

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

Mr. S.A.P.E.

1973 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 7

STAFF

- a. F R Harden Jones
M Greer Walker
J Horwood
B Riches
T Attak (Sandwich Course Student)
J Hamby (" " ")

- b. R R Dickson
J Rous
J W Read (19-24 April only)
P A Hardiman (Burnham-on-Crouch)
B H Holford (24-27 April only)
M R Vince (24-27 April only)
A Young (24-27 April only) (Sussex University)

- c. R B Mitson
J Rous
N D Pearson
H R Stewardson
M J Holley
A R Pratt (Loughborough University)
F R Harden Jones (27 April only)

DURATION - 1515 h, 12 April - 0830 h, 2 May

- a. Left Lowestoft 1515 h, 12 April
Arrived Lowestoft 0820 h, 15 April

- b. Left Lowestoft 1004 h, 19 April
Arrived Dover 1325 h, 27 April

- c. Left Dover 1500 h, 27 April
Arrived Lowestoft 0830 h, 2 May

All Times Greenwich Mean Time

LOCALITY

Southern North Sea and English Channel

AIMS

- Part a. To track plaice fitted with acoustic transponding tags.

- Part b. 1. To survey areas of fishery and dredging interest off the Isle of Wight.
2. To survey and take sediment samples from the experimental pit on the Hastings Shingle banks.

Part c. To test solid state Scanner.

NARRATIVE

Part a. CLIONE left Lowestoft at 1515 h, 12 April and steamed to IJmuiden to fit the sonar dome. CLIONE left IJmuiden at 0400 h, 13 April and steamed to the working area to the east of the Outer Gabbard where the first tagged plaice was released at 1654 h. An electrical fault developed in the sector scanner stabilisation control system shortly afterwards and the fish had to be abandoned. Arrangements were made to retract the transducer and package with the help of divers at Dover, and this was successfully achieved on the afternoon of 14 April. CLIONE left Dover at 1835 h and returned to Lowestoft at 0820 h, 15 April. After examination of the equipment Cruise 7a was abandoned and the fault repaired.

Part b. CLIONE sailed at 1004 h, 19 April and proceeded to Dover to install the dome before continuing to the Nab Tower area east of the Isle of Wight. Between 1017 h and 1813 h, 20 April a continuous survey of the seabed was carried out in an area comprising Area U together with a strip of seabed 1 n.mi. wide along its northern margin. 17 north-south survey legs were worked at 400 yard spacing with the ARL Scanner trained due west, and the Scanner display was continuously recorded on video tape with polaroid snaps as back-up. CLIONE anchored inshore at 1830 h. Between 0832 h and 1336 h, 21 April a further 14 survey legs were worked as before to complete this survey and CLIONE then proceeded to Horse Tail Bank, Spithead, where a survey of the deeper parts of Area L was carried out between 1504 h and 1721 h. The north western part of this area was too shallow to be accessible. CLIONE anchored for the night at 1750 h. On 22 April CLIONE steamed offshore to survey an area of probable gravel accumulation to the north west of Area U between 0902 h and 1159 h; again the display was continuously recorded on video tape. From 1238 h to 1420 h, in worsening weather, CLIONE then steamed along two legs each approx. 4 n.mi. in length between Areas U and O in order to delineate the intervening areas of rock outcrop. At 1420 h work was abandoned and CLIONE anchored inshore at 1540 h to await an improvement in weather. At 1800 h with no moderation in prospect CLIONE proceeded towards the Solent Bank area, anchoring 2000 h in Cowes Roads. From 0710 h, 23 April CLIONE continued to Solent Bank and at 0829 h began a survey of Area G with the Scanner display continuously recorded on film.

At 0912 h with 4 legs completed the survey was halted prematurely when the roll limit indicator light came on in calm conditions. The Scanner was raised and an area of evident tracking between pins 34 and 69 in the McGeoch plug was dried and cleaned. The Scanner was then relowered part-way into the tube but leaking at the plug was obvious from the erratic behaviour of the controls. The package was carefully raised, the lower (male) side of the McGeoch junction was dried and connected with the replacement cable. The Scanner was then gradually readjusted to the axis zero condition and relowered into the tube with stretchers in place on the rams to test for further leaking. At 2018 h, with no renewed leaking evident, the Scanner was raised and with the remainder of the Solent Bank survey abandoned CLIONE proceeded to the Hastings shingle banks.

