

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
 FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND
 1974 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 7A

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

STAFF

B. W. Jones
 J. G. Pope
 A. J. Burridge
 S. Flatman
 B. J. Knights
 C. J. Garrod
 S. M. Baynes

DURATION

Left Grimsby 1900 h 20 August

Arrived Aberdeen 1500 h 14 September

All times Greenwich Mean Time

LOCALITY

Barents Sea - West Spitsbergen

AIMS

1. To participate in the International O-Group fish survey in the Barents Sea.
2. To make nanoplankton studies.

NARRATIVE

CIROLANA sailed from Grimsby at 1900 h 20 August and proceeded direct to the Barents Sea. Fishing trials with the Boothbay net were conducted on 24 August. From 25-27 August experimental fishing was carried out using the Capelin Trawl at 73°00'N 25°00'E. Our first leg of the International survey was commenced at 0900 h 28 August. The other vessels, G. O. SARS and HAVDRØN from Norway, and AKADEMIK KNIPOVICH and POISK from USSR commenced that day or the following day. CIROLANA reached broken ice patches NW of Spitsbergen at 81°26'N on 5 September. Our part of the survey was completed at Fugloy on the morning of 11 September and from there the ship made for Tromsø arriving at 1300 h. Adverse weather interrupted the survey for about 16 hours on 7-8 September.

CIROLANA sailed from Tromsø at 1830 h 11 September and docked at Aberdeen at 1500 h 14 September where part A of Cruise 7 was terminated. Mr Jones left the ship at Tromsø to join scientists from the other vessels in preparing a joint report.

RESULTS

1. The 0-group fish survey was successfully completed. CIROLANA covered a track of 2410 miles and worked 72 trawl stations. 35 hydrographic stations were worked on six sections. The echo sounder and Simrad integrator were run throughout the survey.

2. The abundance of cod was low this year but the 1974 year-class of haddock appeared to be a good one. Capelin and particularly redfish were very abundant, and Polar cod and long rough dab were abundant. Only 3 0-group herring were taken by the five vessels during the survey. 0-group mackerel were recorded in greater abundance than usual, with their distribution extending further to the east than in previous years. Adult blue whiting were recorded as usual over deep water in the Norwegian Sea, but they were also recorded in the Barents Sea further to the north and east than in previous years.

3. During three days of experimental fishing 24 hauls were made with the Capelin trawl at 4 standard depths of 15, 25, 35 and 45 m which were varied with time of day. In the area chosen for this work 0-group redfish were abundant (about 3000 per 30 min haul) and haddock averaged 50 per haul. The catch data will be analysed to examine the variation of catch with depth and time of day, and also the relationship between catch and integrated voltage.

4. Trials with the Boothbay net indicated that the diving plane acts as an effective depressor. Without a diving plane, or with the plane at a neutral angle, the net descended to shallower depths. Two Scripps depressors were not as effective as the diving plane.

5. A fluorometer monitored chlorophyll 'A' levels throughout the cruise. Samples for spectrophotometric analysis were taken, and the total and nano-plankton chlorophyll 'A' levels were recorded at 70 stations. Electro-microscope grids were prepared from material obtained from 12 stations.

6. Samples of young fish, capelin and krill were frozen for hatchery fish food.

7. Samples of 0-group fish were preserved for analyses of their stomach contents.

B W Jones
19 September 1974

SEEN IN DRAFT: TKF (Master)
GWA (Fishing Skipper)

INITIALLED: AJL

DISTRIBUTION:

Basic List

S. Flatman
B W Jones
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A J Burridge
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S M Baynes