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CRUISE REPORT

F.R.V. "MARA"

7th - 28th January, 1959

Objectives: Comparison of light wing trawl with standard ground trawl.

Narrative: Extremely bad weather, and icing of both the Caledonian and Union canals delayed the ship seriously, and comparative trawling could not be started until 21st January. Arrangements were made to extend the cruise by two days, and the comparative trawling was carried out in Loch Long only.

Results: The first three days work showed that the ground trawl considerably outfished the wing trawl. The composition of the catches was similar with both nets, consisting of whiting, haddock, and a few cod. Large catches of G. esmarkii were obtained in the small mesh cover, whose contents were almost entirely of this species. It was thought that the wing trawl was floating too high for the type of fishing, accordingly the number of headline floats was reduced from 24 to 19 for the subsequent period. Catches by the modified net were not significantly altered, however, and the whole period analysed together suggests the ground trawl as capturing at least twice the number of fish caught by this particular wing-net.

The size composition of the catches are not significantly different in the two nets for either species.

Other points:-

- (1) Time was usefully spent during the bad weather in getting to know the ship thoroughly and checking electrical equipment.
- (2) The M.S. 29 sounder was converted for dry paper and gave excellent results. There are a few problems associated with the speed control of this type of machine which are being studied.
- (3) The performance of the wide-beam M.S. 26 was studied. It is concluded that the simple wide beam is not helpful for bottom discrimination and that a double-beam is the best answer, strong side lobes providing a good second-best.
- (4) A change-over switch and external socket were arranged to allow the M.S. 29 to be used with a headline oscillator or shark.
- (5) The shark was used on 250 fathoms of borehole cable, the capacity of the cable being tuned out by a parallel choke. Results were better than on the previous trial (on "Clupea") and the net was observed from above. It is considered however that the cable losses are still too high and a better type of cable will have to be obtained.
- (6) The new hydrographic winch was tested and the arrangements found to be workable.
- (7) Attempts at tagging whiting proved to be abortive. The design of the fish trap will require some modification.

R. E. CRAIG.
11th February, 1959.