

In Confidence: NOT TO BE QUOTED WITHOUT REFERENCE TO THE LABORATORY

FRV MARA

CRUISE 7/78

REPORT

3 July - 4 August 1978

Objectives

1. To carry out an echosounder and midwater trawling survey for juvenile clupeids in the Clyde.
2. To carry out comparative fishing experiments with the Gourock midwater trawl and the new modified version of this trawl.
3. To carry out a routine water quality survey in Loch Linnhe and Loch Eil.

Narrative

MARA left Buckie on 3 July 1978 and proceeded through the Caledonian Canal, reaching the Clyde by the morning of 7 July. An echo survey track was started up the west side of Arran and one trawl haul was made on "marks" off Carradale. However, only Cyanea capillata and small whiting were taken. The echo survey was continued to the north and east of Arran and MARA docked in Troon overnight. The survey was continued between Troon and the Arran shore on the morning of 8 July and thereafter MARA returned to Troon for the weekend.

On 10 July MARA left Troon, proceeded south as far as Loch Ryan, and completed the southern part of the echosounding grid without significant echotraces before docking in Campbeltown overnight.

Between 11 and 13 July MARA completed echo surveys of the area between Arran and the Ayrshire coast, the Cumbrae-Largs channel and the Loch Striven and Kilbrannan Sound areas. The trawl was shot once on good marks near Cumbrae, but once again the catch was almost entirely composed of Cyanea capillata.

Because of the absence of significant echotraces in midwater during the day it was decided to carry out a dusk survey. Accordingly on 14 July MARA crossed to Holy Isle and surveyed the area round Pladda from 2000 onwards. No good traces were encountered, but some diffuse traces were detected rising from the sea bed from 2100 onwards in a depth of approximately 30 fathoms.

A trawl haul was made through these traces and 2 baskets of Cyanea capillata and one basket of sprats were taken. MARA subsequently returned to Troon for the weekend.

On 17 and 18 July MARA surveyed the Loch Fyne and Kyles of Bute areas and on the night of 18 July another night survey was carried out in Kilbrannan Sound. Only poor echo contacts were made during this period and no significant catches were taken with the trawl. On 19 July MARA continued the echosurvey to the south side of Arran and then made for Troon for the long weekend.

On 26 July MARA conducted a night survey in the Holy Isle - Pladda area. The trawl was shot once and the major constituent of the catch was found to be Cyanea although a few sprats were also present.

On 27 and 28 July MARA continued the echo survey in waters to the north of Arran and the Cumbrae, Skelmorlie Bank area. Again no significant echo traces were obtained. MARA subsequently returned to Troon for the weekend.

On Monday 31 July MARA left the Clyde and reached Oban the same day. One trawl haul was made en route in the Sound of Jura, and half a basket of small sprats was taken. MARA left Oban on 1 August and made for Corpach.

North-east of Shuna the trawl was shot on very heavy marks and an estimated 100+ baskets of jellyfish, mainly Aurelia aurita, were taken. MARA subsequently reached Corpach the same night.

On 2 August a change of scientific personnel took place and in a collaborative exercise with the Highland River Purification Board an anchor station off Fort William was worked during most of a tidal cycle. Records were obtained of current speed and direction at 4 metre depth intervals and temperature, oxygen and salinity were determined using telemetering probes. Water samples were taken on each vertical profile for confirmation of oxygen and salinity levels and bulked samples (surface mid-depth and bottom) were accumulated over the period for nutrient and other analysis. Samples were returned to the Laboratory for subsequent analysis.

Scientific personnel left MARA on the night of 2 August and the following day she proceeded into the Caledonian Canal en route for Buckie.

No comparative fishing was carried out due to loss of time because of bad weather on this trip.

Biological

Only small numbers of sprats were caught during this survey, with Cyanea being the main constituent of all trawl catches and sometimes occurring in very large numbers. Young whiting were often present in association with the Cyanea, these ranging from 2.5 to 23 cm in length but mainly below 8 cm, with no clear modal length. Sprats ranged from 3 to 12 cm with modes at both 5 and 9.5 cm. Herring were caught in only 3 hauls and ranged from 4 to 23 cm again with no clear modal length.

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29/12/78

Seen in draft W T Mair