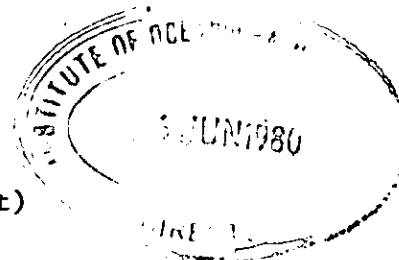


IMER C/2/80

RVS Ref. No. 2/80

VESSEL	RRR John Murray	
CRUISE PERIOD	2-15 May 1980	
PERSONNEL	R Williams	PSO (Senior Scientist)
	D V P Conway	HSO
	N R Collins	HSO
	D B Robins	SO
	S Surey-Gent	SO
ITINERARY	Friday 2 May	10.00 hrs; departed Barry for Celtic Sea (CS) site. 20.00 hrs; commenced programme at CS site.
	Monday 5 May	17.10 hrs; water-pump inboard proceeded to open ocean site.
	Wednesday 7 May	19.00 hrs; edge of Rockall Plateau (RP) (55°06.8'N 15°41.2'W). Deployed gear and carried out station work.
	Thursday 8 May	08.00 hrs; proceeded to North Channel for shelter.
	Saturday 10 May	Hove to off Pt. Lynas.
	Sunday 11 May	07.00 hrs departed Lynas Bay towards Cardigan Bay to shelter off Fishguard. 18.06 hrs; hove to off Fishguard.
	Tuesday 13 May	01.30 hrs; set course for Celtic Sea site. 08.37 hrs; commenced work at Celtic Sea site. 18.46 hrs; completed work in Celtic Sea
	Wednesday 14 May	08.00 hrs; deployed Macer sledge and $\frac{1}{2}$ m nets in Swansea Bay. 15.45 hrs; completed work and proceeded to Blue Anchor Roads. 18.25 hrs; hove to at Blue Anchor Roads deployed $\frac{1}{2}$ m net. 20.00 hrs; net work completed.
	Thursday 15 May	09.00 hrs; docked at Barry.



OBJECTIVES

1. To compare the vertical distributions and diurnal migrations of the developmental stages (including nauplii) of Calanus finmarchicus, Thysanoessa longicaudata and Sagitta maxima from the open ocean with Calanus helgolandicus, Thysanoessa inermis and Sagitta elegans from the Celtic Sea. (The choice of sites is determined by a) the requirement to obtain the sets of species uncontaminated by each other; this is especially the case with the copepods C. finmarchicus and C. helgolandicus. b) to maintain the comparative ecological investigations with work carried out at Ocean Weather Station "India" from 1971 to 75 and Celtic Sea from 1977 to 1979).
2. To measure the feeding rates of all species used in the experimental programme under ambient conditions.
3. To obtain fresh material for length/dry weight measurements and to deep freeze material for the determination of carbon, nitrogen, ash and calorific content, of all species used in the experimental programme.

4. At the two sites: to investigate other biotic conditions (chlorophyll, total suspended matter, organic matter and phytoplankton) and hydrography.

PROCEDURES AND
METHODS

See Cruise Programme IMER C/2/80

OPERATION AND
EQUIPMENT FAILURES

Bad weather throughout the cruise was responsible for the failure to reach the open ocean site at 59°N 19°W and a loss of over 50% of the proposed scientific objectives. Attempts were made to work a station on the Rockall plateau but all nets and sampling equipment were clogged by the presence of large aggregations of Salpa fusiformis. The RMTI opening and closing net did not function properly because the Deck Command System failed to open and close the release mechanism. The DCS also failed to operate with the Combined Lowestoft Longhurst sampler (CLLS). Studies on Thysanoessa inermis were not carried out at the Celtic Sea site through lack of material.

RESULTS

- 1) 10 oblique hauls were taken with the double LHRP system and 3 with the CLLS fitted with fine and coarse mesh nets. (400 individual samples)
- 2) Water-bottle samples from six depths were taken at seven stations in the Celtic Sea and two on the Rockall plateau for measurements of chlorophyll, POC, total suspended matter, coulter counts, microzooplankton, phytoplankton, salinity and temperature.
- 3) 30 feeding experiments were carried out in the CS site on Calanus helgolandicus, Meganctiphanes norvegica and Sagitta elegans. No feeding experiments were carried out at the RP site.
- 4) 11 hauls by the RMTI net (3 at RP and 8 at CS) and numerous deployments of the ½ m net and Macer sledge were made to obtain fresh material for length/weight determinations before drying and freezing the material. The specially constructed gimballed container allowed the successful use of the Cahn 25 microbalance in conditions up to moderate seas (4/5 Beaufort).

