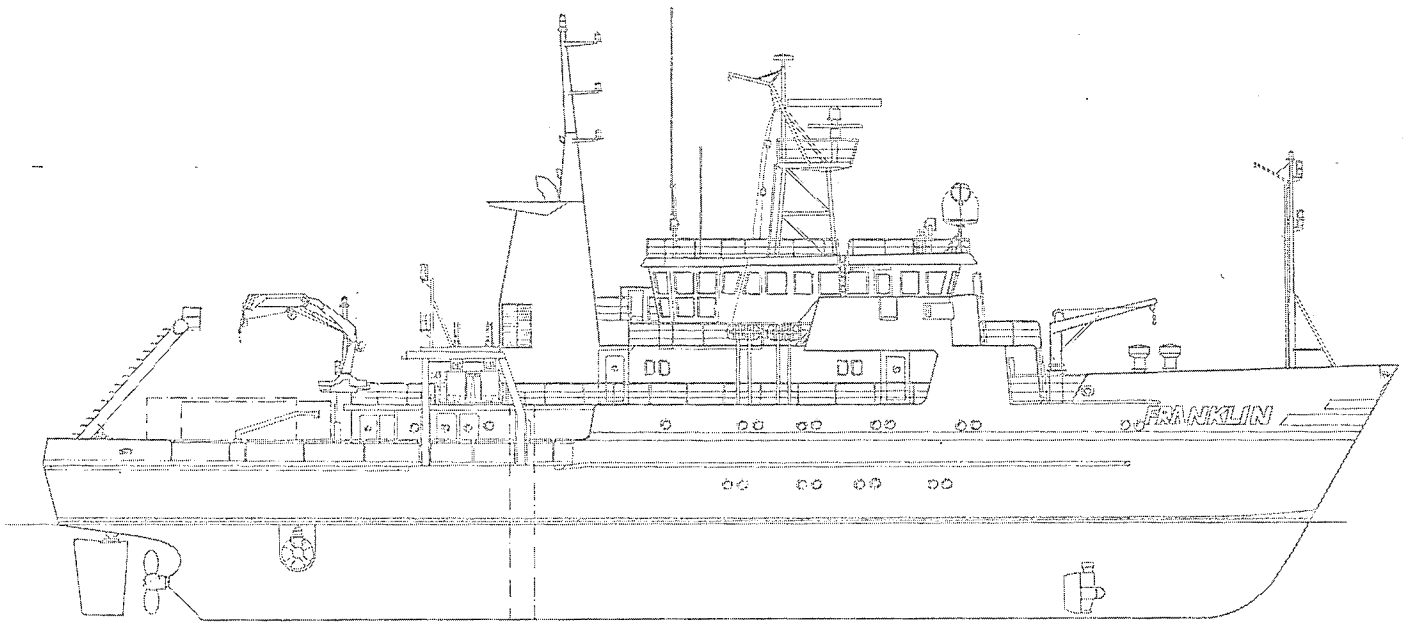
R.V. FRANKLIN

NATIONAL FACILITY
OCEANOGRAPHIC RESEARCH VESSEL

CRUISE PLAN

R.V. 'FRANKLIN'

FR 9/87



For further information contact

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AUSTRALIA

R.V. FRANKLIN IS OWNED AND OPERATED BY CSIRO

GRC/BB

3 August 1987

CRUISE PLAN
R.V. 'FRANKLIN'
FR 9/87

ITINERARY

Depart Fremantle:	1000 hrs	Friday	2 October 1987
Arrive Broome:	0800 hrs	Monday	2 November 1987

SCIENTIFIC PROGRAM

LUCIE: Circulation features of the triangle between NW Australia and the waters of Indonesia

PRINCIPAL INVESTIGATOR

Dr George Cresswell
CSIRO, Division of Oceanography
GPO Box 1538
Hobart, Tas 7001

PREAMBLE

FR 9/87 will work in the Indonesia/NW Australia triangle. This triangle receives the throughflow from Pacific Ocean and is the source region for the South Equatorial and Leeuwin Currents. It contains the spawning area for the Southern Bluefin Tuna, a creature whose life cycle is being studied by the Division of Fisheries Research.

The downstream nature of the Indonesian seas throughflow, which is believed to take place primarily through Lombok Strait and passages east to the Timor Trough, will be examined from NW Cape to Christmas Island and then northward to the edge of Indonesian territorial waters. CTD stations and University of Sydney "Prowas" profiles will give information on water properties, while the acoustic Doppler current profiler will give upper ocean currents. The West German "Pegasus" profiler will give currents down to the bottom at selected sites.

The downstream nature of the throughflow will also be examined on the line from near Christmas Island across to Broome.

After leaving Broome the ship will work both northward and southward examining currents and water properties on the continental shelf and slope. Part of this work will focus on a line between Admiralty Gulf and the southern tip of

Timor (at least, that part of the line that is within Australian waters). CSIRO plans to put four moorings on the continental shelf along this line in March 1988 as part of the Indonesian Seas Throughflow Experiment (INSTEP) being run by Drs Gordon and Schott of the USA. FR 9/87 will survey mooring sites and measure currents and water properties in the region.

CRUISE OBJECTIVES

1. To examine the currents and water properties in the triangle, particularly at:
   * the front that will be crossed between NW Cape and Christmas Island
   * on parts of the shelf and slope of NW Australia

2. To dredge the Sherbakov seamount.

3. To take seabird observations.

CRUISE TRACK

The cruise will go from Fremantle to Christmas Island via NW Cape. Thence to Sherbakov Seamount and on to Broome. After replenishing, the ship will work northward and southward on the continental shelf and slope. It will finally return to Broome.

O.R.V. EQUIPMENT REQUIRED

CTD, ADCP, GPS, Salinometer, O_2-Anal., Auotanalyser, Sci. Sounder, Thermosalinograph, XBT.

PERSONNEL

George Cresswell (Chief Scientist)	CSIRO, Division of Oceanography
Jan Peterson	CSIRO, Division of Oceanography
Tim Osborn	CSIRO, Division of Oceanography
Gary Critchley	ORV Support Staff
Alan Poole	ORV Support Staff
David Terhell (Broome-Broome)	ORV Support Staff
Rudolph Quadfasel	University of Hamburg
Assistant	University of Hamburg
Rick Varne (Christmas Island-Broome)	University of Tasmania
Trevor Falloon (Christmas Island-Broome)	University of Tasmania
Ron Wooller	Murdoch University
Neil Trenaman (Fremantle-Broome)	University of Sydney
Daniel Large (Fremantle-Broome)	University of Sydney

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

for

A.D. McEwan
CSIRO Division of Oceanography

D.H. Green
National Facility Steering Committee