

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

1975 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 6/75

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

STAFF

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DURATION

Left Grimsby 1645h 9 June

Arrived Grimsby 1752h 25 June

All times are Greenwich Mean Time

LOCALITY

Faroe Islands and Faroe Bank

AIMS

1. To carry out the yearly 0-group fish survey in the Faroe Area.
2. To make detailed comparison of the catch rates of 0-group fish made by RV CIROLANA with those made by the Faroese research vessel.

NARRATIVE

CIROLANA left Grimsby at 1645h 9 June and after a passage via North Ronaldsay work began at 1430h 11 June. After making two stations to obtain a warp-length/depth calibration for the capelin trawl, the '0' group survey was commenced. It was interrupted at 0030h 13 June by adverse sea conditions work being resumed at 0830h the same day. The survey was again broken off at 0740h 17 June in order that CIROLANA could put into Torshaven to land two members of the marine staff for medical attention. Advantage was taken of this halt to discuss existing results with the Faroese scientists. CIROLANA left Torshavn at 1240h and recommenced work on the survey at 1329h 17 June. Poor sea conditions again forced a break in the work on 18 June from 2255h until 0805h on the 19th. The survey was completed at 1728h 21 June. Camera stations were worked on 22 June and noise levels were monitored at various steaming speeds. CIROLANA met with RV JENS CHRISTIAN SVABO at 0800h 23 June and six comparative fishing stations were worked during the day. Work was completed by 2035h and course was set for Grimsby. CIROLANA docked at Grimsby at 1752h 25 June.

RESULTS

1. Figure 1 shows the cruise track, trawl stations and camera stations. The survey grid and the survey procedures followed were similar to those used in previous years. In all 87 survey hauls were made an average of 8 per day for the period of the survey. Throughout the survey the kH Humber 30 kHz echo sounder and the Simrad integrator were run, providing two channels of output, both monitoring integrations per nautical mile. Channel A was used with a blanket gate from 10 to 60 metres. Channel B was used to monitor echoes from the depth trawled. The capelin trawl was used to sample the densest part of the trace. At the end of each trawl station hydrographic observations were made at the surface and at 50 metres using Nansen bottles. At each station the catch of each species of 0-group fish were counted and measured, using subsampling techniques where appropriate. The relative distribution of fish was similar to that of previous years with haddock widely distributed and cod mostly in heavy concentrations at the inshore stations. The fish were in general considerably smaller than in previous years due partly to this survey being carried out at an earlier date than in past years and also possibly due to the water being colder this year than in past surveys. Probably for the same reason jelly fish were much less abundant and caused far less trouble in sampling the catch than in previous surveys. This advantage was however balanced by the difficulty of identifying the very small fish, particularly the gadoids. Some haddock were less than 10cm long and it is possible that fish of this size might not be fully retained by the F.F. liner.

The smaller average size of fish would probably explain the generally lower levels of the volume back-scattering function estimated for this cruise as compared with the 1974 results.

2. Dr Hoydal of the Fiskirannsoknarstovan Torshavn had to attend the ICNAF annual meeting in Edinburgh. Since he is the ICES Co-ordinator for the Faroe Area it was considered best to delay the comparative fishing exercise until his return and until the survey was completed. Unfortunately the Faroe Research Vessel JENS CHRISTIAN SVABO was unable to work over the weekend and consequently fishing comparisons were only made for one day, 23 June. Adverse sea conditions offshore prevented the initial plan of making paired hauls at different fish concentrations from being carried out and the plan was therefore amended to making six paired hauls at the same approximate position at two depths, thus producing results in the form of a two way analysis of variance with three replicates in each cell. These hauls were made in shallow water at an inshore station close to Torshavn. The hauls all yielded high catch rates of cod, Norway pout and sandeels.

MISCELLANEOUS

Underwater camera work was carried out at two positions (see Fig 1). Some frames showed 0-group fish but identification was not possible. The new twin transducer was tested out on two occasions. It adequately recorded (a) the water surface from a depth of 80 metres and (b) the foot rope and it was able to see the bottom at a depth of 100 metres but this was near the limit of its range. It was not used in the survey because it was heavier than the standard transducer and tended to reduce the gape of the capelin trawl. Its weight would also have made it difficult for the crew to handle in marginal weather conditions.

From time to time during the survey adult fish were caught. These were sampled for stomach contents to determine if they were preying on 0-group fish. A sample of haddock were preserved for Dr Portman. Quantities of 0-group fish were preserved for Dr Purdon.

Noise measurements of the ship steaming at different speeds were made.

J G Pope
9 July 1975

SEEN IN DRAFT T H F
 G W A

INITIALED A J L

DISTRIBUTION

Basic list

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Figure I Cruise Track of Cirolana 6/75

