

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

1975 RESEARCH VESSEL PROGRAMME

REPORT: R V CLIONE: CRUISE 11B

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

STAFF: G C Baxter
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R M Dunbar)
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DURATION: Left Lowestoft 1700 h 18 July
Arrived Lowestoft 0745 h 24 July

All times are Greenwich Mean Time

LOCALITY: North Sea

AIMS:

- 1 1 ANGUS trials
- 2 ANGUS survey of sea bed conditions on a sandeel spawning ground.

NARRATIVE:

CLIONE proceeded direct to the Outer Dowsing Shoal area where ANGUS trials commenced at 1015h 19 July with the vehicle being launched into water of depth 14 m, in good weather conditions and excellent underwater visibility. This first dive lasted $1\frac{1}{2}$ hours, and was used to combine checks on handling qualities, speed, visual presentation and reliability, with observations of sand eels and other animals on the sea bed. These were recorded on video tape, and a DRCM used to monitor current velocity. 3 more such dives were completed by 0100 h 20 July, including one in darkness. Checking of the acoustic navigation system for ANGUS was started at 0830 h 20 July when two acoustic transponders were anchored on the sea bed approx 1000m apart. The acoustic measurements necessary to set up the system having been made, and with CLIONE re-anchored in the correct position relative to the transponders, ANGUS was launched at 1411 h 20 July to attempt to fully survey a set area of sea bed, in which two targets were anchored. This was not accomplished successfully, apparently because of difficulty in maintaining the required courses. The next two slack water periods were used for further survey attempts which again, were not fully satisfactory. Following this, alterations were made to the trim of the vehicle, and another launch made at 1237 h 21 July. This resulted in a much better survey, and produced a video tape showing everything on the sea bed in a charted area.

The transponders having been lifted, CLIONE steamed to the Flamborough Off Ground, arrived there at 1830 h 21 July, and anchored in 52 metres. Tidal conditions being suitable, ANGUS was launched at 1851 h and gave some good pictures of the sea bed before visual contact was lost due to the failure of the lighting system. The lights were serviced, but by 0530 h 22 July the deteriorating weather forced CLIONE to move to an anchorage in Filey Bay, arriving there at 0930 h/22 July. ANGUS was launched at 1046 h in 24 metres, but the lights failed very soon after diving. The fault was now found to be

caused by leakage, and to be non-repairable, thereby rendering ANGUS incapable of operation on the bottom in the relatively cloudy coastal water. With the weather still too bad to permit anchoring in the open sea, ANGUS was launched twice on 23 July, to permit MAFF staff to be instructed in the use of the controls, and for filming the launch and recovery procedure.

CLIONE then departed for Lowestoft, leaving at 1515 h 23 July.

RESULTS

1 ANGUS was found to be easy to launch and recover from CLIONE, and to have a working speed of about 0.5 m/sec in still water. Endurance can vary from around 4 hours to an indefinite period, depending on the amount of pressure changes on the hull.

The navigation system, although requiring a rather lengthy setting up procedure, proved to be capable of stating the position of ANGUS relative to a fixed object, with a very high degree of accuracy, ie ± 1 m.

The survey ability appears to be governed by current velocity and the amount of obstructions on the sea bed which could foul the trailing cable. The maximum acceptable current velocity in water 14 m deep was found to be 40 cm/sec.

The quality of visual presentation, which during these trials varied from excellent to poor, depends entirely on the turbidity of the bottom water, and the width of the field of good vision was approx 3 m at a distance of 1 m from the camera.

2 Good quality television pictures of the sea bed on part of the Outer Dowsing Shoal sand eel grounds were observed and recorded on video tape.

G C Baxter
7 August 1975

SEEN IN DARFT: J R F (Master)
W G (Fishing skipper)

INITIALLED: A J L

DISTRIBUTION:

Basic List

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