

# R.V. FRANKLIN

## NATIONAL FACILITY OCEANOGRAPHIC RESEARCH VESSEL

RESEARCH CRUISE PLAN

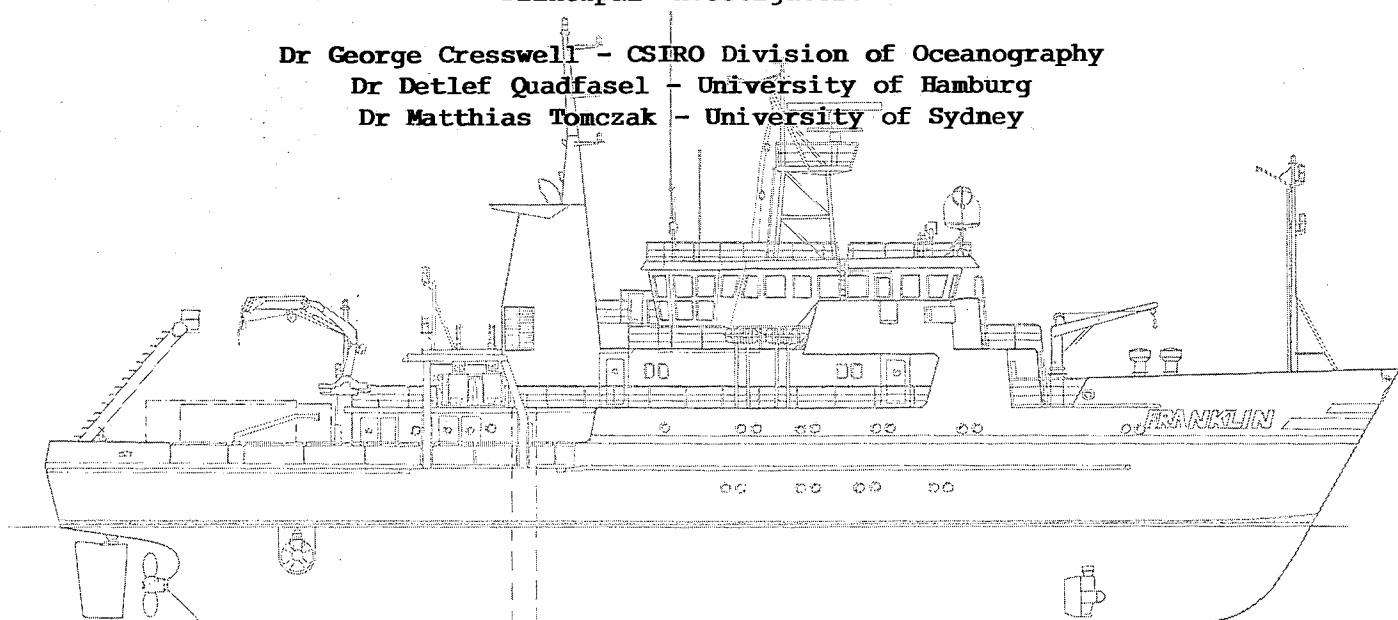
R.V. 'FRANKLIN'

CRUISE FR 3/88

8 March 1988 - 23 March 1988

**Principal Investigators:**

Dr George Cresswell - CSIRO Division of Oceanography  
Dr Detlef Quadfasel - University of Hamburg  
Dr Matthias Tomczak - University of Sydney



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R.V. FRANKLIN IS OWNED AND OPERATED BY CSIRO

RV FRANKLIN  
Research Voyage Plan  
FR 3/88

ITINERARY

Depart Darwin	0800 h Tuesday	8 March 1988
Arrive Cairns	1800 h Wednesday	23 March 1988

SCIENTIFIC PROGRAM

Leeuwin Current Interdisciplinary Experiment (LUCIE) - To examine the throughflow from the Pacific to the Indian Ocean in Australian waters northwest of Ashmore Reef.

The nature and magnitude of the throughflow is important for global mass and heat budgets and has implications for climate change and the biogeographical distribution of marine flora and fauna. It is unfortunate that approval to enter Indonesian waters to completely monitor the throughflow was not granted by Indonesia.

PRINCIPAL INVESTIGATORS

Dr. George Cresswell, CSIRO Division of Oceanography, Hobart.  
Dr. Detlef R. Quadfasel, University of Hamburg.  
Dr. Matthias Tomczak, University of Sydney.

APPROACH

This study will repeat the CTD stations, ADCP measurements, and Pegasus profiling as carried out northwest of Ashmore Reef on FR 9/87. The region was found to be characterised by quite complex currents and water properties. It is also planned to install two continental shelf current meter moorings and one deep mooring with a University of Hamburg ADCP if the logistics of recovery can be solved with the assistance of the RAN.

The time taken for Pegasus stations will also be used to test PROWAS. The Pegasus transponders are already in position at sites A, B, and C.

The science time on the Ashmore line will be approximately 7 days. The relatively long travelling time to Cairns will be used for ADCP and other underway measurements.

#### VOYAGE TRACK

Darwin-Ashmore Reef 474 miles  
@ 11.5kn 1 day 17.2 hours

Ashmore Reef-Cairns 1656 miles  
@11.5 kn 6 days 0 hours

TOTAL steaming Darwin-Ashmore-Cairns  
@11.5 kn 7 days 17.2 hours

#### DRV EQUIPMENT REQUIRED

CTD, ADCP, GPS, Salinometer, Oxygen analysis, Autoanalyser, Scientific sounder, Thermosalinograph, XBT.

#### EQUIPMENT PROVIDED BY THE INVESTIGATORS

Moorings, Pegasus, drifters, PROWAS water sampler.

#### PERSONNEL

George Cresswell	CSIRO Chief Scientist
Jan Peterson	CSIRO
Bob Griffiths	CSIRO
Eric Madsen	CSIRO
Peter Campbell.....	CSIRO
Tony Woods.....	CSIRO
Fred Boland.....	CSIRO
Dan McLaughlin.....	CSIRO
Kevin Miller.....	CSIRO

Detlef R. Quadfasel	Univ. of Hamburg
Klaus Schulze	Univ. of Hamburg

Neil Trenaman	Univ. of Sydney
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This Voyage Plan is in accordance with the directions of the National Facility Steering Committee for the oceanographic vessel RV 'Franklin'.

*A. D. McEwan*

A. D. McEwan  
CSIRO Division of Oceanography

*D. H. Green*

D. H. Green  
National Facility Steering Committee

