

Indexed ✓

06

M. I. A. S.
03 AUG 1984
(WORMLEY)

Scottish Marine Biological Association

Dunstaffnage Marine Research Laboratory



CRUISE REPORT

~~R.R.S. CHALLENGER~~

R.R.S. FREDERICK RUSSELL

Cruise 1/84

5-30 January

S.M.B.A., P.O. Box No. 3, Oban, Argyll, Scotland.

Scottish Marine Biological Association

Dunstaffnage Marine Research Laboratory

Cruise Report

R.R.S. Frederick Russell

Cruise 1/84

5 - 30 January

Frederick Russell Cruise 1/84

Aims

- 1) To recover SMBA and MAFF moorings L1, L2, L3 and L4 on Porcupine Bank.
- 2) To deploy two Bidston tide gauges at station YP in the Porcupine Sea Bight.
- 3) To recover SMBA moorings F and M and Bidston tide gauge N1 in the Rockall Channel.
- 4) To recover SMBA moorings V and W near the Wyville Thomson Ridge.
- 5) To service the UCNW moorings HS1 and M2 on the Scottish Continental Shelf.
- 6) To deploy four SMBA satellite-tracked drogues between station F and the Anton Dohrn Seamount. In addition, another drogue to be deployed on the eastern slope of Anton Dohrn.
- 7) To collect caesium samples for MAFF and Glasgow University.

StaffLeg A

J.M. Graham

N.D. Pascoe

N. MacDougall

A. Harrison (IOS Bidston)

T. Furey (University College, Galway)

Narrative

Frederick Russell sailed from Falmouth at 0910 h 5th January in force 6-7 south-westerly winds. The increasing wind forced the ship

to anchor in the shelter of Crow Sound in the Isles of Scilly early that evening. Despite a forecast of force 6-8 north-northwesterlies the ship weighed anchor at 0037 h 6th January and proceeded to the Bidston tide gauge station YP in the Porcupine Sea Bight. Wire testing of the acoustic releases was carried out between 1015 and 1130 h 7th January and the two tide gauges were deployed between 1820 and 1725 h. In improving conditions Frederick Russell continued on towards mooring L1. A search was conducted without success between approximately 0730 and 0830 h 8th January. In view of the poor history of recovery of moorings at this site, the limited daylight and a poor medium term forecast it was decided to abandon this mooring and move along the line to L2 which was successfully recovered between 1237 and 1344 h. Mooring L3 was recovered between 1502 and 1557 h. A search for L4 conducted between 1630 and 1834 h failed to locate the mooring. Darkness had fallen by this time and with a southerly gale imminent it was decided to head for mooring F. Searching began at 0300 h 10th January in poor conditions but with the loss of the PES fish in a heavy sea at 0420 h and the increasing difficulty for the officers in manoeuvring the ship she was hove to at 0430 h after a short abortive attempt to search using the hull transducer. It later became apparent that even before its loss the PES fish had not been operating correctly and the failure to locate the mooring could not be considered a valid indication that it had been lost and a further search should be undertaken at a later date.

The ship remained hove to in an increasing south-westerly sea until 1000 h when it was decided to run for the Butt of Lewis and the safety of the Minches. The winds remained at storm force and attempts

to anchor in the Sound of Mull on the evening of 11th January were unsuccessful forcing the ship to steam off Oban until she was able to berth at Dunstaffnage at 1238 h 12th January.

Results

- Aim (1) Moorings L2 and L3 were successfully recovered.
Neither L1 nor L4 could be located and must be considered to be lost.
- Aim (2) The two tide gauges were successfully deployed.
- Aim (3) The first attempt to locate F was hindered by bad weather and the damage to and subsequent loss of the PES fish.

