

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

1988 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 2

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

STAFF

C T Macer (SIC)
D S Kirkwood
T J Hulme
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J Last
A M Watson
S P Milligan
M Scriven

DURATION

Left Lowestoft 0900h 2 February
Arrived Lowestoft 1300h 22 February
All times are Greenwich Mean Time

LOCALITY

North Sea

AIMS

1. To participate in the ICES International Young Fish Survey.
2. To sample post-larval herring, sprat and eel, and volumetric assessments of krill, using the Isaacs Kidd midwater trawl.
3. To take surface and bottom temperature and salinity readings and collect nutrient samples on each trawl station.
4. To measure nutrients in-situ and investigate various preservation regimes for samples.
5. To collect and preserve stomachs of *Raja radiata* for the Danish Institute for Fisheries and Marine Research.
6. To replenish stocks of specimens for fish identification courses.
7. To collect and preserve tissues from *Myxine glutinosa* for Dr. Holland, University of Oxford.
8. To collect biological samples including ovaries from long rough dabs for M Ntiba.
9. To collect livers from dabs from 3 areas for D Bucke (Weymouth).
10. To record the incidence of ulcerated cod for D Bucke.

NARRATIVE

RV CIROLANA sailed at 0900h on 2 February and proceeded south to the first station in rectangle 32F1 off the Essex coast which was reached at 1600h. Work initially proceeded northwards from there, covering 21 ICES rectangles off the English coast. In each rectangle, one or two hauls with the GOV trawl were made in daylight, followed by hydro casts, whilst at night two hauls per rectangle were made with the Isaacs-Kidd net. Bad weather interrupted work with the I-K net on the nights of 6 and 7 February off Flamborough Head. Later, the ship was forced to seek shelter in Scarborough Bay where she anchored at 1100h on 8 February. She remained there until 2030h on 10 February, during which time westerly winds gusting to 85 mph were recorded. After leaving the anchorage, work proceeded until 13 February, when a force 10 SE'ly gale forced the ship to dodge. The western block of rectangles was completed at 1330h on 14 February in rectangle 40E9, and the ship steamed easterly to rectangle 41F5, 90 miles off the Danish coast, to commence the eastern block of rectangles. Work started here at 0700h on 15 February and the ship left for Esbjerg at 0800h on 16 February, docking at 1130h on 16 February. Here, samples of stomachs of *R. radiata* were unloaded, repairs were effected to an I-K net depressor, and modifications to the electronic balances were made by an engineer from Eilersens.

The ship sailed from Esbjerg at 0600h on 17 February and worked in a southerly direction along the Danish coast and into the German Bight. Work continued intermittently and was interrupted by periods of bad weather on 17, 18 and 19 February. The final GOV trawl haul was made at 1715h on 21 February in rectangle 38F6. I-K hauls were then made in rectangles 37F5 and 36F5, after which the ship made for Lowestoft where she docked at 1300h on 22 February.

RESULTS

1. Of the 36 rectangles allocated to England on the IYFS, 31 were completed with the GOV trawl, and 33 were completed with the Isaacs-Kidd net. Preliminary results were telexed to the coordinating vessel RV TRIDENS at regular intervals and results from other vessels were received from her. Advice from RV TRIDENS was also received about priority rectangles, when it became clear that we would not be able to complete our allocation. The rectangle out with the GOV trawl were a block off the Dutch coast (37F4 + F5, 36F4 + F5) and 37E9 (off Flamborough), which was not attempted due to rough ground. Rectangles not covered with the I-K net were 37F4 and 36F4.
2. Temperature and salinity readings were made at surface and bottom on all GOV trawl stations, and nutrient measurements (phosphate, nitrate and nitrite) were also taken. During the cruise, a simultaneous 3-channel auto-analysis system was developed which enabled measurements to be made of the 3 nutrients within 30 minutes of sampling. This circumvents problems of sample storage and preservation.
3. Full stomachs of all *R. radiata* caught were preserved in formalin for H Sparholt (Denmark). A total of 41 were examined. Most of those collected were offloaded at Esbjerg.
4. Specimens of a variety of species were collected for fish identification courses.
5. No specimens of *Myxine glutinosa* were obtained, and it was therefore not possible to collect tissue, as requested by Dr Holland.

6. Stratified samples of long rough dabs were collected from all stations for Mr Ntiba.
7. Samples from 50 dab livers were collected off the English coast, and 25 off the Danish coast, for D Bucke.
8. The incidence of ulcerated cod was recorded for D Bucke. Overall, the incidence of ulcers was low. Few large cod over 60cm, which are more susceptible to the condition, were caught (62 in total) and 5% showed signs of ulceration.
9. Samples of sprat and herring for fish food were collected for S Singh.

C T Macer
(Scientist in Charge)
29 February 1988

SEEN IN DRAFT: M J Willcock (Master)
R Graham (Senior Fishing Mate)

INITIALLED: DJG

DISTRIBUTION:

Basic List +
C T Macer
D S Kirkwood
T J Hulme
G J Howlett
J Last
A M Watson
S P Milligan
M Scriven

CIROLANA 2/88

SHOWING :
CRUISE TRACK
COASTLINE

