

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

1971 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 18

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

STAFF

I L Davies  
B C Mumford  
A King (Lt)  
E Allison (IDU, WFA)

DURATION

Left Lowestoft 1030 h 4 December

Arrived Lowestoft 0750 h 17 December

All times are Greenwich Mean Time

LOCALITY

Southern Bight

AIM

To determine the reactions of plaice to a Granton Trawl by extending the series of experiments carried out on cruises CLIONE 9/71 and CORELLA 13/71.

NARRATIVE

CORELLA proceeded to a position in the Shipwash - Inner Gabbard area where a Plessey current meter fitted with a pressure transducer was laid at 1520 h 4 December. CORELLA anchored close by and depth soundings were made with the echo meter at  $\frac{1}{2}$  hourly intervals. The current meter rig was recovered at 0750 h 5 December and course was set for the Black Bank area rendezvousing with CLIONE at 1915 h, 5 December.

'Attacks' with a Granton trawl on plaice fitted with Mitson-West acoustic transponding tags were carried out on 6 and 7 December. Both vessels dodged on 8 December and trawl 'attacks' were re-started on 9 December.

CORELLA called at Den Helder on 10 December where discussions were held with staff of CLIONE and the plaice recaptured by CORELLA were transferred to CLIONE.

Mr Allison who had been transferred by rubber boat to CLIONE on 7 December rejoined CORELLA at Den Holder and subsequently left to return to England.

CORELLA left Den Helder on 11 December and sailed to the Southwold area, where there would be more shelter from the W to NW winds. An acoustic tagged fish released by CLIONE on 12 December was never in a suitable position to be attacked by the trawl, and whilst CLIONE tracked this fish CORELLA anchored at the E Barnard Buoy to carry out a 14 h DRCM station.

Trawling was continued on 14 December at Smith's Knoll and on 15 and 16 December at the Kentish Knock.

It was discovered on hauling after the last attack (Fish 14 attack 3) that the trawl had been badly damaged. A whole section of netting comprising the back of the square, top belly and funnel was torn out. The lower wings were damaged close to the bunts and the 72 ft mid-wing tickler chain was parted.

The joint exercise with CLIONE was completed by 1520 h 16 December and CORELLA proceeded to the anchorage in Corton Roads collecting live plankton en route.

#### RESULTS

1. A total of 44 'attacks' on 11 tagged plaice were made with the trawl. 22 'hits' (fish within the doors) were reported of which 5 were captures.
2. The bathythermograph and water bottle were used on the trawling grounds. Sea surface temperatures were 9.2°C at the Black Bank, 7.2°C and 7.0°C at Southwold and Corton and 9.3°C to 9.6°C at the Kentish Knock. There was no evidence of a thermocline.
3. Samples of cod heads were preserved for Mr Bye's pineal gland studies, and live plankton was collected for Mrs Thompson.

I L Davies  
21 December 1971

SEEN IN DRAFT: JEMB  
CNS

INITIALED AJL

#### DISTRIBUTION

Basic List  
I L Davies  
B C Mumford  
A King (LT)  
E Allison (IDU, WFA)

All Staff on CLIONE Cruise 13/71