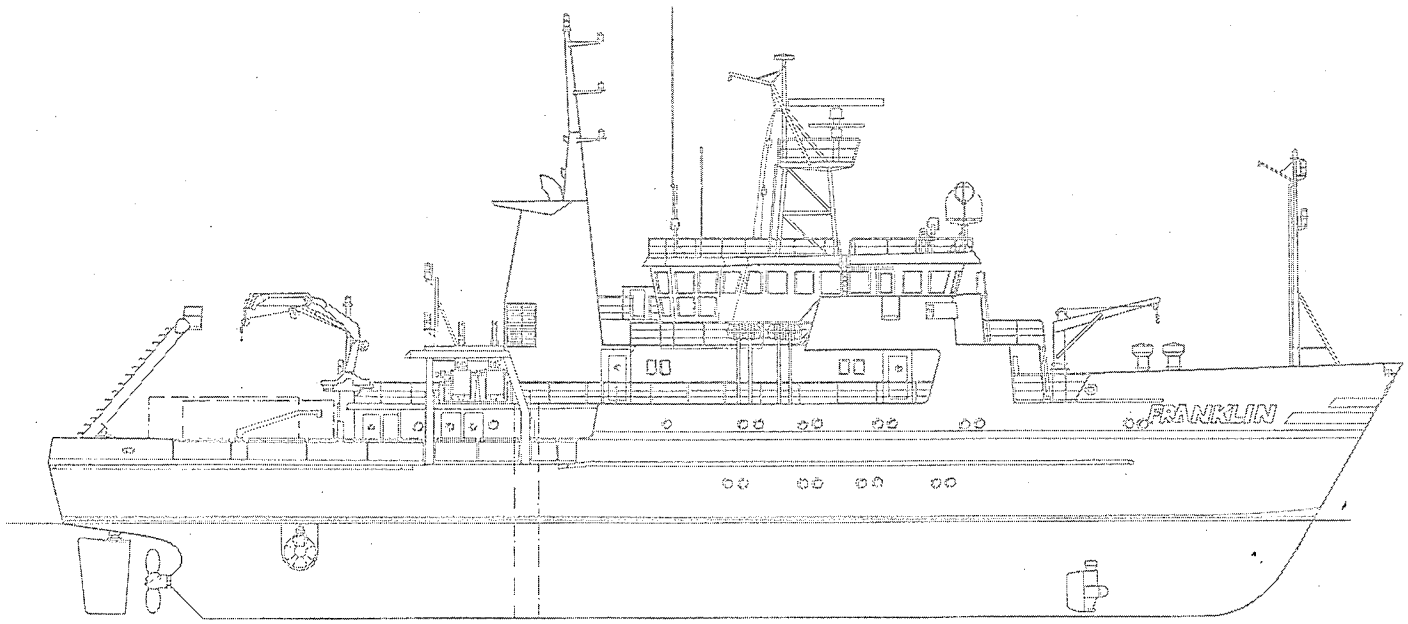
R.V. FRANKLIN

NATIONAL FACILITY
OCEANOGRAPHIC RESEARCH VESSEL

CRUISE PLAN

R.V. 'FRANKLIN'

FR 10/86



For further information contact

ORV Operations Manager
c/- CSIRO Division of Oceanography
GPO Box 1538, Hobart, Tas. 7001
Telephone (002) 20 6222
Telex AA 57182

AUSTRALIA

R.V. FRANKLIN IS OWNED AND OPERATED BY CSIRO

WP/NP

October 1986

CRUISE PLAN
R.V. 'FRANKLIN'
FR 10/86

ITINERARY

Depart Launceston:	0600 hrs	Tuesday	9 December 1986
Arrive Hobart:	1800 hrs	Friday	19 December 1986

SCIENTIFIC PROGRAM

1. Survey of benthic invertebrates from the Continental Slope of Eastern Australia.

2. Pilot study of circulation of the Tasman Sea.

3. Development of programmable profiling water sampler.

4. Geomagnetic deep sounding of the ocean-continent transition zone.

PRINCIPAL INVESTIGATORS

Program 1

Dr P. Hutchings
Dr W. Ponder
Dr F. Rowe
Dr J. Lowry

Division of Invertebrates
Australian Museum
6-8 College Street
SYDNEY NSW 2000
Tel: (02) 339 8111

Program 2

Dr Gary Meyers
CSIRO Division of Oceanography
GPO Box 1538
HOBART TASMANIA 7000
Tel: (002) 206 208 Telex: 57182

Program 3

Dr Matthias Tomczak
Dr Philip S. Lingard

Marine Studies Centre
University of Sydney
SYDNEY NSW 2006
Tel: (02) 692 2003 Telex: 26169

Program 4

Dr Antony White
School of Earth sciences
Flinders University
BEDFORD PARK SA 5045
Tel: (08) 275 2359 Telex: AA89624 FLINDU

CRUISE OBJECTIVES

Program 1. To collect benthic invertebrates from transects across the Continental Slope of Tasmania and southern New South Wales.

