

# **FRANKLIN**

National Facility  
Oceanographic Research Vessel

**SEARCH FOR SEDIMENTS FROM THE LAST GLACIAL MAXIMUM,  
NORTHWEST SHELF AUSTRALIA**

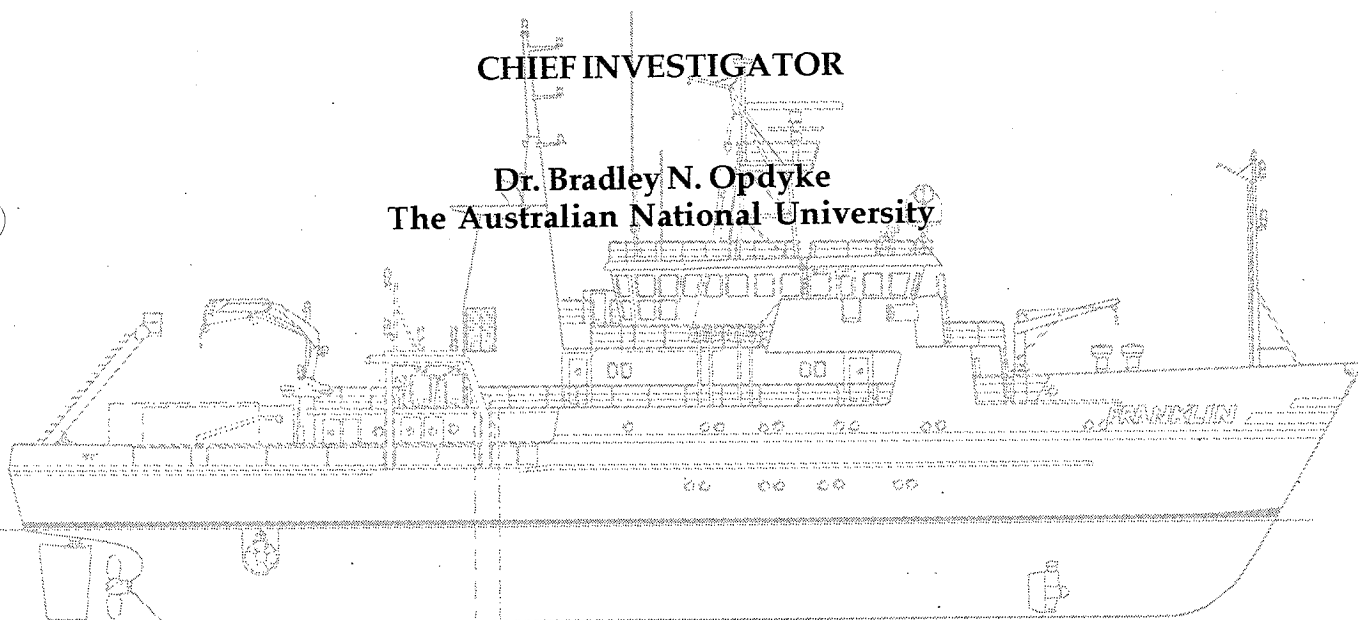
**RV FRANKLIN**

**CRUISE FR 03/96**

Sail: Dampier, WA 1000 hours Thursday, March 7, 1996  
Dock: Dampier, WA 1000 hours Thursday, March 21, 1996

**CHIEF INVESTIGATOR**

**Dr. Bradley N. Opdyke  
The Australian National University**



For further information contact:

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**RV FRANKLIN**  
**RESEARCH PLAN**  
**CRUISE FR 03/96**

**Itinerary:**

Sail: Dampier, WA 1000 hours Thursday, March 7, 1996  
Dock: Dampier, WA 1000 hours Thursday, March 21, 1996

**Project Title:**

Search for sediments from the last glacial maximum, Northwest Shelf  
Australia

**Principal Investigator:**

Dr. Bradley N. Opdyke  
The Australian National University  
Dept. of Geological Sciences  
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**Scientific Objectives:**

- 1) Find glacial age sediments associated with the coral reef on the northwest shelf of Australia.
- 2) Do a gravity coring survey over the Scott Plateau as a preliminary Site Survey for an Ocean Drilling Program proposal.
- 3) Find a record of glacial - interglacial sea level change on the Northwest shelf
- 4) Find a geochemical record of the dissolution of neritic carbonates in deeper water off the northwest shelf.
- 5) Record the nutrient levels in the sea water off the northwest shelf.

**Sampling Methods:**

We hope to collect:

Approximately 70 Gravity cores (GC)  
 Approximately 50 CTD profiles  
 Approximately 70 Plankton Tows (PT)  
 Approximately 12 Vibracores from Ashmore Reef  
 Samples from 2 sites via SCUBA diving  
 Grab samples will be taken where gravity coring is not successful

The area of operation includes the continental shelf from Dampier to north of Ashmore Reef and the Scott Plateau.

### Cruise Track and Time Estimates:

The following Table outlines the intended cruise plan. Variations may be necessary due to new findings or unforeseen difficulties.

