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

1971 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 2b

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

STAFF

P O Johnson
C T Macer
C R Hood
J Rous

DURATION

Left Dover 1755 hours 3 February

Arrived Plymouth 1730 hours 12 February

All times are British Standard Time

LOCALITY

Lyme Bay-Eddystone Area

AIMS

1. Check performance of the Scanner System
2. Shoal identification and behaviour
3. Survey a gravel area
4. Acoustic tag trials
5. Measure seabed noise.

NARRATIVE

The scientific staff for this part of the cruise joined the vessel at Dover on 3 February at 1600 hours after travelling by car from Lowestoft. CLIONE sailed from Dover at 1755 hours after raising the scanner dome, then proceeding towards Lyme Bay to commence an echo-survey on the morning of the following day. This was completed by the evening of 4 February when course was set for the Eddystone are where the echo-survey continued overnight. At this time contact was made with the pilchard fishing vessels and assistance rendered in locating shoals. The survey continued on the following morning but increasing south-easterly winds made working conditions difficult and CLIONE proceeded to Plymouth where she berthed at 1620 hours 5 February. The scanner dome was fitted whilst in Plymouth on 6 February but persisting strong south-easterly winds prevented any further work that day and the vessel remained in harbour.

Work with the sector scanner was able to commence on 7 February when it was used to study sprat fishing gear and the responses of the sprat shoals to

the mid-water trawls. This was arranged with several local boats working at this time in the Eddystone region. Work then continued overnight on the pilchard fishing grounds, when some assistance in locating and maintaining contact with shoals was provided for the pair-fishing vessels and studies on their gear and shoal reactions carried out.

The 8 February was spent on a general echo-survey covering a fairly wide area to the south of the Eddystone, scanner work continuing over the following night with the pilchard fishing vessels. On the morning of 9 February CLIONE again berthed at Plymouth to embark a group of visitors from the Plymouth laboratory and the District Inspector of Fisheries for a short voyage to show the scanner gear in operation. On this occasion further work was carried out with the sprat fishing vessels, CLIONE returning to Plymouth again that evening to disembark the visitors.

The remaining three days were then spent echo-surveying and scanning around the Eddystone region up to 20 miles offshore, which also involved further work with the sprat fishing vessels. The final day, 12 February, involved surveying a very large concentration of pelagic fish (probably horse mackerel) located some 17 miles south-south-westerly from Start Point, but the weather rapidly deteriorated and a south-westerly gale developed. Conditions then became too rough for further scanner operations and a return to Plymouth was made, the vessel docking at 1730 hours that day. The scientific staff for this part of the cruise left the vessel early on 13 February and returned home by train.

RESULTS

1. The scanner was run for nearly 80 hours trouble-free operation.

2. Studies were carried out on (a) the fishing gear used by vessels fishing for sprat and pilchard together (b) shoal reactions to gear, (c) shapes and sizes of the shoals.

3. Large concentrations of pelagic fish were located over most of the Eddystone region up to 15-20 miles offshore. An extensive range of shoal types and diurnal differences in shoal pattern were noted and filmed on the scanner equipment.

4. Pelagic fish shoals were almost entirely absent over the Lyme Bay area, but became very abundant to the west of Start Point.

5. There appeared to be some demarcation between the distributional areas of sprat, pilchard and what were probably horse mackerel, each species presenting fairly distinctive shoal types. Several large shoals of mackerel were also located in the feather fishery area to the west of the Eddystone.

P O Johnson
15.2.71

SEEN IN DRAFT:

M R Sutcliffe (Master)

A H Button (Fishing Skipper)

INITIALLED: AJL

DISTRIBUTION:

P O Johnson
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