Staff

A. Edwards (SMBA)
C. Griffiths (SMBA)
N. Pascoe (SMBA)
A. Harrison (IOS Bidston)

Narrative 17-18 January 1984

Taking advantage of a lull, "Frederick Russell" sailed from Dunstaffnage at 1600 h 17th January and steamed for 1G. Work started at 1900 h and continued until 2115 when, in worsening sea and heavy swell, water sampling was finished at station 3G. The ship sheltered behind Coll during the night and returned to Dunstaffnage during the morning of 18th January, docking around midday.

Staff Leg G

C.R. Griffiths
N.D. Pascoe
N. McDougall

Narrative

Frederick Russell sailed from Dunstaffnage at 1300 h 24th January and steamed for 4G via the Sound of Mull. Radiocaesium surface sampling began at 1710 h and continued up to 1G which was completed at 0235 h 25th January.

Frederick Russell made way to mooring F in force 8 westerly winds and a moderate swell. Despite a forecast to the contrary, conditions had improved by the time the mooring site was reached at 1430 h. A thorough box search of the area was conducted till 1700 h when it was decided to abandon the acoustic interrogation.

Four satellite drogues were released at 1900 h midway between F and the Anton Dohrn Seamount, sea conditions were good. A further drogue was deployed on the seamount at 2230 h. Mooring site 'M' was reached just after midnight 26th January. A four hour box search was conducted without success. The winds were now freshening from the east. At 0400 h we progressed to the nearby Bidston tide gauge at 'N'. Acoustic contact was established immediately and maintained till daylight. The gauge was safely aboard by 0900 h. By the time we reached Barra Head the weather had deteriorated further. Frederick Russell made slow progress up the Minch early morning 27th January to HS1 in a force 9 north-easterly gale. By daylight the wind had eased and HS1 was serviced by 1230 h. To save time the marker buoy was left in place.

The 'M2' mooring position was passed at 1930 h, conditions were calm, no visual or radar contact was made. Water samples were taken on lines 'D' and 'A' between 2255 h and 0648 h 28th January.

Our passage through the Irish Sea was not aided by a southerly force 9 gale, speed was reduced to 4 knots for much of the day.

A force 8 south westerly gale prevented any attempt at recovering the IOS Taunton mooring off Milford Haven on 29th January.

Frederick Russell docked in Falmouth 0800 h 30th January as scheduled.

Results

Aim (3) Only the Bidston tide gauge at N was recovered, no contact was made with either F or M.

Aim (4) There was insufficient time to visit mooring sites V or W.

Aim (5) HS1 was successfully serviced, M2 was left due to shortage of time.

Aim (6) The satellite drogues were launched as planned.

Aim (7) Caesium samples were taken from lines A, D and G.

Acknowledgements

We would like to thank Captain Dowell, his officers and crew for their efforts in enabling us to achieve as much of the cruise programme as we did given the poor weather conditions.

J.M. Graham
A. Edwards
C.R. Griffiths

11 April 1984.

Table 1. Moorings raised during Cruise 1/84

Date recovered	Date deployed	Station	Position		Sounding m	Instruments	Institute
			Lat N	Long W			
8 Jan 1984	15 May 1983	L2	51°43.0'	14°56.5'	740	2C/m	SMBA
8 Jan 1984	15 May 1983	L3	51°42.8'	15°12.3'	1710	2C/m	MAFF
27 Jan 1984	20 May 1983	N'	57°18.4'	9°53.8'	2005	1C/m pressure gauge	Bidston
27 Jan 1984	13 Nov 1983	HS1	57°25.0'	6°58.8'	157	3c/m + thermistor chain	UCNW

Table 2. Moorings laid during Cruise 1/84

Date	Station	Position		Sounding m	Instruments	Institute
		Lat N	Long W			
7 Jan 1984	YP	50°59.3'	13°00.5'	(2085)*	1C/m pressure gauge	Bidston
	YP	50°59.9'	13°00.9'	(2085)*	1C/m pressure gauge	Bidston
27 Jan 1984	HS1	57°24.4'	6°58.0'	170	3C/m + thermistor chain	UCNW

* nominal station depth