Program 2. Recover current meter/thermister moorings deployed on a previous cruise from sites 400 km apart in the Tasman Sea.

Program 3. Test a new water sampler in depths up to 800 m.

Program 4. Recovery of recording magnetometer packages deployed on a previous cruise.

CRUISE TRACK

Proceed from Launceston to the first benthic transect (Program 1) commencing at approximately 40°40', 148°45' to about 40°40', 149°30'. Proceed north to 37°, 150°20'and complete benthic transect from this point to 37°, 150°40'. Then north to 35°42', 150°26' to arrive at 1400 hrs on the 13th to recover time released geomagnetic equipment along a transect to 35°48', 150°55' finishing at about 0230 (Program 4). Recovery of Program 2 equipment follows from 35°54', 151°23', commencing at about 0500 hrs on the 14th. Proceed to 38°15'S to recover equipment (Program 2), arriving at first light on the 15th. Proceed SW to approximately 43°50', 148°20' and complete benthic transect to about 43°40', 147°50' (Program 1). Proceed to Hobart.

Note 1. Program 3 will be slotted in at suitable times.

Note 2. Program 1 transects will utilise any extra time available (on a 24 hour basis).

Note 3. Dr White's (Program 4) recoveries will be on a time release so that arrival on each station at the specified time will be essential.

Note 4. Dr Meyers requires arrival at his locations at first light to aid recovery of his equipment.

Note 5. Loading and unloading is before and after cruise dates.

O.R.V. EQUIPMENT REQUIRED

1. All winches and maximum cable, including crane, A-frame and boom, with tensiometer and wire-out meter on main towing cable. Connectors for dredge/trawl.
2. Scientific sounder
3. 12 kHz pinger (back-up) and facility to receive behind ship while dredging/trawling.
4. Photocopier
5. Shipboard communications
6. Bench space with power outlets
7. Closed circuit T.V.
8. Wet laboratory
9. CTD Profiler
10. Deck hose with water pressure adjustable at nozzle
11. Biological Container laboratory

EQUIPMENT PROVIDED BY USERS

1. Benthic dredges x 2
2. Benthic sledges x 3
3. Beam or other trawl from CSIRO
4. Five gallon plastic drums x 30
5. Miscellaneous small storage items (bags, vials etc.)
6. Bank of sieves $1m^2$
7. Ocean bottom magnetometers and associated test equipment (will require 4m x 2m with tie down points to secure)
8. Stereoscopic microscope with cold light source
9. Sorting trays, plastic trays, petrie dishes
10. Programmable profiling water sampler

ON BOARD ANALYSIS

Program 1. Bottom samples will be taken from 200, 400, 800, 1000, 1500 and 2000 m depths and sieved on deck using the bank of sieves and a deck hose. Material will be picked from the coarser residues and fine fractions kept for microscopic sorting. Some material will be examined alive microscopically.

Program 2 and Program 4. Recovery of equipment.

Program 3. CTD water sample processing (May be done post-cruise in Hobart).

