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# R. V. ERNEST HOLT

## Report for Cruise 9/1968

Staff: R. C. A. Bannister
T. Williams
T. Watson
R. N. Tucker
S. Flatman
B. O. Meggett (Grimsby)

Duration: 5 November - 3 December

### Aims

1. To survey the distribution of the large and small fish of the west and north-west Iceland plaice population during the seasonal period of availability to the fishery, and to investigate their thermal environment.

2. To extend previous inshore/offshore tagging experiments to complete the study of the pattern of recruitment to the seasonal fishery.

3. To collect blood samples from cod and plaice as part of an investigation into the variation of specific activity of 55Fe in the marine environment (for Radiobiological Laboratory).

4. To bring back live lemon sole and long rough dab for hatchery use (for Mr. Riley).

5. To collect flesh samples from 20 cod (for Mr. B. W. Jones).

6. To return cold water prawns of the genera Pandalus and Sclerocrangon (Mr. Wickins, Conway).

### Narrative

Sailing from Grimsby at 0415 hours, 5 November, ERNEST HOLT made an uneventful passage to West Iceland where work began in the vicinity of Snaefellsjokull (64°50'N 24°10'W) at 0145 hours, 9 November. After testing the two bathythermographs, however, a southeastgale made further work in this area impossible and ERNEST HOLT laid until midday waiting for the weather to moderate before steaming to the northwest fjords, where improved conditions allowed the Staalbierg Huk and Ritur lines of hydrographic stations to be worked between 1700 hours and 2230 hours, 9 November, and 0415 hours and 1545 hours, 10 November respectively. Fishing commenced north of the Horn at 2015 hours, 10 November and with a lee from the continual southeast winds ERNEST HOLT worked steadily southwards until by 2000 hours, 17 November a total of 35 one-hour hauls had been made to sample the age and length structure of inshore and offshore plaice populations off the following headlands:

| | | |
|---|---|---|
| Kogur | Stigi | Blakknes |
| Straumnes | Goltur | Staalbierg |
| Ritur | Dyrafjord | Snaefellsjokoll |
| Bolungavik | Kopanes | Geldinganes |

ERNEST HOLT then steamed to Reykjavik to obtain fuel and water, arriving at 0330 hours, 18 November. Junior members of the scientific staff took the opportunity to visit the hot springs and greenhouses outside Reykjavik while the N.I.C. and ship's officers exchanged hospitality with staff from the German research vessel WALTER HERWIG which was visiting Reykjavik while engaged on a survey of northern herring grounds.

At noon, 19 November, ERNEST HOLT left Reykjavik to begin the tagging programme and worked the nursery grounds at Faxa Bay in strong southeast winds until 1400 hours, 20 November. An attempt to work the Snaefellsjokull hydrographic grid later that evening was again frustrated by gale force winds and the ship made for more sheltered water in Breda Bay, where tagging continued throughout 21 November. With much of the tagging still to do, hydrographic work off Snaefelsjokull was abandoned and for the remainder of the cruise the ship worked those northwest grounds shown by the earlier survey to yield sufficient numbers of both large and small plaice for tagging purposes. With one major interruption for bad weather, when strong northeast gales forced ERNEST HOLT and several English and foreign commercial trawlers to seek shelter at Isafjordhur on 26 and 27 November, a further 25 hauls were made in this area. On several occasions information was exchanged with ships of the commercial fleet which expressed interest in the work being done at Iceland. Leaving North Cape at 2000 hours, 28 November, ERNEST HOLT made passage to Grimsby, docking at 0330 hours, 3 December.

Results

1. A total of 76 hauls were made with the Granton trawl with 80 mm codend and shrimp net cover. The notoriously catchy west side grounds frequently caused extensive net damage, and therefore some loss of time, while plaice fishing was rather light following the good run of plaice catches taken during October. However, sufficient complete length distribution data were obtained to confirm that ideas developed so far to explain the seasonal availability in terms of a more offshore distribution of medium and large sized fish are correct. The 1163 otoliths collected should provide adequate age information to complete the investigation of the recruitment mechanism deduced previously from the analysis of market sampling data. It was pleasing to find from V.H.F. R/T communication with skippers working the area that practical observations by these men fitted well the information collected by scientific studies.

2. Although the deep bathythermograph was non functional satisfactory temperature profiles were obtained along the Ritur and Staalbierg grids using the shallow bathythermograph in conjunction with suitable series of Nansen bottles.

3. A total of 2120 plaice were tagged with Peterson Discs. Half of these fish were caught and released in the fishable area twelve miles offshore, and the remainder were within territorial waters. The latter will recruit to the British fishery in due course and so give information on the pattern of recruitment.

4. 1500 ml of cod blood and 400 ml of plaice blood were collected as requested for the Radiobiological Laboratory.

5. Samples of cod flesh were obtained for Mr. B. W. Jones.

6. Live lemon soles were returned for Mr. Riley. No long rough dabs were obtained.

7. No prawns were found on the west side of Iceland.

8. Meteorological and wave recorder observations were made on passage.

R. C. A. Bannister
9 December, 1968

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

Initialled: A.J.L.

Distribution

Basic list, plus the following:-

Scientific Staff on Cruise
Mr. Bannister
Mr. Williams
Mr. Watson
Mr. Tucker
Mr. Flatman
Mr. Meggett (Grimsby)
Mr. Wickins (Conway)