

Library

R. V. ERNEST HOLT
Report for Cruise 1/1968

Staff:

C. T. Macer
W. G. Parnell (24-31 January)
I. D. McCallum
P. W. Sadler (GY)
T. Watson (24-31 January)
T. Boon (17-24 January)
A. G. Macdonald } University of East Anglia
M. R. Biggs } (12-19 January)

Duration:

1600 hours 12 January -
0800 hours 1 February

All times are G.M.T.

Aims:

A. Horse Mackerel

1. Echo survey in western English Channel; trawling.
2. Routine sampling of length, otoliths, maturity, etc.
3. Collect gonads for histological studies.
4. Tagging.

B. Sprat and Herring

5. Echo survey of Bristol Channel and Celtic Sea with trace identification if possible.
6. Tin Tow Net (TTN) survey in same area as (5) for sprat eggs and herring larvae; surface salinity and temperature.
7. Bottom temperature and salinity off Dunmore herring spawning ground.

C.

8. Drag tests in connection with an experimental plankton collector (U.E.A.)

Narrative:

The ship left Grimsby at 1600 hours 12 January and proceeded south into the English Channel where the echo survey was commenced. On receiving warning of a severe gale, shelter was sought in Tor Bay at 1800 hours 14 January and whilst there tests were made with the plankton collector.

At 0700 hours 15 January course was set for the Ushant area, where, on 16 January the trawl warps were streamed in deep water after a delay of several hours due to bad weather. The ship then steamed for Plymouth at 1800 hours 16 January and arrived at 1300 hours 17 January; Mr. Boon and an assistant cook joined by pilot boat.

A close echo grid of the area between Start Point and the Lizard was started and the French trawl shot on traces off Start Point and the Eddystone. Further tests with the plankton collector were also made before Dr. Macdonald and Mr. Biggs were landed at Plymouth in a pilot boat on 19 January. The echo and trawl survey for horse mackerel continued westwards and some fish were tagged on 21 January.

The TTN survey commenced on 23 January north of the Scillies, but on the first haul the nose cone was smashed on a submarine peak. Since the spare nose cone was also found to be damaged, it was decided to start the echo survey for sprats in the Bristol Channel using the 100 kcs sounder. The ship put into Swansea for water and fuel etc. at 1100 hours 24 January; Mr. Parnell and Mr. Watson joined, whilst Mr. Boon returned to Lowestoft.

ERNEST HOLT left Swansea at 2330 hours 24 January, short of a deckhand who had been admitted to hospital for observatipn. The sprat survey was completed and a TTN survey of the Bristol Channel and Celtic Sea area continued until 28 January, surface temperature and salinity being taken at each station. The survey was interrupted on 26 January to fish amongst a group of 6 Polish trawlers about 20 miles southeast of Ballycotton Island. A 1-hour drag with the French trawl yielded 4 baskets of herring and 2 baskets of small gadoids, chiefly Gadus esmarkii.

On 28 January the Granton trawl was shot off Trevoise Head to collect live plaice and soles for transportation to Lowestoft. Two hauls produced sufficient fish but the ground was clearly rough and damage was sustained to the trawl. The ship then steamed for Yarmouth at 0300 hours 29 January, an echo survey in the English Channel being made en route. The ship docked at 1200 hours 31 January and the live fish and gear were landed; the scientific staff except Mr. Sadler disembarked.

ERNEST HOLT left Yarmouth at 2200 hours 31 January and docked at Grimsby at 0800 hours, 1 February.

Results

A. 1. Despite an extensive echo survey which covered most of the English Channel and extended to Ushant, no echo traces of the typical horse mackerel type were encountered. Some good 'plume' traces yielded mainly squids and Gadus minutus but only 1 or 2 baskets/hour. This type of catch was taken with both the French and Engels trawls. Two hauls about 20 miles south of the Eddystone produced 8-12 baskets of horse mackerel per hour, but the fish disappeared on subsequent hauls in the area. No Polish or Russian vessels, which sometimes fish for horse mackerel, were seen in the area.

Pelagic trace was widespread near to the English coast in the eastern English Channel and a good midwater trace of the sprat type was seen about 2 miles east of Berry Head.

2. Several samples of horse mackerel were analysed for age, length, maturity, etc. The fish were mainly recovering spents, though some of the males were still fairly full.

3. Gonadial tissue was fixed in Bouins, formaldehyde-calcium and FWA for histological examination.

4. About 580 horse mackerel were tagged with a hydrostatic tag. Immediate post-tagging condition was generally good.

B. 5. The only heavy traces were encountered off the Dunmore area where, as previously mentioned, there was a small Polish trawl fishery for herring; a sample was deep-frozen. There was no sign of any sprat concentrations in the Bristol Channel.

6. The egg and larval survey of 41 stations was successfully completed, although the warp meter eventually failed and a TTN was damaged on the bottom.

Surface salinity and temperature observations were taken at each station.

7. Bottom temperature and salinity were taken with a Nansen bottle at 4 stations close to the southeast Irish Coast.

C. 8. Tests on the plankton collector were successfully carried out, despite the loss of two nets.

Miscellaneous:

The wave recorder was run on several occasions.

Live soles and plaice were brought back for Dr. Purdom.

Selected ship meteorological observations were made at Synoptic hours throughout the cruise.

Seen in draft: EAH
GWA

C. T. Macer
2 February, 1968.

Initialled: AJL

Distribution

Basic list, plus the following:-

C. T. Macer
W. G. Parnell
I. D. McCallum
P. W. Sadler
T. Watson
T. Boon
A. G. Macdonald
M. R. Biggs.
Dr. Went