

Mr. Bate

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

1972 RESEARCH VESSEL PROGRAMME

REPORT: R V CORELLA: CRUISE 16

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

PART A

STAFF: I L Davies
M Htun Han
Mrs J Howlett) 1-5 and 6-8 November
Miss G Pull)
B H Holford)
E Lambe) 5 - 6 November
R Keable)

DURATION:

Left Lowestoft 1800 h 1 November
Arrived Lowestoft 0930 h 8 November
All times are Greenwich Mean Time

LOCALITY: Southern North Sea

AIMS:

To determine the reactions of plaice to a Granton trawl by extending the series of experiments carried out on cruises CORELLA 13 and 18, 1971 and 15, 1972.

NARRATIVE

This cruise was the second of this year's series of joint sector scanner cruises with R V CLIONE.

CORELLA sailed at 1800 h 1 November and steamed overnight to the Black Bank - Brown Bank area. While awaiting the arrival of CLIONE the Granton trawl was shot at 09.05 h 2 November and fish was obtained for histological sampling. The first of the trawl 'attacks' on an acoustically tagged plaice released by CLIONE started at 14.40 h, and 'attacks' were continued on 3 and 4 November.

At 1430 h 4 November a message was received from CLIONE that following a sudden loss of hydraulic oil pressure in the scanner control system, it was not possible to move the transducer to the vertical mode and thus withdraw the scanner package up the tube. It was therefore decided that CORELLA would steam to Gt Yarmouth to collect the laboratory diving team, scanner spare parts and hydraulic oil. This she did, docking at Gt Yarmouth at 23.30 h 4 November and sailing again at 0120 h 5 November. Mrs Howlett and Miss Pull were left ashore so that the divers could be accommodated aboard. CORELLA docked at Den Helder at 1245 h 5 November and the divers successfully moved the scanner transducer to the vertical mode by 1700 h.

CORELLA sailed from Den Helder at 0743 h 6 November and arrived at Gt Yarmouth at 1920 h, where the diving team and their equipment were put ashore and Mrs Howlett and Miss Pull rejoined the ship. Sailing at 2020 h CORELLA steamed to rendezvous with CLIONE at Black Bank, but on 7 November a message was received from CLIONE that because the scanner hydraulics were still not functioning properly the joint exercise would be terminated.

One trawl haul for plaice for laboratory use was made at West Mud Hole and there was only time for one haul at the Silver Pits, because instructions had been received from the laboratory that CORELLA had to berth at Lowestoft on 8 November so that she could carry out Cruise 16 (b) starting on 9 November. A live plankton sample was collected just south of the Silver Pits and CORELLA then steamed to Lowestoft docking at 0930 h 8 November.

RESULTS

Fifteen 'attacks' with the Granton trawl were made on six acoustically tagged plaice out of a total of eight released. Nine 'attacks' were classes as hits, ie fish between the trawl doors. Use of the 'Bridger plotting chart' improved the efficiency of CORELLA in homing onto the tagged fish. Two plaice were never attacked due to the scanner malfunction. Four were captured and two were abandoned, one because of the termination of trawling at darkness and one because it was not captured although the trawl passed over it three times (it is assumed to have been dead or that the acoustic tag had come off the fish).

Sea surface temperatures in the working area were 12.46 to 12.56^o C and there was no evidence of a thermocline.

Four recaptured plaice and 5 suitable for future tagging were landed at Gt Yarmouth on 6 November. Eleven plaice for Mr Scholes and one turbot for Dr A Jones were landed at Lowestoft on 8 November.

Dab pineal and pituitary glands and heads were collected and preserved, and whole dabs were deep frozen for Mr Htun Han. Pineal glands and heads from cod were obtained for Mr Bye and plaice muscle samples for Dr Walker.

Eleven kg of cod fillets were processed and deep frozen for Dr Purdon.

A plankton sample was collected for Mrs Wells.

I L Davies
19 November 1972

Seen in draft: J F
C N S

Initialled: A J L

PART B

STAFF: G C Baxter
T C Doddington
K Medlar

DURATION: Left Lowestoft 1010 h 9 November
Arrived Lowestoft 1400 h 14 November

LOCALITY: North Sea

AIMS:

- 1 To recover the current meter rig on Station C and service those on Stations A and B.
- 2 To check the drag exerted on a parachute drogue dahn by surface wind and current.

NARRATIVE:

CORELLA set course for Station A but arrival there was delayed until 1000 h 10 November by bad weather which prevented any work on the rig until 1430 h, 12 November. In this period checks were made on the effect of wind and tide on a typical parachute drogue dahn.

The current meter rig was lifted, serviced, and replaced by 1600 h, in marginal conditions which soon deteriorated into cyclonic gales, forcing the ship to heave to until 0900h 13 November, when shelter could be sought from a north west gale in Bridlington Bay. With further northerly gales forecast and a heavy northerly swell making further buoy work impossible, CORELLA left for Lowestoft at 1915 h, 13 November.

RESULTS:

- 1 Station A was serviced and replaced in good order. Both recovered current meters appeared to have worked satisfactorily. No work could be done on Stations B and C.
- 2 Drag forces on a parachute drogue dahn were measured for wind speeds between 25 and 35 knots and current speeds in the range 20-250 cm/sec.

G C Baxter

SEEN IN DRAFT: J F
C N S

INITIALLED: A J L

DISTRIBUTION:

Basic List	G C Baxter
I L Davies	T C Doddington
M Htun Han	K Medlar
Mrs Howlett	Dr Harden Jones
Miss Pull	Mr D MacLennan (DAFS)
B H Holford	Mr Wyatt
E Lambe	B K Clarke
R Keable	T Storeton-West
	M Pawson