

SIR. SALE.

aka

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

1974 RESEARCH VESSEL PROGRAMME

REPORT: R V CORELLA: CRUISE 14

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

STAFF:

- A R Margetts (from 29 September)
- J P Bridger
- I L Davies
- B C Mumford
- Htun Han (22-27 September)
- B Holford)
- A Howard) (by day, 30 September- 3 October)
- P Hardiman)
- J. Joyce)

DURATION:

Left Lowestoft 1730 h 25 September
Arrived Lowestoft 1700h 27 September

Left Lowestoft 0840 h 28 September
Arrived Lowestoft 1400 h 10 October

LOCALITY:

Southern North Sea and English Channel

AIMS:

- 1 To investigate the effects of tickler chains on the geometry of an otter trawl.
- 2 To observe and measure effects of otter trawl tickler chains on the sea bed.
- 3 To measure the fishing parameters of a pelagic trawl with various rig modifications.
- 4 To observe natural disturbance of various types of sea bed surface in tidal waters.

NARRATIVE:

CORELLA left Lowestoft at 1730 h 25 September but remained in Corton Roads for radar repairs during bad weather until 1415 h 26 September. At Smith's Knoll 26-27 September, as weather was unsuitable for trawl instrumentation work and as the radar had failed again, four trawl hauls were made to collect live dabs and these were returned to Lowestoft at 1700 h 27 September. Staff left the ship overnight while further repairs were made to the radar. CORELLA sailed again at 0840 h 28 September on passage to Brixham which was reached at 1500 h 29 September. There Mr Margetts joined the ship at 1945 h 29 September.

The diving team and their equipment was taken aboard and CORELLA left Brixham at 0930 h 30 September. From 30 September to 3 October inclusive the diving team was taken aboard daily from either Brixham or Kingswear for work in Start Bay investigating the effects of otter trawl tickler chains on the sea bed; they were finally landed at Brixham at 1230 h 3 October. As CORELLA could not then get alongside to take freshwater at Brixham, this was done at Plymouth the same day, arriving there at 1630 h and leaving again at 2350 h 3 October.

From 4 to 9 October CORELLA worked in Lyme Bay measuring the effects of various tickler chain rigs on the spread and drag of a Granton trawl. During this period, when weather twice restricted trawl instrumentation work on 6 and 7 October, the underwater television was used for inspection of the sea bed in more sheltered waters at two positions in Tor Bay, on Shambles Bank and in Weymouth Bay.

The Granton trawl measurements were completed by 0930 h 9 October. A live plankton sample was taken in Lyme Bay and another off Shoreham on 9 October. CORELLA reached Lowestoft at 1400 h 10 October.

RESULTS:

Aim 1: The spreads between otter boards and between wing-ends and the warp towing loads of the Granton otter trawl fitted with from nil to five tickler chains were measured over a range of speeds from about 2 to 4 knots. The working load in a tickler chain was also measured. The data have yet to be analysed, but the full array of ticklers appeared to reduce otter board spread by something like 20%.

Aim 2: Extension to otter trawling of the technique of implanting 'combs' into the sea bed to measure the penetration depth of trawl parts, which had been developed previously for beam trawls, met with only limited success, largely because of a combination of the strong spring tides, the much greater spread of the otter trawl and the only moderate underwater visibility. The few measurements made indicated that the tickler chains travelled over the surface of the sandy sea bed rather than in it. The exercise was terminated on 3 October because results were not justifying the effort being expended.

A Aim 3: Work with the pelagic trawl was not possible.

Miscellaneous: Live zooplankton was collected from the English Channel for Mrs Thompson. A plankton sample was taken at Smith's Knoll for Dr Dodge. About 20 live dabs were landed at Lowestoft for Htun Han on 27 September and a few more on 11 October.

A R Margetts
16.10.74

Seen in draft: G S (Master)
C S (Skipper)

INITIALED: A J L

DISTRIBUTION:

Basic List	Mr Htun Han
Mr Margetts	Mr Holford
Mr Bridger	Mr Howard
Mr Davies	Mr Hardinan
Mr Munford	Mr yce