R.V. FRANKLIN

NATIONAL FACILITY
OCEANOGRAPHIC RESEARCH VESSEL

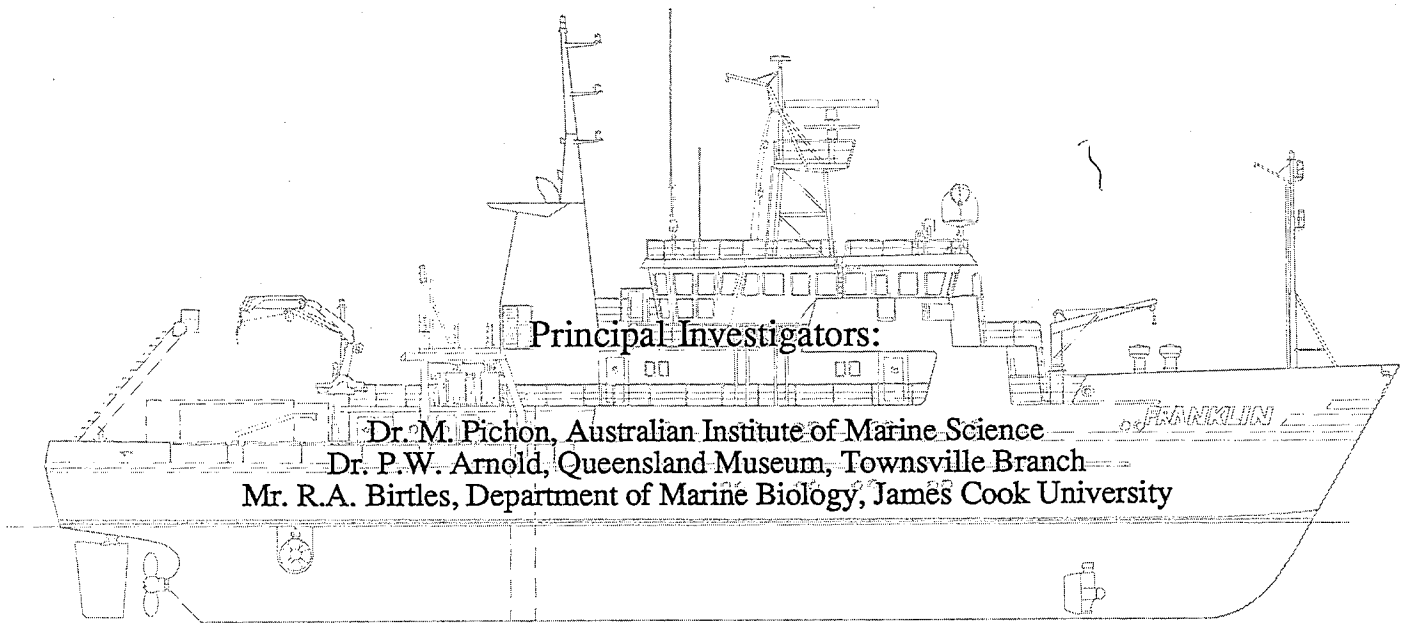
CRUISE PLAN

R.V. 'FRANKLIN'

FR07/88

"CIDARIS II"

Depart Townsville 0800 Saturday, 27 August, 1988
Arrive ~~Hobart~~ Townsville 1600 Monday 12 September, 1988



Principal Investigators:

Dr. M. Pichon, Australian Institute of Marine Science
Dr. P.W. Arnold, Queensland Museum, Townsville Branch
Mr. R.A. Birtles, Department of Marine Biology, James Cook University

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

RESEARCH CRUISE PLAN

R.V. FRANKLIN
FR 7 / 88
"CIDARIS II"

ITINERARY

Depart Townsville 0800 hrs Saturday 27 August 1988
Arrive Townsville 1600 hrs Monday 12 September 1988

SCIENTIFIC PROGRAM

The deep bottom fauna of the Barrier Reef shelf and adjacent Coral Sea (Part 2). This cruise is the follow-up of FR 3/86, and corresponds to leg 2 of the original proposal submitted in 1985 to the National Facility Steering Committee.

