

DC

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY LOWESTOFT SUFFOLK ENGLAND

1974 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 12

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF

P G W Jones
A R Folkard
J A Bedwell
J A Henderson

DURATION

Left Lowestoft 1715 h 30 July
Arrived Lowestoft 0900 h 7 August
All times are Greenwich Mean Time.

LOCALITY

English Channel and Thames Estuary

AIMS

1. To survey the distribution of selected dissolved trace metals (cadmium, copper, nickel and zinc) in the English Channel between the Straits of Dover and Lands End/Ushant.
2. To compare surface sampling techniques for the collection of trace metal samples.
3. To intercalibrate methods of trace metal analysis between the Hydrographic Section, the Fisheries Radiobiology Laboratory and the Institute of Marine Environmental Research (IMER) Plymouth.

NARRATIVE

After leaving Lowestoft, CORELLA proceeded to the Thames Estuary, where a surface water sample for the trace metal analysis intercalibration was collected in the Ooze Deep at 0314 h 31 July. The vessel then continued on to the Straits of Dover and the main trace metal survey started at 0720 h the same day. This survey continued without interruption and was completed off the Plymouth Breakwater at 0651 h 5 August. The vessel docked at Plymouth at 0800 h and the intercalibration samples were despatched to the IMER. In addition, scientists from the MBA and IMER visited CORELLA. The vessel sailed from Plymouth at 1705 h the same day and returned to Lowestoft docking at 0900 h 7 August.

RESULTS

1. The trace metal survey consisted of the grid shown on the attached chart. All water samples were deep frozen after filtration and returned to the laboratory for analysis.
2. At selected stations surface water was collected both by bucket and Niskin bottle to determine the effect of sampling techniques on the metal content of the sample. Some water was filtered through Millipore membranes of different pore sizes (0.22, 0.45 and 0.80 μ) to examine the effect of pore size on the metal content of the filtrate.

3. Three samples were taken for the trace metal intercalibration exercise; one in the Thames Estuary, one in the Seine Bay and the other in mid-Channel between Lands End and Ushant. Each sample was divided into replicate subsamples for analysis by the three laboratories.

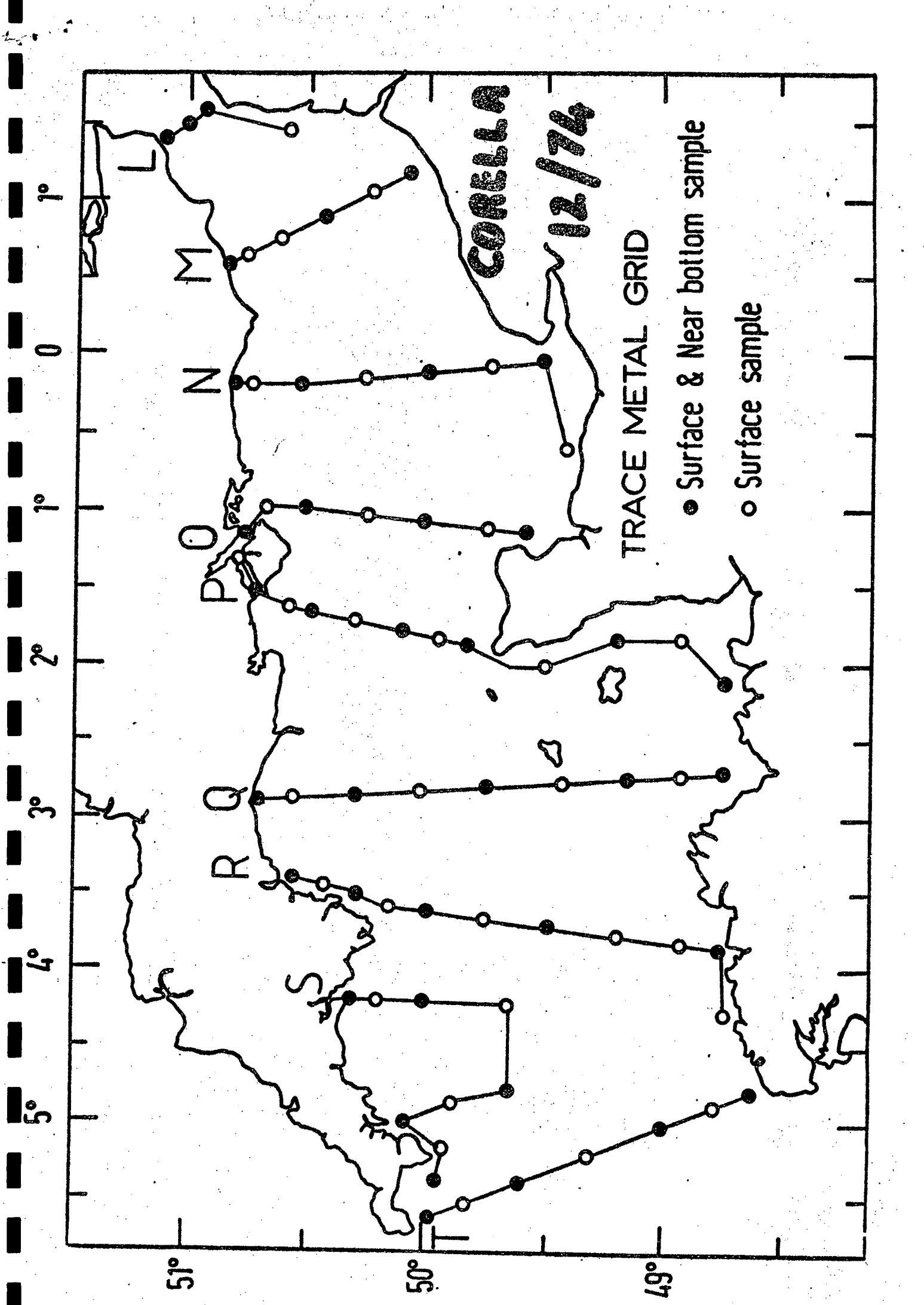
Miscellaneous

1. Short hydrographic sections, each approximately 30 miles long, were worked for Mr Talbot: on these temperature and salinity were measured at standard depths off Start Point, Plymouth Sound, the River Fal and Lands End.

2. A phytoplankton sample was collected 10 miles off Southwold for Dr Dodge of Birkbeck College.

P G W Jones
12 August 1974

SEEN IN DRAFT	J M B & C S
INITIALLED	A J L
DISTRIBUTION	
Basic List	P G W Jones A R Folkard J A Bedwell J A Henderson



CORELLA
12/74

TRACE METAL GRID

- Surface & Near bottom sample
- Surface sample

51°

50°

49°

1°

0

1°

2°

3°

4°

5°

L

M

N

O

Q

R

S

PACIFIC