

R.12/5

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13 MRG 60

C R U I S E R E P O R T

F.R.S. "MARA"

November 23rd - December 22nd, 1960.

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- Objectives:
1. Comparative fishing using a "trouser" trawl with different coloured nets and mesh sizes.
  2. Use of different coloured cod ends.
  3. Measurements of light intensity on the sea bottom.
  4. Photography of fish in relation to the trawl.
  5. Recording of trawl noises.

These experiments were to be done at different times of the day and night.

General:

The cruise was rather curtailed by bad weather and also by the difficulty of finding clear water so that trawling in daylight could be done with a high light intensity on the bottom. Six hauls were made in Loch Long and the Kyles of Bute but there the water was very turbid, as it was also further out in the Firth of Clyde. For this reason it was decided to return to the East Coast. During the next three weeks, 18 hauls were made in the Moray Firth and 4 in the Cruden Bay area with the trouser trawl, and 6 hauls were made in the Moray Firth with the Vinge trawl. The water in the Moray Firth was very clear but off the Buchan coast it was very turbid.

Results:

(a) Comparative fishing:

Most of the work was done on comparisons between the catches made by the black and white sides of the trouser trawl. There was no obvious trend in the catches.

In a further series of experiments, a green net was used on both sides of the trouser trawl, but a very coarse white nylon net (18" mesh) about 20 feet long and 4 feet high was attached to the spreading wires on one side of the trawl as a sort of extra "wing".

There was a tendency for the net on the far side from the white nylon "wing" to catch more fish, as if the wing was scaring fish away from it and into the far net. This effect merits further investigation.

(b) Mesh selection experiments:

A small meshed cover was used with each codend of the trawls throughout the experiments. The resulting selectivity data are being worked up.

(c) Light intensity readings:

Very low readings were recorded on the bottom during the day both in the Clyde and off the Buchan coast.

(d) The camera was used on the headline of the Vinge trawl during the last week, but no photographs of fish were obtained.

(e) Successful recordings of trawl noises were made by attaching a recording unit to the headline of the Vinge trawl.

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10th April, 1961.