PRINCIPAL INVESTIGATORS

Dr M. Pichon (Chief Scientist)	Australian Institute of Marine Science PMB No 3, Townsville M.C. 4810
Dr P.W. Arnold	Queensland Museum, Townsville Branch Great Barrier Reef Wonderland, Townsville 4810
Mr R.A. Birtles	Department of Marine Biology James Cook University, Post Office James Cook University, 4811

CRUISE OBJECTIVES

There exists an enormous gap in our basic knowledge of the fauna, communities and potential living resources of the seabed beyond the continental shelf. The present project is aimed at partially filling such a gap, by a qualitative and quantitative study of the deep sea fauna, and of the bathyal benthic assemblages.

The approach is therefore from several standpoints:

- taxonomic; leading to inventory of the deep sea bottom fauna of the bathyal and upper abyssal environment

- ecological; including a study of depth distribution, and depth range of deep sea benthic organisms (micro, macro and macrofauna), of their relationship with the sediment, their feeding ethologies, their interspecific relationship and the definition and mapping of the main communities/assemblages

- zoogeographical; leading to comparison of the Western Coral Sea Bottom Fauna with results obtained in other deep sea regions.

CRUISE TRACK

The proposed cruise track is given on the chart attached. Reefs will be cleared through the Palm Passage, hence proceeding in a northerly direction to reach Station 1 (Lat. 15°30'S; Long. 148°50'E). Two types of stations will be worked out.

- Simplified Stations during which bean trawl sampling only will be carried out.
- Detailed Stations during which the following equipment will be deployed in turn. Grab (Smith Mc Intyre or Box Corer), Dredge (Charcot or Calypso), sledge or beam trawl (with the exception of the Box Corer this equipment is identical to that successfully utilised during FR 3/86, CIDARIS I).

Cruise track will follow a heading of approximately 330° (true) until Station 5 is reached (Lat. 14°53'S; Long. 145°52'N). After Station 5, cruise track will follow 2 parallel lines oriented approximately WSW-ENE. Position of these lines and of the stations is given on the attached chart.

After Station 25, a number of slope stations will be occupied, between 300 m and 900 m deep. Exact number and position of these slope stations will depend upon bottom topography, as determined by prior echo-sounding transect. If practical, slope stations will be at depths of 900, 600 and 300 m.

Sampling stations have been selected so as to complete the investigations undertaken during "CIDARIS I" in the Queensland trough and also to obtain a reasonable sample of the bottom fauna in the Queensland trench (Coral Sea Basin).

The proximity of Station 22 and 23 to Osprey Reef will provide opportunity to sample in a sedimentary environment composed of reef-derived fine carbonates.

O.R.V. EQUIPMENT

- Towing block and readout (cable out and rate of pay out, tension gauge)
- Scientific echo sounder (Simrad EK 400)
- Satellite Navigator
- Walkie Talkies
- Intercom
- Nav/Met displays
- Biological Container-Laboratory

EQUIPMENT PROVIDED BY USERS

- Box Corer
- Spring loaded Smith McIntyre Grab
- Charcot-naturalist dredges
- Calypso Dredges
- Modified Ockelmann epibenthic sledges
- Beam trawls
- Sorting table
- Sorting tray
- Sorting sieves (for grab samples)
- Sieving table (for dredge/sledge and trawl sample)
- Preservatives, containers, vessels, for specimen preservation
- Sample trays
- Laboratory equipment (for specimen handling)
- Photographic equipment

TIME ESTIMATES

Time estimates are based on the experience gained during FR 3/86 (CIDARIS I). Parametres taken into account are as follows:

- Transit speed: 12 knots
- Average speed from station to station: 10 knots
- Towing winch speed: 0.75 ms^{-1}
- Round the clock operation.

Estimate of overall timing is the following:

. Total transit time:	87 hours
. Detailed stations:	160 hours
. Simplified stations:	85 hours
. Slope stations	60 hours
Total	**392 hours (16.3 days)**

