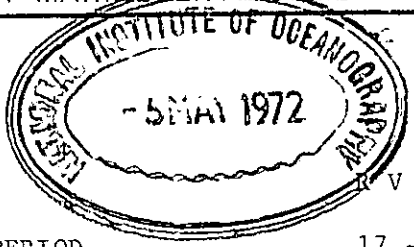


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IMER/3/72

VESSEL

R V "JANE"

CRUISE PERIOD

17 - 22 April 1972

PERSONNEL

Mr M B Jordan SO, IMER Plymouth Senior Scientist
Mr C M Worrall SO, " " "
Mr R Price ASO, " " "

All personnel were aboard for the whole period of the cruise.

ITINERARY

A station list and sketch track chart are attached to this report.

- Monday 17 April Sailed Barry 1100 hrs. One hour was spent testing the STD for integrity in the Barry Deeps. Stations 1 to 6 were worked en route for Swansea. Locked in at Swansea 1800 hrs alongside berth 1915 hrs.
- Tuesday 18 April Cleared Swansea Lock 0945 hrs. Worked six stations (7-12) in area bounded by Mumbles Head, Porth Eynon Point and Bull Point. Locked in at Swansea 1845 hrs and alongside at 2025 hrs.
- Wednesday 19 April Cleared Swansea Lock 0955. Calibrated the flowmeter of the Lowestoft high speed plankton net in Swansea Bay off the Scarweather Lightvessel. Worked seven stations (13-19) en route for Barry. Locked in at Barry 2100 hrs.
- Thursday 20 April Cleared Barry Lock 0900. Worked four stations (20-23) around the Holm islands. Bad weather conditions necessitated an early return to Barry. Locked in at Barry 1353 hrs.
- Friday 21 April Cleared Barry Lock at 1005 hrs. Worked six stations in area bounded by Barry - Newport - Brean Down - Culver Sands. Locked in at Barry 1611 hrs, alongside berth 1630 hrs.

continued/.....

OBJECTIVES

- 1) to train IMER personnel in the operation of the Bissett-Berman STD 9060 graphic recorder and to evaluate a Backman in situ O₂ probe and meter.
- 2) to continue the regular IMER survey of plankton, benthos and water chemistry. The immediate aims of this cruise were to:
 - i) sample the plankton quantitatively for community analysis,
 - ii) collect qualitative samples of the plankton for chemical analysis,
 - iii) collect samples of seawater for chemical analysis,
 - iv) collect samples of benthos from areas not sampled on cruise IMER/1/72 due to weather conditions.

PROCEDURE AND METHODS

Hydrography: The first day was used for testing and familiarisation with the Bissett-Berman STD 9060. Initially the pressure casing was lowered, without the electronics, on three separate tests to ensure that all joints were watertight. Thereafter six standard casts were made on the first day, and two casts per day on the three subsequent days.

The oxygen meter and the in situ probe which were to be evaluated gave persistent trouble with the outcome that no data were obtained. Three basic faults were apparent: (i) the thermistor calibration was inaccurate, (ii) the plug joining the cable to the thermistor leaked, and (iii) there was a persistent drift in the oxygen values recorded.

Chemical: At seven widely spaced stations sub-surface water samples were collected with Van Doorn bottles. Each station coincided with an STD cast.

Benthos: Two areas were sampled, one in the west and the other in the east of the survey area. The Day grab was used to obtain all the samples; this operated successfully and was easy to handle. Five hauls were made at each station; if the sediment was sand, or finer material, then two cores were taken from an undisturbed part of the grab sample. These were preserved in formalin to be studied for the presence of meiofauna and of polystyrene spheres. The remainder of the sample was sieved and preserved in formalin for examination of the macro-fauna.

Plankton: It had been hoped to use a 1-meter plankton net both for surface hauls to provide a qualitative plankton sample for chemical examination and for vertical hauls through the water column to give a semiquantitative density distribution of polystyrene spheres. However, this net was not available from RVB.

