

# R.V. FRANKLIN

## NATIONAL FACILITY OCEANOGRAPHIC RESEARCH VESSEL

*RV FRANKLIN*

RESEARCH PLAN

CRUISE FR 8/89

Sail Launceston 0900 Tuesday 4 July 1989

Arrive Hobart 1200 Saturday 15 July 1989

### Principal Investigator

Associate Professor Matthius Tomczak  
Ocean Sciences Institute, The University of Sydney

Investigation of Mixing in the Bass Strait Water Cascade and the associated undercurrent along the eastern Australian continental slope.

### Associate Investigators

Dr Lindsay Pender

CSIRO Division of Oceanography, Hobart

Test of the Bunyip micro-turbulence sensors of the microfish-body

Dr David Close

South Australian Ornithological Association, Adelaide

relation to: surface zones, continental  
and time of year.

Bernadette Baker

CSIRO Division of Oceanography

HOBART

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ED AND OPERATED BY CSIRO

## ***RV FRANKLIN***

### **RESEARCH PLAN**

#### **RESEARCH CRUISE FR 8/89**

**Itinerary**                      Sail Launceston 0900 Tuesday 4 July 1989  
                                        Arrive Hobart 1200 Saturday 15 July 1989

#### **Scientific Programs**

- Investigation of mixing in the Bass Strait Water Cascade and the associated undercurrent along the eastern Australian continental slope.
- Investigation of the spreading of Bass Strait water in the Tasman Sea.
- Test of the micro-turbulence sensors on the *Bunyip* microfish towed body.
- Distribution of pelagic birds in relation to: surface zones, continental shelf, latitude and time of year.

#### **Principal Investigator**

Associate Professor Matthius Tomczak  
Ocean Sciences Institute  
The University of Sydney

#### **Associate Investigators**

Dr Lindsay Pender  
CSIRO Division of Oceanography  
Hobart

Dr David Close  
South Australian Ornithological Association  
Adelaide

### **Research Plans**

The water mass characteristics of Bass Strait Water for July 1989 will be established by performing CTD casts in the eastern part of Bass Strait. The outflow from the Cascade and along the Undercurrent will be surveyed with CTD stations. Areas of intense layering or interleaving identified will be surveyed in detail with Bunyip, the towed CTD sea-soar. CTD sections into the Tasman Sea will be made to verify the presence of Bass Strait Water and assess its pathways. All CTD stations will include oxygen and nutrient analysis.

At a convenient time, the microfish will be deployed with the Bunyip system to test the micro-turbulence sensors and the associated software and hardware.

Watches will be arranged to monitor the distribution of sea birds. During these watches, oceanographic conditions will be recorded for inclusion in later multivariate analysis.

### **Cruise Track**

A possible cruise track is shown in figure 1. The ship will cover a few CTD stations in Bass Strait as shown and then embark on the CTD survey between A and B. Details of the cruise between these two points will depend on the incoming data. After point B, the cruise track is nominal only and will be modified depending on the findings of the first part of the cruise.

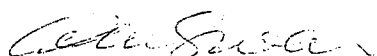
### **ORV Equipment**

- CTD and Rosette
- Acoustic Doppler current Profiler
- Bunyip
- Thermosalinograph
- Meteorological Data
- GPS Navigation
- Microfish Towed Body

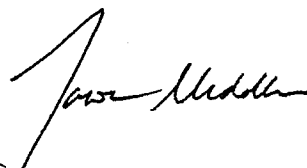
## Personnel

Matt Tomczak	The University of Sydney	Chief Scientist
Randall Lee	"	
Janet Sprintall	"	
Mathew England	"	
Andrew Franklin	"	
David Close	S.A. Ornithological Association	
Bob Edwards	CSIRO - ORV	Cruise Manager
Lindsay Pender	"	
Ian Helmond	"	
Erik Madsen	"	
Dave Terhell	"	

This cruise plan is in accordance with the directions of the National Facility Steering Committee for the Oceanographic Research Vessel Franklin.



A.D. McEwan  
CSIRO Division of Oceanography



for D.H. Green  
National Facility Steering Committee

May 1989

Figure 1

Cruise track  
FR 08/89