PERSONNEL

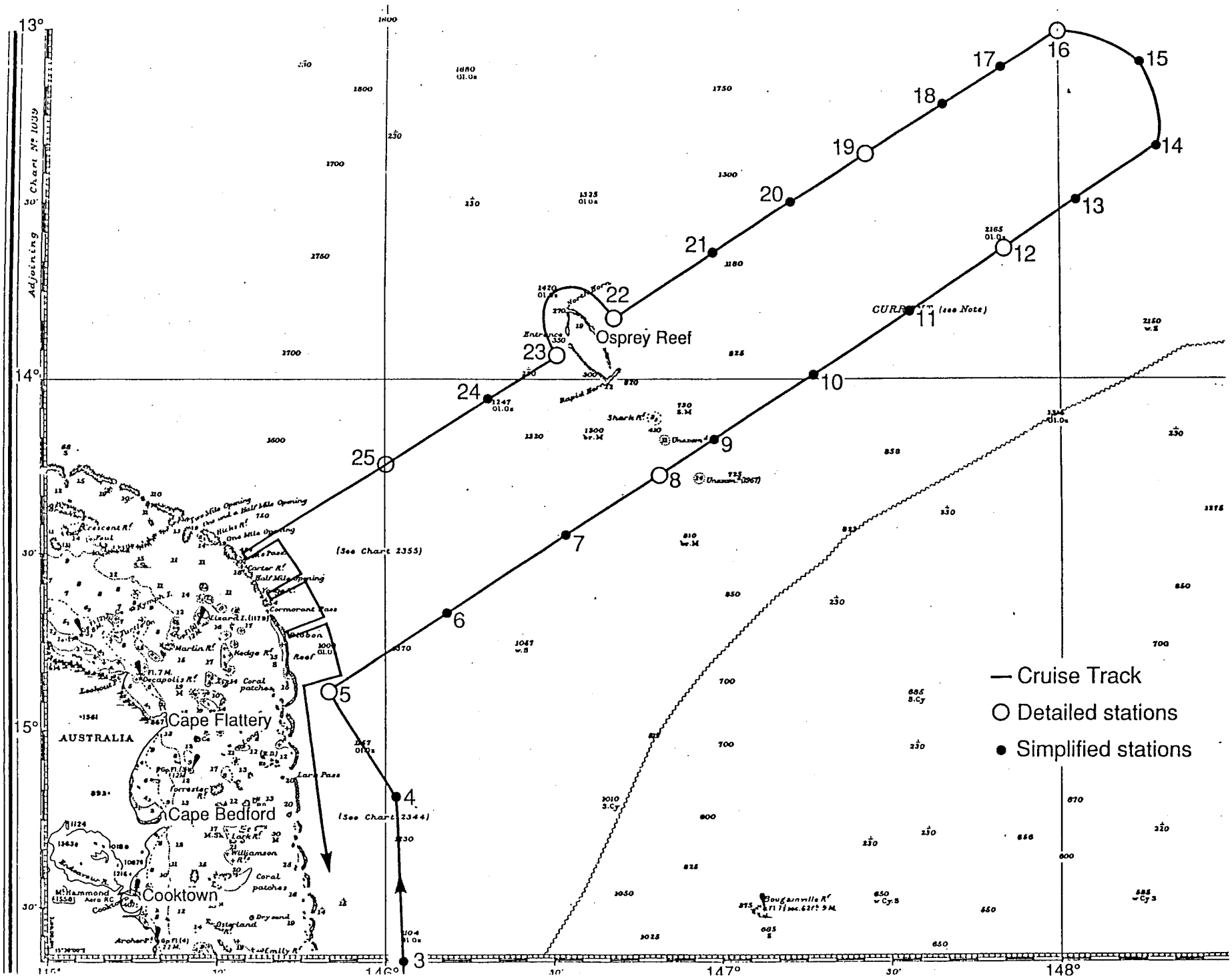
Dr M. Pichon	Australian Institute of Marine Science, (Chief Scientist)
Dr D Alongi	Australian Institute of Marine Science
Mr O. Dalhaus	Australian Institute of Marine Science
Ms C. Fabricius	Australian Institute of Marine Science
Mr T. Mackenna	Australian Institute of Marine Science
Dr P.W. Arnold	Queensland Museum, Townsville Branch
Mr A. Birtles	James Cook University
Dr B. Richer De Forges	Centre ORSTOM, Noumea
Ms L. Marsh	Western Australian Museum

CSIRO Cruise Manager:	Ms Jan Peterson
CSIRO Technician (Electronics)	Mr Phil Adams

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


13°
14°
15°
30'
146°
147°
148°
Adjoining Chart No 1039
Osprey Reef
Cape Flattery
Cape Bedford
Cooktown
AUSTRALIA
(See Chart 2355)
(See Chart 2344)
— Cruise Track
O Detailed stations
● Simplified stations