After further successful tests of the Scanner between 0755 h and 0845 h, 24 April, the experimental pit on the shingle banks was identified and marked with a dam. CLIONE then proceeded to Newhaven to land Mr Read and pick up the Diving Team. This was accomplished by 1715 h and CLIONE returned to the Hastings area; after a brief re-inspection of the experimental pit for the purpose of briefing the divers, CLIONE anchored inshore at 2125 h. On 25 April, CLIONE anchored by the pit at 0827 h and the divers began a programme of core sampling within the pit. Each dive was observed by the Scanner and recorded on video to show the sampling pattern. The core samples were sieved and preserved. Divers also began the rigging of lines across two diameters of the pit between

acoustic targets laid in previous years. From 0730 to 1000 h, 26 April, tests of the shear velocity current meter array were made before the diving programme was resumed at 1115 h. Further faunal samples were obtained, the rigging of lines was completed and the pit was profiled across one diameter. Again, video recordings of the dives were made for de-briefing purposes. During an early morning dive on 27 April further core samples were taken and the pit was profiled across the second diameter. The dan was then recovered and at 0810 h CLIONE steamed to change staff at Dover, docking 1325 h.

Part c. Changeover of staff was completed at Dover by 1600 h, 27 April and CLIONE left for a position on the Sandettie Ridges. A marker was put out for Dr Harden Jones who then made some records using the Scanner. This work was completed by 1915 h and the ship returned to the Dover area where Dr Harden Jones was taken off by pilot boat at 2100 h. CLIONE then proceeded to a position off Hastings and anchored for the setting up of the solid state scanner and its test equipment.

Work continued on the tests until 1830 h, 30 April when the anchor was weighed and a wreck surveyed on the way to the reported position of the recently sunk coaster JONRIX. The survey of this vessel was completed by 0900 h, 1 May and CLIONE proceeded to Boulogne to remove the sonar dome. This was completed by 1900 h when a course was set for Lowestoft. CLIONE docked at 0830 h, 2 May.

RESULTS

Part a. No results were obtained.

Part b.

1. The survey of area U and the surrounding seabed clearly showed the distribution of rock and gravel in the area, with the minimum evidence of dredging activity.
2. The survey of area L showed that dredging had been fairly well confined to the license area and had not been extended to the south and east.
3. In area G the existence of waves across the seabed which divers had earlier shown to be composed of small pebbles provided evidence that the material on this dredging ground is being replenished, as suspected.
4. The experimental pit at Hastings had a maximum depth of 4.7 m and much the same overall diameter as in May 1972.
5. Approximately 30 core samples were obtained from the floor of the pit.

Part c. Many measurements were taken from the solid state scanner and a number of adjustments made. Acoustic trials were made with a transponding acoustic tag floated away from the ship which showed that the scanning beam was not perfectly formed by the new equipment. Further trials will be necessary.

Dr Pratt carried out tests on the Loughborough University frequency generating equipment and concluded that some further work was necessary.

F R Harden Jones
R R Dickson
R B Mitson
29 May 1973

SEEN IN DRAFT: J R French (Master)

A H Button (Fishing Skipper)

INITIALLED: AJL

DISTRIBUTION:

Basic List

F R Harden Jones

M Greer Walker

J Horwood

B Riches

T Attak

J Hamby

R R Dickson

J Rous

J W Read

P A Hardiman (Burnham-on-Crouch)

B H Holford

M R Vince

A Young (Sussex University)

R B Mitson

N D Pearson

H R Stewardson

M J Holley

A R Pratt (Loughborough University)

Mr Pearce)

Mr Maynard) Great Westminster House

Mrs Young)

Mr Edwards (Crown Estate Commissioners)