Prepared by:
Approved by:
Date:

R Williams

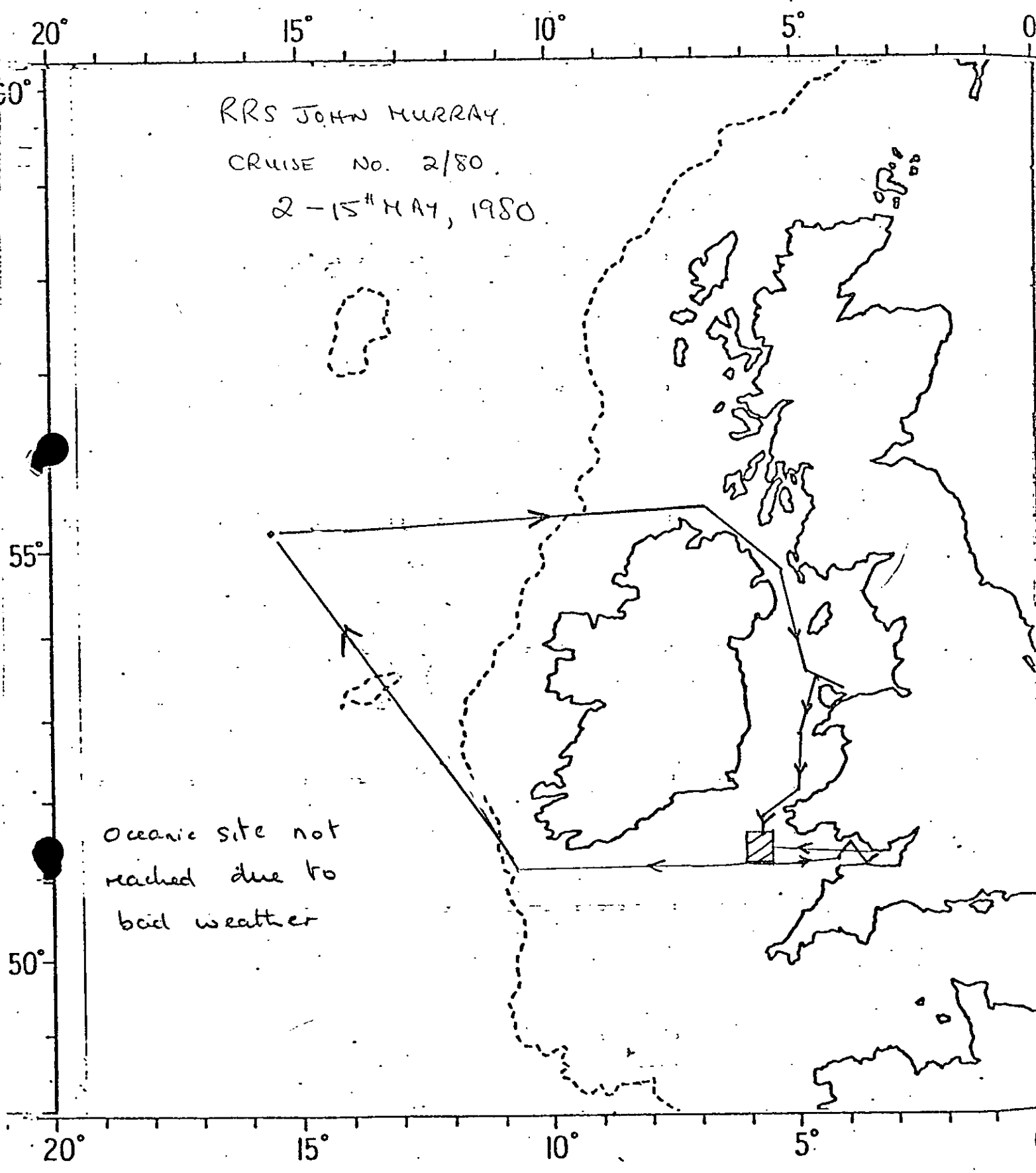
4 June 1980

Figure 1.

V

MAY 2441

1-30 (unclear)



RRS JOHN MURRAY.
CRUISE NO. 2/80.
2-15th MAY, 1980.

Oceanic site not
reached due to
bad weather