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Charter Vessel "Kings Cross"

Report

10-27 June 1988

Personnel

P Hopkins	HSO (in charge)
W S MacDonald	SO

Objectives

1. To obtain biological samples of the western mackerel spawning stock.
2. To collect and preserve mackerel ovaries for fecundity studies.

Narrative

"Kings Cross" left Fraserburgh at 1100 on 10 June, and trawling commenced west of the Butt of Lewis at 1200 on 11 June. The second haul was delayed until 0500 on 12 June when the Elac cable winch motor was damaged by the crane on the after deck. This was repaired and a spare motor was collected by launch at Mallaig. Trawling recommenced at 0600 on 13 June and continued uninterrupted for the remainder of the cruise.

"Kings Cross" docked in Fraserburgh at 1030 on 27 June.

Results

The cruise track and trawl positions are shown on the attached chart. A total of 39 hauls were made, 35 of which were successful in collecting mackerel. Sufficient numbers were caught for otoliths to be taken in 31 hauls, with catches from approximately 50 fish to over 20,000 fish. A total of 2206 otoliths were collected.

All samples contained fish in spawning condition, and fish as small as 26 cm were found to be mature. The proportions of pre-spawning fish (maturity stages 2, 3, 4) were lower north of 55°N, but spawning fish at maturity stage 5 were common. One sample north of North Rona contained a high proportion of maturity stages 3 and 4 fish. These results indicate that there could be significant egg production north of the standard mackerel egg survey sampling area.

Twenty ovaries were collected and preserved in 4% buffered formaldehyde solution. Two boxes of fresh mackerel were collected for investigations to be carried out by staff at Torry Research Station.

P J Hopkins
12 July 1988

'Kings Cross' 10-27 June 1988 Cruise track and trawl positions.

