. JONSIS stations 1 and 2 were serviced successfully though the surface marker at JONSIS 2 was missing for the third successive time. At first sight four 56 day records of tidal stream conditions extending over the July-August period were recovered. The acoustic release at JONSIS 2 did not work because it was found on recovery that the transducer scroll was either knocked off or fell off during the time the rig was in operation. The situation is being investigated.
5. An attempt was made to gain an "order-of-magnitude" feel for the vertical components of motion at mid-water column depths throughout a tidal cycle in Dr Greere-Walker's fish-tracking region. A surprisingly large difference in the character of these components between the two tidal streams was recorded which may be an artifact of the rig used. Further measurements are being planned to check these findings.
6. The capabilities of the MAFF sector scanner system were demonstrated to Lt Cdr Gobey RN.

J W Ramster
26 September 1975

SEEN IN DRAFT

J French (Master)
W Gowen (Fishing Skipper)

INITIALLED

AJL

DISTRIBUTION

Basic list +

J W Ramster	S Rushy)	Lt Cdr C Gobey MOD	B Q Braithwaite
G C Baxter	D Gaunt) IOS	S R Jones	H W Riepma (KNMI,
B Riches	N Kenyon)	J W Read	The Netherlands)