The Lowestoft 12-inch plankton sampler with attached plankton indicator was towed at five knots, being paid out slowly and hauled slowly to the surface, this operation being repeated to give a timed tow of about ten minutes. A double-disc plankton indicator was towed away from all hydrographical, chemical and benthic stations. All samples were preserved in formalin.

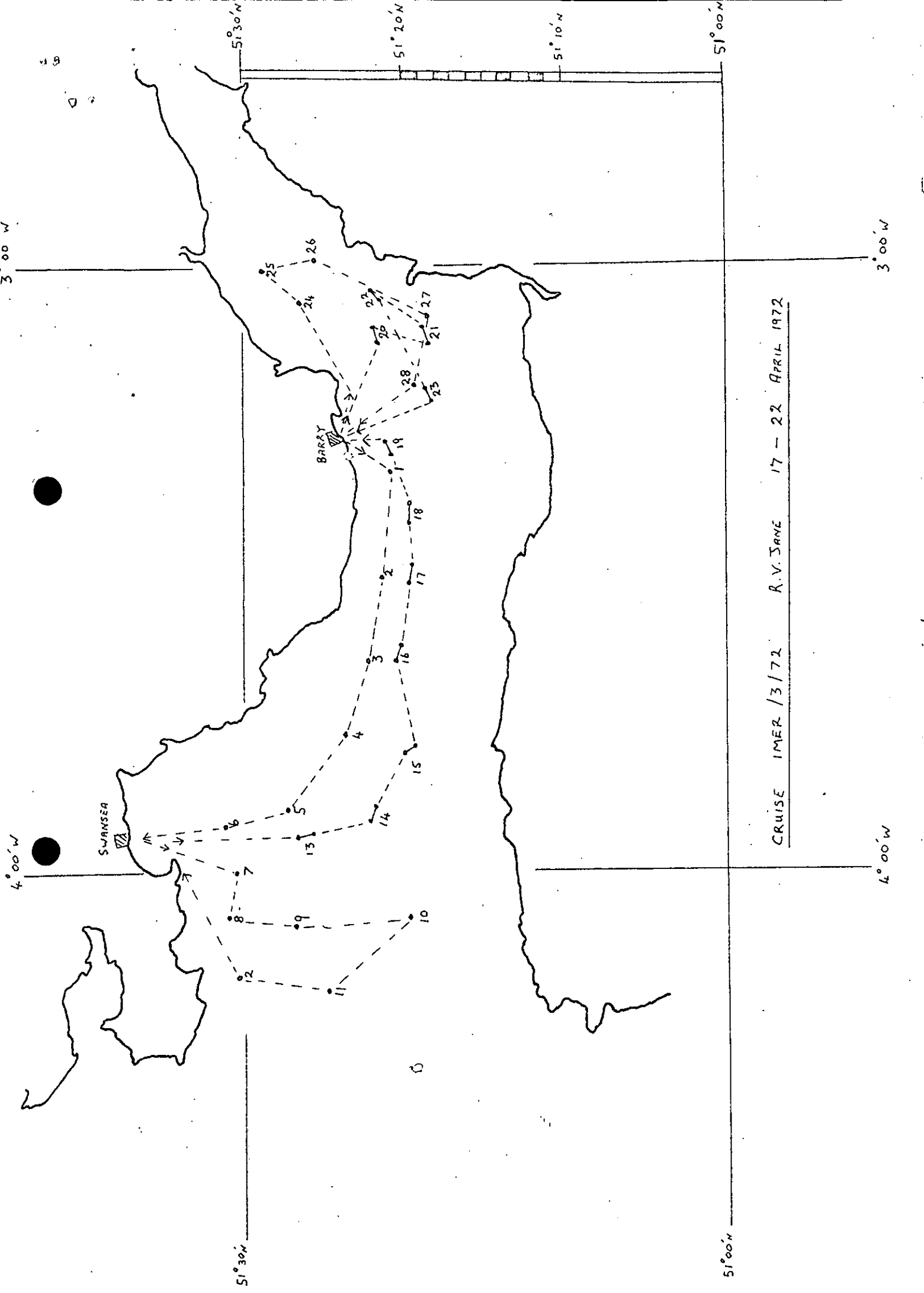
RESULTS

A preliminary inspection of the STD traces shows that the water column is completely mixed at most stations, and only at stations 15 and 28 were there any significant differences between surface and bottom temperatures and salinities. Station lists and a sketch chart are attached.

