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In Confidence: Not to be quoted without reference to the Laboratory

CRUISE REPORT

FRS CLUPEA

12-29 July 1971

Objective:

To survey the distribution and abundance of 0-group herring and sprats off the east coast of Scotland.

Narrative:

"Clupea" sailed from Buckie on 12 July and proceeded to Spey Bay to shoot the midwater trawl. The doors kept surfacing and considerable damage was done to the net and to the headline transducer cable.

"Clupea" returned to Buckie to mend the net and to replace the 30 fm sweeps with 10 fm ones. The cored cable could not be repaired and the net was used without a transducer for the rest of the week. Sailing again in the late afternoon of 13 July "Clupea" trawled in the Moray Firth and Orkney areas before returning to Buckie for the weekend.

The cored cable was replaced over the weekend and "Clupea" sailed again in the evening of 19 July to continue the survey along the east coast. Trawling was carried out between Fraserburgh and Newburgh and in the Firth of Forth with the headline transducer in use recording a headline height of $4\frac{1}{2}$ -5 fathoms. Considerable difficulty was experienced in shooting the trawl with the cored cable attached in the shallow waters and eventually the trawl was used without the transducer. Trawling was continued in St Andrew's Bay and Aberdeen Bay before going into Aberdeen for the weekend.

During the third week the rest of the survey stations in St Andrew's Bay and along the coast from the Tay to Newburgh were completed before the cruise ended at Aberdeen on 29 July.

Results:

Herring were found in quantity in two areas only, in the inner reaches of the Moray Firth where they had a modal length of 7.5-8.0 cm and in the Firth of Forth with a modal length of 9.0-9.5 cm. The largest catch per hour's trawl in the other areas was 8 and most of the hauls were blank.

Very large numbers of sprats, slightly bigger than the herring, were caught in the Moray Firth and Firth of Forth where the modal lengths were 8.0-9.0 cm and 8.5-10.5 cm respectively. Good catches of sprats with a modal length of 7.5 cm were taken at two stations in St Andrew's Bay. Smaller sprats with modal lengths ranging from 3.0-5.0 cm were found in fair numbers on the north coast of the Moray Firth, in Sinclair Bay and off Dunbeath, and along the east coast between Cruden Bay and Montrose.

Sandeels were also plentiful in the Moray Firth and off Cruden Bay but were almost completely absent further south. Those caught in the inner reaches of the Moray Firth were slightly larger (modal length 10-11.5 cm) than those caught in Sinclair Bay and off Dunbeath (8.0-8.5 cm) and off Cruden Bay (8.5-9.0 cm).

Small whittings, around 5 cm long, were caught in small numbers (up to 35 per hour) in many of the hauls but there was no concentration of these in any area.

Jellyfish (Aurelia, Cyanea and Pleurobrachia) were present in all the hauls from Fraserburgh southwards but in only a few of those north of Kinnaird Head. In many cases they formed the bulk of the catch with up to an estimated 45 baskets for a half hour haul and an average catch of 17 baskets per hour over the area from Fraserburgh to Firth of Forth.

Alan Saville
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3 December 1971