

MR SALES

MINISTRY OF AGRICULTURE FISHERIES AND FOOD
FISHERIES LABORATORY LOWESTOFT SUFFOLK ENGLAND

1973 RESEARCH VESSEL PROGRAMME

REPORT R V CORELLA: CRUISE 17

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

STAFF

J P Bridger
P Scholes
M Htun Han
J Last

DURATION

Left Lowestoft 0950 h 26 November
Arrived Lowestoft 0555 h 6 December
All times are Greenwich Mean Time

LOCALITY

Southern North Sea

AIMS

1. To determine the reactions of plaice to a Granton trawl by extending the series of experiments carried out on CORELLA 13 and 18/1971, 15, 16, 17 and 18/1972 and 3, 12 and 16/1973.
2. Capture of live dabs for use in laboratory experiments.
3. Collection of dab gonads and brains for histological examination.
4. Collection of flat and round fish pituitary glands for hormone analysis.
5. Collection of phytoplankton sample for Dr Dodge (London University).
6. Collection of live plaice for use on future cruises.
7. To salvage current meter rig at Station KC with the help of divers if weather was suitable on 26 November.

NARRATIVE

The scientific staff, Diving Team and crew met at the ship at 0830 h 26 November. It was soon apparent that in view of present weather and a forecast of NW winds Force 7-9 that no attempt to salvage the current meter rig would be feasible during the next 24 hours. The Diving Team therefore removed their gear before the ship sailed at 0950 h for the Texel area.

After a very unpleasant crossing CORELLA anchored alongside CLIONE off Texel at 0910 h 27 November and at 1115 h with winds gusting to 60 knots, moved to No 6 Dock at Den Helder.

At 0900 h 28 November CORELLA sailed from Den Helder and joined CLIONE, just outside the 12-mile limit, where the first attack on an acoustically tagged plaice was made at 1245 hr. Five attacks were made that afternoon on two fish, the first being caught at the second attempt and the other abandoned in midwater after 3 attempts.

All the 29 November was lost due to gale force winds, both vessels dodged in the working area until the weather moderated.

On 30 November 5 attacks were made and all four fish recaptured. While waiting for fish to settle on the sea bed trial tows were made with the headline height telemeter system and other tests were made that night using receiving transducers both on CLIONE and CORELLA.

On 1 December 8 attacks were made on 4 fish of which three were recaptured.

The vessel then steamed to Lowestoft to put Skipper Snowling ashore, his wife having been unexpectedly sent to hospital, and the ship rejoined CLIONE at 0915 h 2 December.

On 2 December a further 8 attacks were made on 4 fish and all 4 fish were recaptured, one having shed its acoustic tag.

At this point CLIONE was running short of live plaice and began using fish caught by CORELLA during the last few days and passed across to her on 1 December. Three of these freshly caught local plaice were tagged and released on 3 December and three attacks made but none of these fish stayed on the bottom for long and all three had to be abandoned in midwater.

With all the major aims of the cruise completed and after consultations with the Laboratory both ships set course for current meter rig XC and plans were made for a joint salvage operation on 4 December.

By 2230 h 3 December it was clear that the weather would not permit these salvage operations and so CORELLA steamed to the Southwold-Aldburgh area to fish for live plaice and dabs while CLIONE went to survey a gravel extraction area.

Three hauls were made off the Suffolk-Essex coast on 3 December but very few undamaged flatfish were taken. CORELLA then set course for Station XC carrying out a plankton haul for Dr Dodge during the evening of 4 December on the way.

CLIONE, having de-doned at Harwich, rejoined CORELLA at Station XC at 0700 h 5 December and located the rig on the sector scanner at 0830 h. An attempt to snare the subsurface float with a line failed but with CLIONE directing CORELLA'S course a grapnel was dragged at right angles to the ground wire. The entire rig, meters, weights, acoustic release, subsurface float and toroid wire were successfully salvaged at the first attempt by 1120 h.

CORELLA then steamed to Smith's Knoll where two trawl hauls were made for live flatfish and various fish samples requested by Radiobiological and Burnham Laboratories.

The vessel docked at 0555 h 6 December.

RESULTS

All the main aims and many subsidiary aims were successfully achieved, including the salvage of current meter rig at Station XC.

The new Kelvin Hughes Situation Display Radar greatly facilitated the task of maneuvering the ship so that the gear passed over the tagged fish. Out of 28 attacks the tagged fish passed between the otter boards on 21 occasions (75%) and on 12 occasions it was recaptured; 6 times at the first attempt, 4 times at the second attempt and twice at the third attempt. On at least 13 occasions the attack was made in a straight line, no last minute alterations in course being necessary. This resulted in a high percentage of completely valid observations.

The headline height telemeter system did not function properly. The 10KHz pulse could not be heard through the background noise in the headphones whilst towing, but, could be heard when the vessel was laid with both transmitter and receiver streamed out by tide. A double pulse, signifying that the 300 KHz transducer/receiver had recorded a bottom echo, was never heard, and the 10KHz pulse recorded by CLIONE lying nearby was very ragged. Some modifications are needed prior to CIROLANA 1/74.

All the fish taken, apart from those kept alive in tanks, were dissected and pituitary and pineal glands removed.

A plankton station for Dr Dodge was worked NE of the Sunk LV.

18 Plaice including 8 recaptured fish, and 15 Dabs were returned to the Laboratory alive.

J. P. Bridger
12 December 1977

SEEN IN DRAFT J R F
INITIALED A J L
DISTRIBUTION
Basic List J F Bridger
P Scholes
M Htun Han
J Last