Prepared by : M B Jordan

Approved by : A R Longhurst

Attached : 1) List of stations and gear worked
2) Sketch chart



Station	Position		Gear Used				
Number	Lat N	Long W	STD	Van Doorn water bottles	Day Grab	LT net & indicator	Double dis indicator
1	51° 20.7'	3° 21.3'	*				
1a	51° 20.5'	3° 23.7'	*				*
2	51° 21.5'	3° 31.8'	*				*
3	51° 21.8'	3° 39.7'	*				*
4	51° 23.6'	3° 46.6'	*	*			*
5	51° 27.3'	3° 54.1'	*				*
6	51° 31.7'	3° 55.6'	*				*
7	51° 30.2'	4° 00.0'			*		
8	51° 31.0'	4° 04.3'			*		*
9	51° 27.2'	4° 04.7'			*		*
10	51° 26.9'	4° 05.4'					
	51° 19.7'	4° 10.2'			*		
	51° 19.6'	4° 10.8'		*			
	51° 19.3'	4° 11.6'	*				*
11	51° 24.9'	4° 12.4'	*		*		*
12	51° 30.1'	4° 10.4'		*	*		
	51° 30.2'	4° 9.7'	*				*
13 start	51° 26.9'	3° 56.3'				*	
finish	51° 26.0'	3° 56.4'					
14 start	51° 22.0'	3° 55.8'				*	
finish	51° 21.7'	3° 54.6'					
15 start	51° 20.1'	3° 48.6'	*	*			
finish	51° 19.9'	3° 48.7'				*	
	51° 19.6'	3° 48.6'					
16 start	51° 20.3'	3° 40.3'				*	
finish	51° 20.0'	3° 39.4'					
17 start	51° 19.7'	3° 32.0'				*	
finish	51° 19.6'	3° 31.0'					
18 start	51° 19.7'	3° 25.5'	*	*			
finish	51° 19.8'	3° 25.1'				*	
	51° 19.8'	3° 23.5'					
19 start	51° 20.6'	3° 18.8'				*	
finish	51° 21.0'	3° 17.1'					
c	51° 20.9'	3° 16.9'	*				
20 start	51° 21.2'	3° 08.0'				*	
finish	51° 21.6'	3° 06.7'					

Station		Position		Gear Used			
Number	Lat N	Long W	Std	Van Doorn water bottles	Day Grab	LT net & indicator	Double disc indicator
21 start	51° 18.1'	3° 08.0'				*	
finish	51° 18.7'	3° 06.9'					
22 start	51° 22.0'	3° 02.9'				*	
finish	51° 21.6'	3° 03.8'					
23 start	51° 18.6'	3° 11.9'				*	
finish	51° 18.3'	3° 13.4'					
24	51° 26.4'	3° 02.9'			*		*
25	51° 28.7'	3° 00.2'	*	*	*		*
26	51° 25.4'	2° 59.5'			*		*
27	51° 18.5'	3° 05.4'			*		*
28	51° 19.1'	3° 12.6'	*	*	*		*

CRUISE REPORT
IMER/3/72CIRCULATIONInternal

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Dr E I Hamilton (2)
Dr G W Heath
Dr R M Warwick
Mr W W Brown
Mr C M Worrall
Mr J R Davies
Mr M B Jordan
Mr R Price

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Director, DAFS, Marine Laboratory, Aberdeen
Mr A Holden, DAFS, Pitlochry
Director, MAFF, Fisheries Laboratory, Lowestoft
Mr P Wood, MAFF, Fisheries Laboratory, Burnham-on-Crouch
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