

H.R. / BALIE

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

1974 RESEARCH VESSEL PROGRAMME

REPORT: R V CLIONE: CRUISE 13

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

STAFF: A R Margetts (except 17 September)
B F Riches
M Greer-Walker (16 and 17 September)
C C Hemmings)
C S Wardle } DAFS (11-24 September)
G Urquhart }
W Moisiejewicz }

DURATION: Left Lowestoft 1245 h 9 September
Arrived " 1650 h 26 "

AIMS:

- 1 ARL Scanner study of geometry of Danish seine ropes operated by fly-dragging method.
- 2 Investigation of reaction of flatfish to seine ropes.
- 3 Comparison of reactions to Danish seine by local underwater-tagged and by transported aquarium-held plaice.
- 4 Scanner observation of the ANGUS steered underwater vehicle.

NARRATIVE:

CLIONE left Lowestoft at 1245 h GMT 9 September. After local sector-scanner trials the extra personnel (including Mr Van der Steld of Rijkswaterstaat) were landed by boat at Great Yarmouth at 1630 h and CLIONE proceeded to Invergordon which was reached at 1030 h 11 September. There the coverless dome was fitted and DAFS Marine Laboratory staff joined the ship. CLIONE sailed from Invergordon at 2215 h 11 September and made rendezvous with R V MARA off Lossiemouth at 0900 h 12 September.

Sector-scanner observations of the geometry of the fly-dragged Danish seine were made in 19 m water off Lossiemouth and in 36 m off Buckie from 12 to 15 September inclusive. On 16 September CLIONE worked with R V CIROLANA on ANGUS trials, Dr Greer-Walker joining at 0800 h and Mr Margetts leaving at 1500 h. After one seine net haul spoilt by unfavourable conditions and gear damage on 17 September, CLIONE accompanied CIROLANA to Dornoch Bay, but weather prevented further ANGUS trials so Dr Greer Walker transferred to CIROLANA at 1500 h and CLIONE went to Invergordon for water and stores.

CLIONE left Invergordon for Spey Bay at 0830 h 18 September, but weather prevented MARA working on that day. Mr Margetts was picked up by boat from Lossiemouth at 1400 h 18 September. Scanner observations of the Danish seine were resumed off Buckie on 19 September and continued off Lossiemouth on 20 September when a first attempt was made to attract local plaice to baits for underwater tagging. A second baiting was done on 21 September, but this too was unsuccessful. An acoustically tagged Lowestoft aquarium-held plaice was released after $3\frac{1}{2}$ hr in a cage on the sea bed on 21 September. This was fished for twice by MARA, but was not caught in the seine; it was then re-captured by a diver guided to it by sector-scanner. Bad weather prevented work on 22 September.

On 23 September baiting again failed to attract local plaice. Two Lowestoft plaice were released, one from a cage (but, by mistake, on to rough unseizable ground) and the other from the surface. The latter went straight to the bottom but kept on the move; after two hours the seine was shot round it but did not catch it. Both of these fish were retrieved by a diver guided from the scanner.

Northerly winds prevented work on 24 September, so CLIONE proceeded to Invergordon where, between 1230 h and 1500 h 24 September the scanner dome was removed and DAFS staff and Mr Margetts left the ship. CLIONE then steamed to Lowestoft where she berthed at 1650 h G.T 26 September.

RESULTS

1 In studying the geometry of the Danish seine, 22 hauls were made of which 15 provided complete sets of valid data; of those, 13 were with the long-winged haddock net and 2 with the vinge net, 3 were with four coils of rope per side and 12 with five coils, 4 were in shallow water and 11 in deeper water, and 8 employed two transponding tags on one rope and 7 one tag on each rope. These data, combined with that collected on MARA, will give a good description of the gear under a variety of conditions.

2 The seine was shot round a tagged fish on three occasions. One fish was seined twice; the first time it was passed over by the rope without displaying any reaction, but the second time it was herded by the port rope and escaped beneath the starboard rope near the net wing end. The second fish, which was moving over the sea bed, was passed over by the rope clear of the bottom without showing any reaction. Both of these fish, together with the one released over hard ground, were recaptured by a diver; the technique devised for this was very practical and effective.

3 Failure to obtain local plaice made comparison of local underwater-tagged fish with Lowestoft aquarium-held fish impossible. When the diver recaptured the three Lowestoft plaice he noticed nothing unusual about their behaviour.

4 Scanner observations were made of Heriot-Watt ANGUS, but as these were over hard ground the cable configuration could not be discerned. CLIONE laid out ANGUS navigation beacons but that system failed. (See CIROLANA 7b/74 cruise report.)

5 Live fish, including 4 unused plaice and 4 dabs caught by MARA were returned to Lowestoft.

6 The use of the scanner dome uncovered provided a welcome increase in speed to about 9.0 kn at economical revs. At around 7 kn a rather loud resonance drone is set up, presumably by the uncovered dome bars, and the aged cladding on the scanner unit tended to come off.

A R Margetts
2 October 1974

SEEN IN DRAFT: J R F
G F Lee

INITIALLED: A J L

DISTRIBUTION:

Basic list

Mr Margetts	Mr Wardle
Mr Riches	Mr Urquhart
Dr Greer Walker	Mr Moisiewicz
Mr Hemmings	