

RESEARCH

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

1971 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 9

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

STAFF

- C E Purdom
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- P Scholes
- A J Jones
- A M Watson
- N E Platt (Fisheries Helminthology Unit)
- K G Mangaly (India)

DURATION

Left Grimsby 1752 hours 5 November
 ETA Grimsby 0630 hours 18 November
 All times are Greenwich Mean Time

LOCALITY

Faroe Bank; North Sea

AIMS

1. To collect live fish for use at the laboratory:-
 - a. Plaice for genetics and acoustic tag work;
 - b. Large halibut for genetic studies;
 - c. Large turbot for hatchery work.
2. To assess the working of the warp gauges on the main trawl winch.
3. To collect cod and hake tissues for immunogenetics.
4. To estimate the amount of nanoplankton in surface waters during the ships cruise.
5. To measure codworm and herringworm infestation of cod on the Faroe Bank.
6. Standing orders.

NARRATIVE

CIROLANA left Grimsby at 1752 hours, 5 November proceeding northwards in bad weather. Further deterioration of the weather occurred on 6 November and the

ship dodged northwards for part of the day. On arrival off the Moray Firth on 7 November it was decided to fish there first, because of bad conditions on the Faroe Bank. Trawling began on Smiths Bank at 0925 hours and 4 1-hour tows produced no plaice during the daylight hours. The 5th tow, at dusk, however, produced 2 baskets of large plaice but further work was cancelled due to increasing N.W. winds which persisted through 8 November. Trawling began again at 1103 hours, 9 November and the daylight hours again proved unproductive but the dusk haul produced sufficient plaice to complete the genetics part of aim 1 a. at the Moray Firth.

With an improvement in the weather forecast, a course was set for the Faroe Bank at 1900 hours, 9 November. Trawling began on the Bank at 1600 hours, 10 November and by 2400 hours, 12 November sufficient halibut had been obtained to complete aim 1 b. and sufficient cod to complete aim 5. The ship then steamed for the North Sea turbot grounds arriving at the north-eastern part of the Dogger Bank during the afternoon of 14 November. After discussion with a commercial trawler (BOSTON JAVELIN), trawling began at the southern edge of the Tail End ground at 1639 hours. A few turbot were caught, but these were too small and at midnight on 14 November the ship steamed to the North West Rough where trawling began at 0822 hours, 15 November. These grounds and the nearby Brucey's Garden proved barren and at 2200 hours the ship proceeded to the Flamborough Grounds where trawling began at 0300 hours, 16 November. Here too, no turbot were obtained for aim 1 c. but a few plaice were retained for the acoustic tag work [aim 1 a]. At 1135 hours, the trawl came fast on hauling and extensive damage was done to the trawl itself, and to the doors. Repairs were completed by 1900 hours, 16 November but this left too little time for further work on other grounds and a course was set for Great Yarmouth where the ship tied up at 1025 hours, 17 November to offload live fish and other material and to put ashore the members of the scientific staff. RV CIROLANA returned to Grimsby on 18 November.

RESULTS

- Aim 1 a. Sufficient plaice for genetics use were obtained from the Moray Firth. Minimum requirements for the forthcoming acoustic tag work were obtained, in collaboration with RV CLIONE with whom contact was made during the latter stages of the present cruise.
- 1 b. One very large, 7 large and 8 small halibut were retained to complete this aim. Statistics and gonad material were collected from fish too damaged to be kept alive.
 - 1 c. The search for turbot was abandoned after 2 days work during which no suitable fish were caught.
 2. The trawl gauges were tested on two occasions and failed each time. It was concluded that they were useless in their present form because of inadequate contact between the wheels and the warps.
 3. 25 cod were sampled at the Moray Firth and at Faroe Bank for immunogenetics studies. Blood and several other tissues were sampled from each fish for analysis at the Laboratory.
 4. Fluorometric estimation of chlorophyll 'a' was made throughout the steaming phases of the cruise. Insignificant readings were recorded at all times in the North Sea, and on passage to and from the Faroe Bank and samples were therefore not collected for spectrophotometry at the Laboratory.

5. Cod worm (Terranova decipiens larvae) and herring worm (Anisakis sp. larvae) were both found in cod on the Faroe Bank. A total of 158 fish were candled, spanning the entire size range. 65% of fish were infested and the mean number of worms per fish was 1.7 with a maximum frequency of 20.

6. Standing Orders.

- a. Bottom temperature recordings on the continental shelf were not made due to the bad weather on both the outward and return journeys from Pentland Firth to Faroe Bank.
- b. Supplies of fish were deep frozen for turbot and halibut food at the Laboratory.
- c. Fish measurements were made on cod, haddock and poor cod throughout the Faroe Bank work. Large numbers of small redfish were observed and retained in the deep freeze for return to the Laboratory.

C E Purdom
22 November 1971

SEEN IN DRAFT: E A Binnington (Master)

G W Argumont (Fishing Skipper)

INITIALLED: AJL

DISTRIBUTION

Basic List

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