

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD  
 FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1981 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 7

(Provisional: Not to be quoted without prior reference to the author)

STAFF:

|            |  |  |  |  |
|------------|--|--|--|--|
| P Scholes  |  |  |  |  |
| B Croucher |  |  |  |  |
| R Harrop   |  |  |  |  |
| J Hunton   |  |  |  |  |

DURATION:

Left Lowestoft 0912 h 20 May  
 Arrived Lowestoft 0627 h 30 May

All times are Greenwich Mean Time

LOCALITY:

North Sea Markham's Hole

AIMS:

- 1) To study jointly with RV CLIONE the diurnal movements of plaice on their feeding grounds by midwater trawling.
- 2) To carry out a benthos survey in the work area to correlate food distribution with feeding.
- 3) To survey the North Smithic sands for salinity anomalies near the bottom.
- 4) To return live Pectinaria to the laboratory.

NARRATIVE:

CORELLA sailed at 0912 h 20 May and proceeded to the work area south of Markham's Hole surveying the Pectinaria grounds to the west of the Knoll Bank en route. On 21 May we were joined by RV CLIONE and began midwater trawling along Decca lane Green 39D from Red 06.00F to 11.00F (Decca chain 9B Friesian Chart L(D-MC) 1187) while CLIONE used the Granton bottom trawl along the same track.

We planned our three hour hauls to include each day a haul ending just before sunset and one beginning just at sunset because we know that in this area tagged plaice tracked by CLIONE swim up after sunset.

A third haul was planned for each day so that over the period of the whole trip two hauls would be made in each three hour period outside of the mandatory pre- and post-sunset hauls. In this way we hoped to build up a picture of the movements of fish off the bottom during the twenty four hours. A series of grab stations was carried out over the track of the trawl hauls on 24 May.

After consultation with RV CLIONE we decided to remain on the fishing grounds while she went and surveyed the Smithic Sands on her own (Aim 3). In this way we could complete our programme without having to go in for water.

So we continued midwater trawling until 1700 h 29 May having made a total of 26 three hour hauls. The ship then sailed for Lowestoft stopping en route to collect live Pectinaria at Smith's Knoll and docked at 0627 h on Saturday, 30 May.

RESULTS:

- 1. Only 11 plaice were caught but of these fish all but 2 were taken in the haul just after sunset. The results are tabulated below and confirm the results obtained by tracking tagged fish in the same area.

| Time of day | Number of hauls | Hours fishing | Plaice caught |
|-------------|-----------------|---------------|---------------|
| 2000*-2300  | 8               | 24            | 9             |
| 0000 -0300  | 2               | 6             | 1             |
| 1030 -1330  | 2               | 6             | 0             |
| Other       | 14              | 42            | 0             |
| Total       | 26              | 78            | 11            |
| *Sunset     |                 |               |               |

- 2. Unless the fish regurgitated food from the stomach the plaice caught in mid-water did not appear to have fed recently since all the fish contained food remains (mainly very small echinoderms) only in the hind gut.

Benthos was sampled by "Day" grab along the line of tow and consisted of the lamellibranchs Mactra and Ensis, Ophiuroids and Echinoids with a few Nereid worms living in a bottom of gravel, shell, and coarse sand over most of the track with a patch of sandy mud at the southern end containing Echinocardium.

- 3. RV CLIONE completed this aim for us.
- 4. Live Pectinaria for Dr D Swift was taken at the Knoll on the way home.

P. Scholes  
Scientist in Charge

Seen in draft! DJG.

G Sinclair Master  
J Harper Fishing Skipper

DISTRIBUTION:

Basic List to the...  
P Scholes  
B Croucher  
R Harrop  
J Hurton