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In confidence: Not to be quoted without reference
to the Laboratory.

CRUISE REPORT

F.R.V. "MARA"

25th March-27th April 1968

Personnel: J.R.G. Hislop S.O.
J. Main E.O.
C. Robb S.A. (25th March-17th April)
W.S. Duncan S.A.
Miss M.V. Moodie S.A. (14th-23rd April)

Location: Firth of Clyde

Objectives: Roundfish tagging underwater and at the surface.
Collection of whiting ovaries.

Narrative

The sailing of "Mara" from Buckie was delayed by mechanical trouble and the ship did not leave until the afternoon of 28th March, Troon being reached in the afternoon of 1st April. However, a recurrence of the mechanical trouble during passage to the Clyde caused a further delay in the commencement of the programme until 9th April. Thereafter, work continued without further interruption until the afternoon of 23rd April, when the scientific staff left for Aberdeen and the ship began her passage to Buckie.

Results

The chief purpose of the trip was to tag fish in midwater, using divers, and at the surface in order that the subsequent return rates of fish tagged by the two methods could be compared.

Weather conditions during most of the cruise were excellent but fish were not very abundant. Hake and whiting, which were particularly required for this work, were scarce and the parts of most catches that included the commercial sized gadoids consisted largely of codling. As a result the divers often found very few fish worth tagging in the codend when they reached it and had to wait until the subsequent haul. This is shown by the fact that of the 50 trawl hauls made during the trip divers went down to the codend on 31 occasions but only 16 times were there enough fish to tag.

Two main problems were met with and overcome. To start with the net (a trawl fitted with a herring extension piece) was frequently choked with mud, small herring and Echinocardium. Forty feet of small mesh netting were removed from the extension piece of the trawl and this measure eased the situation considerably. The net was now considerably shorter and the codend tended to come to the surface whenever there was enough wind to cause the ship to drift. By leaving the otterboards at a depth of 10 fathoms when the divers submerged to detach the codend this tendency was greatly reduced.

Fishing was conducted in depths ranging from 20 to 30 fathoms. Underwater tagging was conducted at a depth of 70 ft. It was not intended that the codend should come nearer to the surface than 70 ft when underwater tagging was contemplated but on occasions, due to the drifting already mentioned, it rose to within 20 ft of the surface.

Surface tagging was carried out in the normal way. 'Blown' fish were released from a lowering cage at 70-80 ft depth. Fish tagged during the cruise were as follows:

<u>Tagged underwater</u>		<u>Tagged at surface</u>
Cod	75	188
Haddock	52	104
Whiting	21	70
Saithe	10	12
Hake	4	2
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	162	376

To date, 15 surface-tagged and 6 underwater-tagged fish have been returned to the laboratory.

J.R.G. Hislop
2nd May, 1968.