

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

1983 RESEARCH VESSEL PROGRAMME

REPORT : RV CIROLANA : CRUISE 3

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

STAFF:

W G Parnell

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A M Watson

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C Searle (14-24 February)

DURATION:

Left Grimsby 1703h, 14 February

Arrived Grimsby 0935h, 6 March

(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 using the Isaacs Kidd midwater trawl.
3. To take surface and bottom temperature and salinity readings on each trawl station.
4. To collect samples of whiting for genetic analysis.
5. To collect cod of the 1976 year-class from Roundfish area 5 for analysis by the Burnham laboratory.

NARRATIVE:

CIROLANA sailed from Grimsby at 1703h, 14 February and in view of a good weather forecast steamed to fish the northernmost ICES rectangles allocated to England by the International Young Fish Survey (IYFS) co-ordinator. The survey was to consist of a specified number of 30 minute tows with a Gov trawl and two tows with the Isaacs Kidd midwater trawl in each of the allocated rectangles. The Gov tows were aimed primarily at determining year class strengths of herring, sprat, cod, haddock, whiting and Norway pout while the Isaacs Kidd tows were to determine the abundance of post larval herring and sprat. Fishing commenced in rectangle 41F1 (see track chart) at 0905h, 15 February and those rectangles west of 2°E and north of the Humber were completed in calm weather by 1340h, 22 February. During this period a compass development engineer from S G Brown was put ashore at North Shields on 19 February. CIROLANA then moved across to fish rectangles off the Danish coast where the first gear

damage of the trip was sustained when an Isaacs Kidd trawl was lost after a towing ring fractured when the ship surged in a moderate swell. CIROLANA docked at Esbjerg at 1046h, 24 February where Mr Searle left the ship to return to the Chief Scientists office. Stomach samples collected on previous cruises were delivered to a representative of the Danish Institute for Fisheries and Marine Research. CIROLANA sailed from Esbjerg again at 0925h and continued the survey off the Danish coast. A Gov trawl was badly damaged after coming fast in rectangle 41F7 but the Danish rectangles were completed by 1414h, 27 February after which CIROLANA moved down to fish off the Dutch coast. Fishing continued here without further incident. An extra rectangle was worked in 36F3 at the request of the survey coordinator and CIROLANA proceeded towards the English coast. After tours in rectangle 33F2 had to be abandoned after coming fast on sand ridges the survey was completed at 1956h, 5 March. CIROLANA steamed for Grimsby and docked at 0935h, 6 March.

RESULTS:

1. Forty-nine tours were made with the Gov trawl. Two allocated rectangles (37E9, 33F2) were not fished because the nature of the bottom was considered an unacceptable hazard to the gear. One extra rectangle was fished at the request of the co-ordinator. All fish, both commercial and non-commercial, were weighed and measured on each haul. Otolith samples of cod, haddock, whiting, Norway pout, herring and mackerel were taken at a level decided upon by the IYFS Working Groups. Samples of sprats were deep frozen for later otolith extraction and examination.

Preliminary catch data from the survey area covered by CIROLANA show that highest catches of 1-gp herring were taken in rectangles 38F0 and 37F1 (40890 and 40020 per hours fishing respectively). Few were caught north of 56°30'N or south of 53°N. Overall very few 1-gp cod were caught, though exceptionally 184 per hour were taken in one haul at the entrance to the Wash in 35F0.

As would be expected haddock catches were only substantial in the north (1152 in 43F1). Peak catches of Norway pout were taken in 38F0 and 37F1 (7848 and 6826 per hour respectively). Whiting were more widely distributed than the other gadoids with highest catches of 1912 and 1096 per hours fishing being taken in 39E8 and 40F6. Mackerel were only caught north of 55° 30'N the best catch of 86 was in 40F0. Highest catches of sprats were taken in 41F7 and 37FS. Catches close to the English coast were very low.

2. Ninety-eight tows were made with the Isaacs Kidd midwater trawl, all in the hours of darkness. Herring larvae were widely distributed north of 53°N with peak catches being taken in rectangles 38F0 and 36F5. In contrast, sprats were mainly confined to the south of 54°N, highest catches being taken at the extreme south of the survey area in 32F1 and 33F1.

3. Surface and bottom temperature and salinity sampling was carried out on each Gov trawl station.

4. Samples of 1-gp whiting from each roundfish area fished were deep frozen for genetic analysis.

5. Only one cod of the 1976 year class from Roundfish area 5 was caught. This was deep frozen for analysis by the Burnham laboratory.
6. Stomach samples were preserved from herring on each haul, cod > 100cm and mackerel when available. Samples of sprats were deep frozen whole for stomach analysis at the laboratory.
7. Samples of small gadoids were deep frozen for the Fish Identification course.
8. Bags of small gadoids were deep frozen for FCU.

W G Parnell
6 March 1983

SEEN IN DRAFT:

GS
GJL
ACB

INITIALLED:

DJG

DISTRIBUTION

Basic list +
W G Parnell
T J Hulme
J Dann
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C N Humphreys
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