

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

1961 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 15

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

STAFF:

R J Wood
 C R Hood
 T J Hulme
 J Damm
 Mrs T E Benford

DURATION:

Left Lowestoft 1045 h 2 December
 Arrived Lowestoft 2130 h 11 December

(All times are Greenwich Mean Time)

LOCALITY:

Southern North Sea and Eastern English Channel

AIMS:

- 1) To make acoustic surveys of herring concentrations using a transducer mounted in a towed body in conjunction with the echo integrators.
- 2) To obtain samples of adult herring for age analysis.

NARRATIVE:

CLIONE sailed from Lowestoft at 1045 h, 2 December and made passage to the Outer Gabbard area where CORELLA had located mid water fish shoals the previous day. The towed body was launched at 1255 h and the acoustic equipment checked before commencing the first acoustic survey at 1530 h. An area to the eastwards of the Outer Gabbard and Galloper was surveyed during late afternoon and evening. A few mid water fish traces were located before dark but almost nothing thereafter. The survey was therefore extended eastwards and the following day the channels in the vicinity of the Hinder Banks, the Fairy Bank, Bligh Bank, Thornton Bank and Schouwen Bank were covered. Only very light scattered echo traces were detected here so the channel between the Outer Ruytingen and Sandettie Banks was then surveyed during the night 3-4 December. Similar light scattered echo traces were encountered with an occasional somewhat heavier patch. The survey was continued southwards within the inshore traffic sector off the French coast. After a survey round the northern part of the Vergoyer Bank the towed body was recovered at 1130 h in rapidly deteriorating weather and CLIONE proceeded to Boulogne docking at 1245 h. Discussions were held with French scientific staff from the Boulogne laboratory during the afternoon 4 December and as the wind had increased to force 9 from the northwest the night was spent in Boulogne. CLIONE sailed again next morning at 0825 h in improving weather. The towed body was launched at 0910 h and a second acoustic survey commenced at 1038 h to the north of Vergoyer. After covering the Vergoyer Bank area the survey was continued southwards to the Bay of the Seine with grid lines spaced at 10 mile

intervals. A patch of small spotty type echo traces was located some 25-30 miles northwest of Cape d'Antifer and this was examined more closely during 7 December, although adverse weather conditions prevented any fishing. The herring spawning area some 10-30 miles off Pointe d'Ailly was covered more intensively during the following day, 8 December, although a heavy swell and strong to gale force winds meant that speed at times had to be reduced to only 2 knots. A patch of echo traces was located with its centre some 15 miles north of Dieppe. A haul within this patch the following day with the midwater trawl yielded a mixture of spent and ripe herring together with a few pilchard and mackerel. The survey was then continued inshore off the French coast towards Boulogne. This had to be terminated at 2242 h owing to a member of the crew becoming ill. On doctor's advice he was landed at Dover 0130 h 10 December for hospital treatment. The acoustic survey was resumed off Dungeness at 0710 h and an area to the west of the Bullock Bank and between the Bullock Bank and Vergoyer covered by 1600 h. A midwater trawl haul was then made close to the Vergoyer Bank but this yielded mainly gurnard and sprat with only a few herring. The survey was then extended northwards close to The Ridge and then between the Sandettie and Ruytingen Banks. After this a line was run westwards and an area surveyed to the west of The Falls and Galloper. Finally the area to the east of the Outer Gabbard where traces had been located during the first day of the cruise was re examined during the afternoon 11 December. Only a scattered fleck type of echo trace was seen and a trawl haul on this in the evening yielded a mixed catch of predominantly whiting and sprat. Having recovered the towed body course was then set for Lowestoft where CLIONE docked at 2130 h.

RESULTS:

Aim 1. Only two sizeable fish shoals were located during the whole of this cruise, and neither was identified to species. Otherwise only scattered fleck and very small plume type echo traces were observed and these gave low levels of biomass of only a few tonnes per kilometre squared. However, it was ascertained whilst in Boulogne that traces of this type have been typical of herring in the Southern Bight and eastern Channel so far this winter. The total area of distribution was very extensive and thus total biomass may be quite substantial when the results of the cruise are worked up.

Aim 2. One sample of adult herring was obtained from the eastern Channel for age analysis. The length distribution suggests a fairly high proportion of 1978 year class recruits.

Miscellaneous. Samples of pilchard and mackerel were deep frozen for Dr Lockwood.

R J Wood
23 December 1981

SEEN IN DRAFT:

INITIALLED: DJG

DISTRIBUTION:

Basic List +

- R J Wood
- C R Hood
- T J Hulme
- J Dann
- Mrs T E Benford