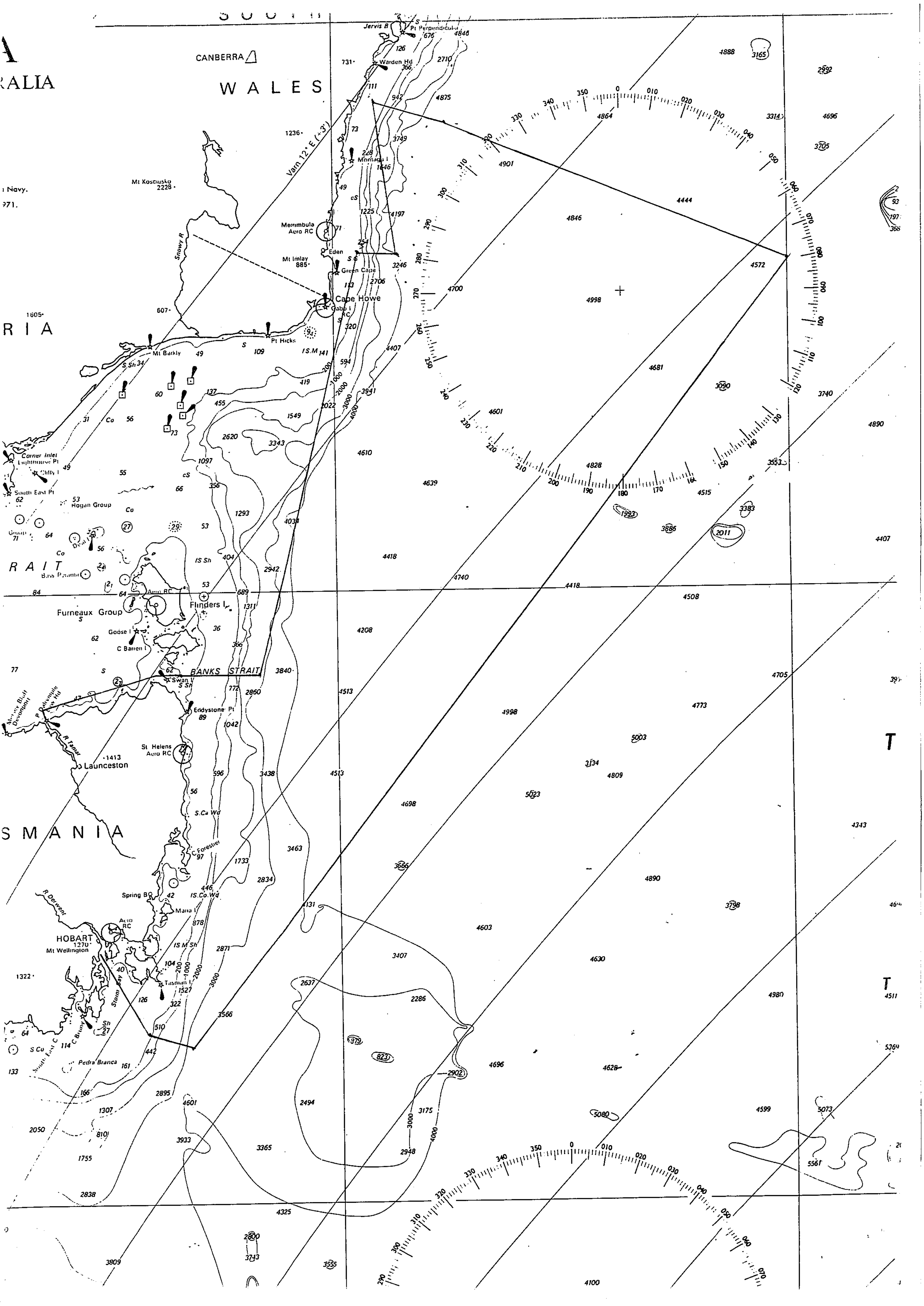
PERSONNEL

W. Ponder - (Chief Scientist) (Australian Museum)
P. Hutchings (Australian Museum)
J. Lowry (or substitute) (Australian Museum)
F. Boland (CSIRO Division of Oceanography)
P. Lingard (University of Sydney)
N. Tremanan (University of Sydney)
A. White (Flinders University)
P. Lilley (Australian National University)
E. Madsen (CSIRO Division of Oceanography)
D. Close (Flinders University - Bird watcher)
N. White - (Cruise Manager) (CSIRO Division of Oceanography)

This Cruise Plan is in accordance with the directions of the National Facility Steering Committee for the oceanographic research vessel RV 'FRANKLIN'.

A.D. McEwan
CSIRO Division of Oceanography

D.H. Green
National Facility Steering Committee



CANBERRA
WALES
Jervis B
Pt Perpendicular
Warden Hd
Montagu I
Mt Kosciusko 2228
Merimbula Aero RC
Eden
Mt Imlay 885
Green Cape
Cape Howe
Gabo I RC
Snowy R
Varn 12° E (+3')
Pt Hicks
Mt Barkly
Corner Inlet Lighthouse Pt
South East Pt
Hogan Group
Bass Pyramid
Furneaux Group
Flinders I
Goose I
C Barren I
BANKS STRAIT
Swan I
Eddystone Pt
St Helens Aero RC
Launceston
R Tamar
S M A N I A
C Forestier
Spring B
Maria I
R Derwent
HOBART
Mt Wellington
Tasman I
Storm Bay
C Bruny
South East C
Pedra Branca