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

1973 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 12

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

STAFF

M Greer Walker
R G Shelton
G P Arnold
I L Davies
J Rous
M L Holley (16–28 August)
B Holford, M R Vince, B Wignall (Hired Diver) — Diving team 14 August only
T Doddington (14–15 August)
S M Stevens, G Titmus (Sandwich Student) — 16–17 August

DURATION

Left Lowestoft 0840 h, 14 August

Arrived Lowestoft 0700 h, 24 August

All times are G.M.T.

LOCALITY

Southern North Sea

AIMS

1. To determine the efficiency of the Granton trawl by extending the series of observations carried out on CLIONE 9e 13/71, 13, 14, 15, 16/72 and 3/73.

2. To test the method for retrieval of the ARL Scanner transducer by divers following a loss of power.

3. To make hydrographic measurements with two current meter rigs near the Shipwash in the area used for plaice tracking studies.

4. To test the acoustic reflectance of modified purse seine ropes with the ARL Scanner for the Aberdeen Laboratory.

NARRATIVE

CLIONE left Lowestoft at 0840 h, 14 August and the diving exercise began at 1040 h close to the S. Scroby buoy. This was completed satisfactorily by 1230 h and the divers returned to Gt Yarmouth by small boat. The northerly (52°27.3'N, 02°07.3'E) current meter rig was laid by 1520 h and the southerly (52°06.6'N, 01°52.5'E) by 1920 h. CLIONE then steamed northwards and began a D.R.C.M. station at 52°21.7'N, 02°01.3'E at 2240 h. This station was completed by 1137 h, 15 August. The northerly current meter rig was recovered by 1305 h and the southerly rig by 1718 h CLIONE then returned to Lowestoft mooring at 2156 h, 15 August. Mr Doddington disembarked.

The following morning Mr Stevens and Mr Titmus embarked and the two current meter rigs were unloaded. Live plaice were taken on board for the estimation of trawl efficiency and the diving team was able to free the active rudder from rope which had made it inoperable.

CLIONE sailed from Lowestoft at 0915 h, 16 August and reached Den Helder at 2200 h where the dome was fitted. The following morning Mr Titmus and Mr Stevens were transferred to the CORELLA and live fish taken aboard. CLIONE reached the working area west of the Texel at 1300 h the same day. With one break efficiency studies continued until 1815 h, 22 August.

On 20 August CORELLA developed a radar fault making repairs in Gt Yarmouth necessary and CLIONE took this opportunity to investigate oil and gas drilling sites around the Leman Bank. In all two prospective drilling sites were surveyed with the ARL scanner at 53 01°28'N, 02°30 28E and 53 05 41N, 02 31 46E and four diused well heads examined for discarded debris. Their positions were as follows 5306.4N, 02 03.4E; 53 018N, 02 218E; 53 030N, 02 093E and 53 023N, 02 226E. CLIONE returned overnight to the Black Bank arriving at 0400 h. That evening the 25KVA A.C. generator failed entirely making it necessary to return to Lowestoft for repairs. The dome was removed in IJmuiden that afternoon. Unfortunately, the hydrographic equipment was not available for collection. CLIONE docked at Lowestoft at 0700 h, 24 August.

RESULTS

1. Granton Trawl Efficiency

The results of this project are summarised in Table 1 and the totals for all cruises brought up to date in Table 2. VHF communication direct from the ARL Scanner laboratory to CORELLA and the latter's new radar improved the accuracy of the exercise significantly.

TABLE 1. Summary CLIONE 12/73

Original Position	Not Herded		Herded		Totals	Invalid Attacks
	Not Caught	Caught	Not Caught	Caught		
Outside Doors > 5 m	7	0	-	-	7	
< 5 m	3	0	1*	-	4	
	10	0	1	-	11	
Inside Doors Doors	2	0	0	1	3	
Bridle	1	0	1	0	2	1 - H
B/D-Leno	2	0	0	0	2	1 -
Net	5	5	0	0	10	1 -, 2 +
Totals	10	5	1	1	17	5
					Total Valid 28	Total Invalid 5
					Grand Total 33	

* This fish moved away from door outside gear

TABLE 2. Estimate of Trawl Efficiency to date 12/73

Position of fish	Cruises	No. Fish Caught	No. Valid Attacks	Efficiency %
Between Doors (Total)	9/71-3/73	37	93	39.8
	12/73	6	17	
		43	110	39.1
Between Doors and wing ends	9/71-3/73	12	50	24.0
	12/73	0	4	
		12	54	22.2
In Path of Net	9/71-3/73	25	43	58.1
	12/73	5	10	
		30	53	56.6

2. Diving Exercise

This was carried out satisfactorily. A separate report will be issued later.

3. Hydrographic Measurements

Two current meter rigs, each with two meters, and a DRCM were successfully deployed and recovered after a single tidal cycle in the area used for plaice migration studies.

4. Danish seine ropes

Five examples of acoustically modified seine ropes were examined with the ARL Scanner. None were easily identifiable and the best results were obtained with unmodified polypropylene rope.

5. Fish Cage

A plaice was successfully released on the bottom and problems of design and handling clarified. However, this equipment was subsequently lost when the rope parted in two places.

6. Well head survey

A detailed survey of the two prospective drilling sites was recorded on film and bottom samples taken. No discarded debris was found around the capped well heads with the ARL scanner or in samples taken by dredge and grab.

The Equipment

The ARL scanner developed no major faults.

3 acoustic tags were not recovered, two being abandoned and one torn off during capture.

The dome cover is in good condition and has now completed 1717 miles.

M Greer Walker
17 Sept 1973

SEEN IN DRAFT: JRF

GL

INITIALLED: AJL

DISTRIBUTION:

Basic List

M Greer Walker
R G Shelton
G P Arnold
I L Davies
J Rous
M L Holley
B Holford
M R Vince
B Wignall
T Doddington
S M Stevens
G Titmus

Dr Harden Jones
Dr Hemmings, DAFS
W R Small (HQ)
Dr M Holdgate (DOE)