DATE	DEPART TIME	SITE	TRANSIT TIME (hrs)	CO-ORDS	DEPTH	SITE ACTIVITY
7-3-96	1000	Dampier				
8-3-96	0900	1	22	18 20 119 00	300	CTD, GC, PT
8-3-96	1100	2	0.25	18 19 118 59	200, 130, 100	3 GRAB/GC
8-3-96	1300	3	1	17 25 118 57	400	GC, CTD, PT
8-3-96	1900	4	4.5	17 00 119 40	400	GC, CTD, PT
8-3-96	2100	5	0.25	17 01 119 40	200, 125, 100	3 GC/GRAB
9-3-96	1800	6	20	14 00 122 00	450	GC, CTD, PT
9-3-96	1900	7	0.25	14 00 122 00	200, 125, 100	3GRAB/GC
10-3-96	0000	8	2	13 55 121 40	1900	GC, CTD, PT
10-3-96	0530	9	2	13 35 121 30	2250	GC, CTD, PT
10-3-96	1630	10	7	13 10 120 11	3000	GC, CTD, PT
10-3-96	2300	11	2	12 50 120 00	3300	GC, CTD, PT
11-3-96	0300	12	2	12 44 119 38	3700	GC, PT
11-3-96	0600	13	0.5	12 44 119 34	4200	GC, PT
11-3-96	1200	14	0.5	12 44 119 30	4600	GC, CTD
12-3-96	0300	15	11	12 13 121 26	3500	GC, CTD, PT
12-3-96	0900	16	2	12 18 121 44	2500	GC, CTD, PT
12-3-96	1400	17	2.5	12 22 122 12	1500	GC, CTD, PT
12-3-96	1830	18	3	12 22 122 47	600	GC, CTD, PT
12-3-96	2300	19	3.5	11 42 122 49	600	GC, CTD, PT
13-3-96	0200	20	2	12 00 123 00	350	GC, CTD, PT
13-3-96	0330	21	1	12 10 123 00	200	GC
13-3-96	0500	22	0.25	12 11 123 00	125	GC, CTD
13-3-96	1600	23	1	ASHMORE LAGOON		VIBRA-CORING
13-3-96	1800	24	1.5	12 11 123 15	100	GC
13-3-96	1900	25	0.25	12 11 123 16	120	GC
13-3-96	2100	26	0.5	12 11 123 20	200	GC, CTD, PT
14-3-96	0000	27	1.5	12 25 123 07	500	GC, CTD, PT
14-3-96	0330	28	2.5	12 29 123 32	300	GC, CTD, PT
14-3-96	0630	29	2	12 30 123 54	125	GC, CTD, PT
14-3-96	0800	30	0.5	12 30 124 00	100	GC, CTD, PT
14-3-96	1100	31	2	12 11 124 00	100	GC, CTD, PT
14-3-96	Fantome Bank 1830	32	3	11 37 123 55	8	DIVE, PHOTO, CORING, CTD
14-3-96	2030	33	1.5	11 32 123 41	30	GC

14-3-96	2230	34	1	11 32	123 30	500	GC, CTD, PT
15-3-96	0100	35	1.25	11 45	123 24	125	GC, CTD, PT
15-3-96	0130	36	0.25	11 45	123 22	100	GC
15-3-96	0230	37	0.5	11 50	123 21	80	GC, CTD, PT
15-3-96	0430	38	1	11 50	123 36	200	GC, CTD, PT
15-3-96	N. Hibernia Rise 0930	39	2	11 53	123 19	15	DIVE, PHOTO, CORING, CTD
15-3-96	W. Ashmore Reef 1830	40	2	12 16	123 10	10	ZODIAC, VIBRA- CORING
16-3-96	0300	41	7	12 43	124 19	120, 110, 100	3GC, CTD, PT
16-3-96	0600	42	1	12 55	124 30	120, 110, 100	3GC, CTD, PT
16-3-96	0730	43	1	12 55	124 42	70	GC
16-3-96	1900	44	10	12 55	122 42	550	GC, CTD, PT
17-3-96	0100	45	4	12 50	122 00	1800	GC, CTD, PT
17-3-96	0730	46	3.5	12 40	121 21	2500	GC, CTD, PT
17-3-96	1600	47	7.5	13 32	122 27	500	GC, CTD, PT
18-3-96	0200	48	8	14 28	123 31	120,110, 100	3GC, CTD, PT
18-3-96	1230	49	9.5	14 20	121 46	600	GC, CTD, PT
18-3-96	1830	50	4	14 50	122 13	120, 110, 100	3GC, CTD, PT
19-3-96	0030	51	5	14 54	121 16	500	GC, CTD, PT
19-3-96	0630	52	4	15 36	121 21	120,110, 100	3GC, CTD, PT
19-3-96	1200	53	4.5	15 35	120 32	600	GC, CTD, PT
19-3-96	2330	54	10.5	17 15	119 40	350	GC, CTD, PT
20-3-96	0330	55	3.5	17 52	119 40	160	GC, CTD, PT
20-3-96	0530	56	1	18 05	119 40	150	GC, CTD, PT
20-3-96	0800	57	2	18 27	119 40	120	GC, CTD, PT
20-3-96	1030	58	2	18 48	119 40	100	GC, CTD, PT
21-3-96	0130	59	14.5	19 11	117 00	150	GC, CTD, PT
21-3-96	1000	Dampier	8.5				

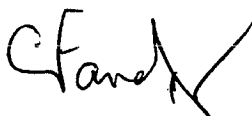
## ORV EQUIPMENT REQUIRED

All standard systems, including deck laboratory, CTD/XBT and water analysis equipment (salinity and temperature), profiling, winch cables on both the stern and starboard winches are requested. The on-board Smith-MacIntyre grab and dive compressor will be required.

## PERSONNEL

Bradley Opdyke	ANU	Chief Scientist
Yusuke Yokoyama	ANU	
Kriton Glenn	ANU	
Michael Wilson	ANU	
Anne Muller	GeisfwoId University, Germany	
Norm Frasier	ANU	
David Vaudrey	CSIRO - ORV	Cruise Manager
Phil Adams	CSIRO - ORV	
Val Latham	CSIRO - ORV	

This cruise plan is in accordance with the directions of the National Facility Steering committee for the oceanographic research vessel *Franklin*.



C B Fandry  
CSIRO Division of Oceanography



G W Paltridge  
National Facility Steering Committee

January 1996

