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FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1970 RESEARCH VESSEL PROGRAMME

REPORT: R V ERNEST HOLT: CRUISE 2

STAFF

P O Johnson  
W G Parnell  
A M Watson  
T W Boon  
J Dann  
J H Prime (F H U)

DURATION

Left Grimsby 1700 hours 6 March  
Arrived Grimsby 0430 hours 20 March  
(All times are British Standard Time)

LOCALITY

North Sea

AIMS

1. To fulfill the English commitment to the 1970 ICES International Young Herring survey. This will entail:
  - a. sampling with the Dutch Herring Trawl within a number of statistical sub-rectangles (hauls of one hour duration are to be made in each);
  - b. running the echo sounder continuously over the whole survey area;
  - c. making surface and bottom temperature and salinity observations at each station.
2. To make subsidiary observations on sprat and any gadoid fish taken in the catches.
3. To act as a standby vessel to assist the Norwegian purse-seiner GERDA MARIE when required. (This vessel is currently tagging young herring as part of the ICES Bløden tagging experiment and may require help in searching for and identifying herring shoals suitable for purse-seine capture.)

NARRATIVE

After leaving Grimsby R V ERNEST HOLT proceeded to the Southern Bight where work commenced on the Young Herring Survey on the morning of 7 March. During the first haul a wooden Dan Leno snapped in half and the trawl was so severely damaged it had to be written off and replaced by a spare. This took several hours to complete and only one haul was successfully completed later that day. The next few days provided good weather conditions and were spent fishing in the Southern Bight, off the Norfolk coast and Wash area north to Flamborough

Head. In these areas the bottom was generally difficult for working a light ground trawl and a considerable amount of time had to be spent in checking the grounds by echo sounder to select tows where the risk of damage to gear was reduced. Even so a number of tows resulted in damage to the net and some trouble was also experienced with strong tides twisting the gear up on shooting.

On 12 March work was interrupted by a south-easterly gale which did not abate until fairly late the following day. The vessel spent this period dodging on the western edge of the Dogger Bank where the southern section of the survey area was completed later on the 13 March. The vessel then steamed overnight to the Great Fisher Bank where work commenced on the morning of 14 March and continued until 16 March in fairly good weather.

A fault in the boiler tubes had developed over this period resulting in loss of steam and greatly increased water consumption, reaching double its normal level. After consultation with the Marine Superintendent at Lowestoft it was decided to call at Aberdeen to top up the boiler water tanks and then work back to Grimsby, ending the trip a few days earlier than scheduled. The vessel then called at Aberdeen on 17 March, berthing at 1015 hours leaving at 1810 hours the same day. Unfortunately the boat grounded (whilst under pilotage) just after leaving the harbour entrance and took about half an hour to refloat herself with assistance from the pilot cutter. No damage was sustained and the vessel was able to proceed at 1900 hours.

A westerly gale prevented operations in the offshore area intended and the vessel proceeded to the vicinity of St Abb's Head for overnight shelter, and fishing recommenced in this area on the morning of 18 March. A severe north-westerly gale restricted the working area to within 10-12 miles from the coast and the wind did not moderate until 19 March. In this period the coastal water area between Berwick and Tees Bay was surveyed, the vessel steaming overnight to the Humber, docking Grimsby at 0430 hours, 20 March.

## RESULTS

1. A total of 30 one-hour hauls were made with the Dutch Herring trawl, covering 22 of the statistical sub-rectangles allocated. The quantities of young herring taken varied considerably, the best catch coming from the area of the Brown Ridges where 12 baskets (about 6,600 fish) of 17-26 cm fish were taken. These were a mixture of immature and recovering spent fish. Elsewhere numbers were generally much less, below 100 fish per hour, although one haul off the northeast coast did produce about 1300 mainly immature herring. Full biological sampling was carried out on all the herring and they were additionally examined for nematode parasites by Mr Prime from the Fisheries Helminthology Unit.

Sprats were also taken on most hauls, but again in varying quantities, although bottom trawling will not provide a very reliable quantitative index for this species due to the shoals usually being found well above the sea bed in daylight.

Gadoids were also present on most hauls, generally a few baskets of cod, haddock and whiting. In the southern part of the survey region cod and whiting predominated, whilst haddock were more numerous in the north, particularly in the Fisher Bank region. All the gadoids and sprats were measured, whilst the latter were deep-frozen for further examination at the laboratory. Some samples of dabs were also preserved. A selection of different species were preserved in formalin for muscle fibre studies by Dr Greer-Walker.

2. The 30 kHz echo sounder was run continuously during the survey. The records showed very little in the northern area, but good traces off the north-east coast of England, very heavy pelagic fish concentrations off the Wash (probably sprat) and some patches of good shoals in the Southern Bight.

3. Surface/bottom temperature and salinity observations were carried out at the end of most hauls.

4. This trip was considerably delayed by a shipyard strike from its original timing and as a consequence the aim of assisting the Norwegian purse-seiner GERDA MARIE could not be fulfilled. An attempt was made to establish radio communication with her at the beginning of the trip but the distance was then too great for satisfactory reception and she ended her cruise at Bergen on 15 March. However, some information was passed via the Scottish research vessel SCOTIA who was within radio range and thus able to act as an intermediary. Liaison was also maintained with the SCOTIA when she was operating.

P O Johnson  
24 March 1970

Seen in draft: J E M B (Master)  
W J S (Fishing Skipper)

Initialled: A J L

#### Distribution

Basic List  
Dr Johnson  
Mr Parnell  
Mr A Watson  
Mr Boon  
Mr Dann  
Mr Prime