

R.V. ERNEST HOLT

Report for Cruise 1/1969

Staff:

C. T. Macer
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Duration: 2-23 January

(All times B.S.T.)

Aims:

1. Echo and trawl survey of English Channel and Celtic Sea for horse mackerel.
2. Biological sampling of horse mackerel.
3. Examination of fish for parasites.
4. Larval herring survey in the eastern English Channel and Southern Bight.

Narrative:

ERNEST HOLT sailed from Grimsby at 1700 hours, 2 January and proceeded southwards into the English Channel. An echo survey and surface hydrography grid was started at 0115 hours, 4 January, south of Portland Bill and two tin tow net (TTN) hauls were made for Dr. Southward (Plymouth).

The first substantial echo-traces were picked up 20 miles south of the Eddystone early on 5 January and the Engel trawl was shot on them, but at day-break the traces descended to the bottom out of reach of this gear. The catch in this haul consisted of 0-group horse mackerel and the jellyfish Pelagia. The Dutch herring trawl was then shot and towed through heavy bottom traces, and the one-hour tow yielded 191 baskets of horse mackerel, with five baskets assorted by-catch (chiefly G. minutus, G. luscus and red gurnard).

After the routine biological sampling of this catch had been made, the echo and hydrographic grid was continued and, on 6 January, the Engel trawl was shot on midwater traces in daylight. However, the headline transducer showed that the shoal passed beneath the footrope (some fish may also have passed above the headline). The catch consisted of one basket of mackerel, pilchard and anchovy. Another tow, this time in darkness, produced the same result, the fish again avoiding the gear.

The south-easterly wind had been steadily increasing and the ship now had to dodge when it reached force 10 on 7 January. The following day it had moderated sufficiently for the survey off the Eddystone to continue, but the large shoals of fish seemed to have broken up. The Dutch herring trawl was shot twice on moderate bottom plumes; the first tow (one hour) yielded 13 baskets mixed horse mackerel and G. minutus but on the next tow the trawl was damaged and parts of it fouled the propeller. In view of this and the deteriorating weather conditions, the ship put

into Falmouth, anchoring overnight and berthing at 0900 hours, 9 January. Water was taken, the propeller was cleared by a diver, and repairs to the Decca navigator effected, but oil could not be obtained because a tanker occupying the oil jetty was unable to vacate it due to the gale force wind.

On 10 January the wind had moderated and the ship sailed at 1230 hours, although it had still not been possible to obtain oil. The Eddystone area was again surveyed and, after an unsuccessful Engel shot on midwater traces, the Dutch trawl was shot on continuous small bottom shoals off Prawle Point on 11 January. The first one-hour tow produced 119 baskets of horse mackerel with $1\frac{1}{2}$ baskets mixed by-catch but the second produced two angler-fish only.

The survey then proceeded westerly on 12 January and, in steadily deteriorating weather conditions, two tows were made on bottom traces 40 miles north of Ushant. During the first tow, there were good traces but what might have been a large catch was lost due to cod-end damage and only $\frac{1}{4}$ basket of horse mackerel was retrieved. The second tow (one hour) produced $4\frac{1}{2}$ baskets of horse mackerel but there was little echo-trace during the tow. Further work was prevented by a force 10 southerly gale and, except for short periods when the wind moderated, the ship dodged until 0900 hours, 15 January. Then with the weather outlook continuing poor, it was decided to run for the Eddystone area where work might have been possible in the north-westerly winds. However, on reaching the area early on 16 January, conditions were no better and with winds of force 8-10 NW, the ship put into Falmouth at 1300 hours, 16 January to take fuel.

Storm force southerly winds prevented the ship from leaving until 1030 hours, 18 January and she then steamed for the start of a TTN and surface hydrography grid off the Isle of Wight which was reached at 2215 hours. After the first station, work was again interrupted by bad weather but was resumed at 1020 hours, 19 January. The grid then continued in good weather and was completed at 1100 hours, 23 January near the Leman Bank. En route, rendezvous was made with R.V. ANTON DOHRN at 1330 hours, 22 January, off IJmuiden and a "Nachthai" net was ferried across to ERNEST HOLT by rubber boat.

After making some TTN free-flow calibrations, the ship steamed for Grimsby where she docked at 2100 hours, 23 January.

Results:

1. Abundant echo trace was present between the Eddystone and Prawle Point out to a distance of about 30 miles. By day, both bottom and midwater trace was present; the bottom trace was identified as being chiefly horse mackerel and catches of 191 and 119 baskets were made; the midwater trace always avoided the net and did not appear to be horse mackerel. By night, bottom trace was very light and the extensive midwater trace was again not satisfactorily identified.
2. A stratified sample of horse mackerel was analyzed biologically. Otoliths, stomachs and ovaries were taken.
3. Helminth parasites were collected from horse mackerel and mackerel.
4. A TTN grid extending from the Cherbourg peninsula to the Leman Bank was satisfactorily completed.
5. A grid of surface hydrographic stations covering most of the English Channel and Southern Bight was made.

6. A sample of mackerel was preserved (D.F.) for Mr. Bolster.
7. Selected ship meteorological observations were made at synoptic hours when the ship was the appropriate distance from the land.
8. TTN samples were taken for Dr. Southward (M.B.A., Plymouth).
9. Wave recorder instrumental observations were made throughout the cruise.

C. T. Macer
23/1/69

Seen in draft: E. A. B., G. W. A.

Initialled: A. J. L.

Distribution: Basic list plus the following:-

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