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R. V. CORELLA

Report for Cruise 1/1969

Staff: R. C. A. Bannister Duration: 1-13 January  
M. R. Vince 1969  
M. Macdonald  
M. E. Easéy  
A. J. Southward (MBA, Plymouth)

Aims

1. To survey spawning concentrations of plaice in the central and southern North Sea using a standard bottom trawl with 60 mm codend mesh, and a four-panel Engel trawl.
2. To identify plaice echoes using the 100 Kc sounder system.
3. To collect plaice gonads for fecundity studies.
4. To collect material for meristic studies.

Narrative

CORELLA left Lowestoft at 0815 hours, 1 January for the White Bank. By mid-afternoon strong N.W. winds were forecast for that area and it was decided to change course for the Silver Pit. There work began with the bottom trawl at 0630 hours, 2 January but after only one haul CORELLA was ordered to Corton Roads to meet R. V. CLIONE, disabled by engine trouble. The ship reached Corton at 1700 hours on the same day and after standing by until CLIONE docked safely, resumed the cruise at 2000 hours, when course was set for the 'P' Buoys. At mid-day 3 January bottom trawling recommenced in calm weather but poor visibility at buoy P2. Between 1200 hours, 3 January, and 1530 hours, 7 January, CORELLA worked east along the P buoys, north and west across the White Bank, westerly via Clay Deep to the Silver Pit and finally eastward again via Botney and West Mud Hole to the Rising Ground. After a rough overnight steam south to the Ribs and Trucks CORELLA made one haul there early on 8 January before steaming again to fish in deeper water southwest of the Brown Ridges. Bottom trawling was completed there at 2015 hours, 8 January, and the ship proceeded to Ljmuiden to change gear, docking in thick fog at 0930 hours, 9 January.

With CORELLA now rigged with the four-panel Engel trawl a test haul was made in the Sandettié Channel at 1900 hours, 10 January. CORELLA then proceeded to fish with this gear at varying depths in daylight and dark conditions on selected grounds N.E. Of the Gabbards, S.W. of the Brown Ridges and in West Mud Hole. With the fracture of the port Engel door, fishing ceased at 1930 hours, 12 January and CORELLA proceeded to Lowestoft, docking at 1530 hours, 13 January after an uncomfortable passage.

Results

1. Satisfactory age/length material was obtained from most of the grounds fished with the bottom trawl, and in general the features characteristic of the distribution of plaice in the spawning season in the southern North Sea were observed. However, fishing was rather light and there was an unusual absence of fish from the West Mud Hole and Botney Grounds.

/2. ....

2. Selected plaice gonad samples were taken from those grounds yielding mature fish of the German Bight, Southern Bight and 'transition' sub population groups of de Veen (I.C.E.S., 1962). Fish from these areas were also deep frozen for meristic studies.

3. During bottom trawling intermittent 100 kc echo sounder surveys were made in an attempt to relate plaice catches to counts of the many echoes coming from targets either just off the bottom or within 5 fathoms of the bottom. Preliminary examination of the records and the results of the trawling suggest that many of these echoes came from small whiting and, occasionally, haddock, and that a positive identification of plaice cannot be made without the simultaneous use of target strength measurements taken from a C.R.T. display.

4. The absence of certain female length groups in samples from plaice spawning grounds is a well known but scarcely explained phenomenon. Engels trawling was carried out to see if the missing groups were to be found off the bottom. Although the main catch was always whiting, seven Engels hauls nevertheless yielded a total of nineteen plaice, comprising six running males between 22 and 34 cm long and twelve females ranging from 35 to 55 cm in length, of which two were maturing and the remainder were either running or newly spent fish. These plaice were caught at night while the footrope of the trawl was fishing about 5 fathoms off the bottom. Haddock, dabs, herring, adult and 'O' group sprat and lump sucker also featured in these hauls.

5. Dr. Alan Southward (MBA, Plymouth) completed his studies of CORELLA's performance and has written his own report for internal circulation at Plymouth. He found the lack of vibration an outstanding feature.

R. C. A. Bannister  
15.1.69.

Seen in draft: W.C. and C.S.

Initialled: A. J. L.

Distribution:

Basic list, plus the following:

Mr. Bannister  
Mr. Vince  
Mr. Macdonald  
Mr. Easey  
Dr. Southward