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IN CONFIDENCE: Not to be quoted without reference to the Laboratory.

CRUISE REPORT

FRS "SCOTIA"

October 10 - 22 1969

MAIN OBJECTIVE

To do further experiments with detachable codends.

NARRATIVE

"Scotia" sailed from Aberdeen at 23.00 hrs on October 10. A passage was made to a fishing ground to the east of the Orkneys and en route two hauls with the Modified Plankton Indicator were made for the SMBA Oceanographic Laboratory, Edinburgh. By the time "Scotia" had arrived off the Orkneys, the weather had deteriorated and the vessel hove to for twenty hours hoping for it to moderate. Weather conditions deteriorated further however, making it necessary to seek shelter in Deer Sound for two days. During that period underwater observations were made on the way in which the detachable codend hung in the water. On the basis of these observations adjustments were made to the position of the floats on the codend. On October 14 a haul was made and the codend was detached from the trawl with the object of raising it slowly. A deterioration in the weather however made it necessary to take this codend on board after it had only been in the water for six hours, and to run for shelter. The next day the wind was still very strong and so "Scotia" put into Kirkwall to change personnel, one day ahead of schedule.

By the next day, October 16, the weather had improved sufficiently to enable the ship to resume work. Wind strengths of 5-6 persisted throughout the next few days so that such work as was possible, was carried out under difficulty. On October 20 the wind dropped only to be replaced by patches of fog that made it unwise to detach the codend from the trawl. As no further useful work could be done "Scotia" set off for Aberdeen that evening, arriving back at 11.00 hrs on October 21.

RESULTS

Because of the very poor weather conditions only nine hauls were made with a new design of detachable codend, larger than previous types used. It was designed so that it could be shot and taken on board in a partly collapsed condition, but be extended in the water. Handling difficulties were experienced with it at first, but by the end of the cruise a satisfactory handling technique had been worked out.

Because of the time lost due to bad weather, it was not possible to experiment with the effect on the fish of leaving them in the detached codend for varying periods on the seabed before raising them slowly to the surface as planned. Out of the nine hauls made, the codend was raised immediately to the surface on eight occasions and slowly to the surface on one. Consequently few fish in good condition were obtained so that only small numbers were available for tagging and for transporting to the Marine Laboratory aquarium.

Small numbers of haddock and plaice were tranquillized using chlorpromazine hydrochloride and behavioural changes observed. Plasma samples were taken from these and from other fish for hormone analysis.

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7.11.69