

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

1986 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 14

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

STAFF

P G Johnson
C R Hood
J Casey
T J Hulme
M W Easey
S Warnes

DURATION

Left Lowestoft 2100 h 1 December
arrived Lowestoft 0955 h 19 December
All times are Greenwich Mean Time

LOCALITY

Western Channel

AIMS

1. To carry out an acoustic and fishing survey for pelagic species in the Western Channel with particular emphasis on sprat in Lyme Bay and mackerel in the 'Mackerel Box' region. Acoustic integration will be carried out using the DAFS towed body and QMII/QD Simrad integrator systems.
2. To identify and obtain samples of pelagic fish using an 800 mesh Engel trawl for biological sampling and fish identification courses.
3. To carry out mesh selection studies on mackerel using a square mesh sleeve and cover with the pelagic trawl.
4. To obtain and freeze bags of sprat and other small fish for fish food (requested by P Scholes).

NARRATIVE

The cruise was generally handicapped by frequent severe gales which resulted in a loss of about half the available working time.

CLIONE departed from Lowestoft at 2100 h on 1 December and made overnight passage to the English Channel where the acoustic survey commenced at 2300 h on 2 December about 20 miles south of Portland Bill. The offshore area of Lyme Bay was covered on the first stage of the survey before a SW'ly gale forced shelter in Torbay later on 3 December. The weather improved again on 5 December and the survey resumed at 1800 h that day to cover the inner part of Lyme Bay. The weather again deteriorated on 6 December and anchorage was made in Torbay in the early hours of 7 December. The survey was able to resume at 0900 h on 9 December when the Lyme Bay section was completed and the second stage covering the area between Start Point and Falmouth commenced.

The weather again turned unfavourable during the evening of 10 December, after covering the inner part of Eddystone Bay, and CLIONE docked at Plymouth at 2100 h, remaining in port for re-provisioning, and sailing again at 0830 h on 12 December. However, soon after leaving port the wind again freshened and soon developed to gale force, when a run was made to anchorage at the mouth of the Helford Estuary, arriving here at 1340 h.

Work was able to resume at 0900 h on 13 December when the area off the Manacles was covered, and with improving sea conditions the survey extended eastwards to cover an area off Start Point on 14 December. Winds increased again to severe S'ly gales late that day and shelter was sought in Torbay early on 15 December. Bad weather prevailed over the next two days and the survey was unable to recommence until 0900 h on 17 December. A final transect was then made across Lyme Bay but by late afternoon a heavy following sea and increasing wind caused work to be finally abandoned at 1740 h and course was set for a return home in a severe SW'ly gale. Overnight anchorage was made in Corton Roads and CLIONE docked at Lowestoft on 19 December at 0955 h.

RESULTS

1. A total of 945 nautical miles were acoustically integrated using the SIMRAD QMII and QD systems with an EK400 sounder. APRICOT computers were used for spreadsheet data storage and analysis. The survey covered an area extending between $02^{\circ}20'W$ to $05^{\circ}05'W$ and offshore to $50^{\circ}10'N$ off Lyme Bay, and $49^{\circ}55'N$ off Start Point-Eddystone.
2. In Lyme Bay the main sprat concentration was located in the 6-12 mile belt between Start Bay and Torbay. A number of local vessels were fishing in this area and radio contact was made with several of these. Very little pelagic trace was recorded elsewhere in Lyme Bay.
3. The area surveyed west of the Eddystone ($4^{\circ}15'W$) also proved relatively barren except for two small mackerel patches found 11-15 miles SE/ESE of Dodman Point. These were mainly 0/group fish with a strong modal length at 21 cm. No indications of shoals were found on the old adult wintering grounds off Dodman Point and the Manacles.
4. Whilst in Plymouth a courtesy call was made to the Inspectorate Office and information obtained there confirmed the general results of our survey up to that point, particularly the absence of larger mackerel in the area.
5. The main pelagic fish concentrations found were in the area east of the Eddystone to Start Point, and these were principally smaller mackerel (less than 30cm) and pilchards closer to the coast, and horse mackerel further offshore.
6. A total of 7 successful pelagic trawl hauls were made yielding samples of mackerel, sprat, pilchard and horse-mackerel. Biological sampling of the mackerel was carried out on board, whilst samples of sprat and pilchard were deep frozen for further examination at the laboratory.
7. 18 mackerel ovaries with the associated fish were preserved for fecundity studies being made by Dr Greer-Walker.
8. Three hauls were made using the net fitted with an 80mm square mesh sleeve and 40mm cover. It was evident that mackerel readily escaped through this mesh into the cover, but unfortunately the size range of mackerel available was too small to establish a selection curve for the 80mm mesh used.

21 9
9. Twenty 1Kg bags of sprat were deep frozen for fish food (P Scholes) and a selection of species deep frozen for fish identification courses.

P O Johnson
8 January 1987

SEEN IN DRAFT: G Sinclair (Master)
R C Newrick (Fishing Skipper)

INITIALLED: DJG

DISTRIBUTION:

Basic List +
P O Johnson
C R Hood
J Casey
T J Hulme
M W Easey
S Warnes

