

R1/7

2MR72

IN CONFIDENCE: Not to be quoted without  
reference to the laboratory

## CRUISE REPORT

FRV MARA

7 February - 2 March 1972

- Objectives
1. To carry out an environmental and pollution survey of the Clyde area north of approximately 55°20'N.
  2. To carry out a survey for plaice eggs and larvae in the Clyde area north of the same latitude.

Narrative The "Mara" sailed from Buckie on Friday 11 February, and passed through the Caledonian and Crinan canals, to reach Ardrrossan on 15 February where the scientific staff joined the ship. Starting on the 16th, the hydro/plankton survey was carried out in the Clyde, covering the area from 55°48'N to 55°20'N.

Once the location of the plaice egg concentrations had been deduced from the first survey, a grid of stations was worked to give a detailed picture of the plaice egg density and distribution. Despite much adverse weather conditions, this second survey was carried out successfully and finished on 2 March.

## Results

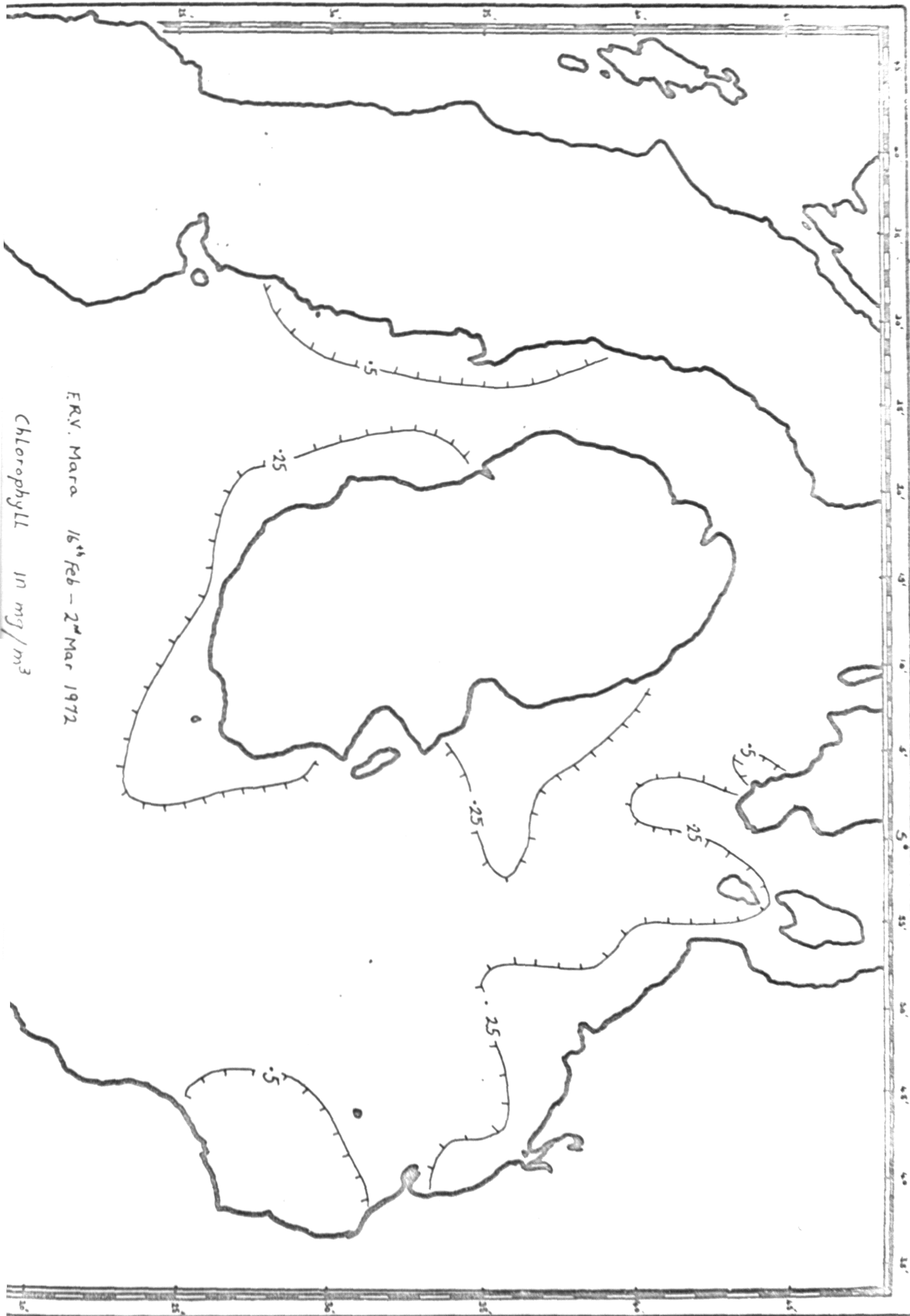
### Hydrography and Plankton

Surface T°C, ‰, phosphate, nitrate, silicate and chlorophyll samples were taken at 28 stations using the pumped sea-water supply. At a further 29 stations hydrography and chemistry sampling was carried out at a range of depths. Chlorophyll estimations from the survey are shown in chart 1. On the first survey, 56 hauls were taken using the ½ metre 60/180 mesh tow-net. On the second half, ie, the detailed plaice egg survey, the Lowestoft U.G. III sampler was used for 12 hauls but the scarcity of plaice eggs made necessary the use of a 1 metre 60 mesh tow-net. 36 hauls were taken with this net. Plaice egg density and distribution are shown in chart 2. Other results from the other environmental sampling have not yet been evaluated.

### Pollution

A special 1 metre net, known as the T.H.M. net, was used to collect zooplankton for heavy metal estimation. Results show copper concentrations to have their highest levels in roughly the same areas as were found in July 1971. Analyses of the samples for lead were however of little value due to heavy contamination arising from the presence of much particulate matter containing appreciable quantities of lead.

N T Nicoll  
22 March 1972



ERV. Mara 16<sup>th</sup> Feb - 2<sup>nd</sup> Mar 1972  
Chlorophyll in mg/m<sup>3</sup>

Chart 1

