

R.V. FRANKLIN

NATIONAL FACILITY OCEANOGRAPHIC RESEARCH VESSEL

R.V. FRANKLIN

RESEARCH PLAN

CRUISE FR12/89

Sail Launceston 1500 Friday 3 November 1989

Arrive Hobart 1600 Friday 10 November 1989

Principal Investigators

Dr B.R. Phillips
CSIRO Division of Fisheries, Marmion WA

Dr I.J. Barton
Dr B.P. Cecket
CSIRO Division of Atmospheric Research, Aspendale VIC

Mr R. Edwards
ORV Operations Group, CSIRO Division of Oceanography
Hobart TAS

Ecology of Larval Stages- Jasus

BERNADETTE BAKER

For further information contact

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R.V. FRANKLIN IS OWNED AND OPERATED BY CSIRO

CRUISE PLAN
R.V. FRANKLIN
Fr 12/89

ITINERARY

| | | | | |
|--------|------------|----------|--------|------------------|
| Depart | Launceston | 1500 hrs | Friday | 3 November 1989 |
| Arrive | Hobart | 1600 hrs | Friday | 10 November 1989 |

SCIENTIFIC PROGRAM

1. To study the ecology of the late stage phyllosoma larvae and puerulus stage of the Southern Rock Lobster, *Jasus novaehollandiae*.
2. To investigate the nature of the infrared radiation upwelling from the ocean surface.
3. To investigate ships heading derived from GPS navigation data.

PRINCIPAL INVESTIGATORS

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CRUISE OBJECTIVES

- 1a. Collect plankton samples at selected stations using a surface net and with the EZ sampler.
- 1b. Collect associated data on temperature, salinity, through the water column in which the samples are collected (in the upper 400m off the continental shelf). A CTD cast to 500 m to be made at the beginning and end of each transect.
- 1c. Measure water currents from surface to maximum sampling depth in area of sampling.
- 2a. To compare between two radiometers so that their potential in validation of satellite measured radiances can be assessed.
- 2b. To investigate the potential of sampling at two different wavelengths in determining the nature of the oceanic skin layer.
- 2c. To investigate the contribution to the upwelling radiance from reflected sky and cloud radiation.
- 2d. To collect simultaneous satellite data for the comparison of satellite-derived and *in situ* sea surface temperatures.
- 2e. To investigate the effect of surface wind speed and near surface humidity on the surface skin layer.
3. Investigations to measure ships heading using relative positions of two antennae GPS Navigation.

CRUISE TRACK.

The cruise track can be adjusted to allow for bad weather but it is intended that the ship will operate from an area near Bicheno, off eastern Tasmania.

On the first day the ship will steam from Launceston to the work area off Bicheno, arriving midday of the 4 November. Trials will be carried out and sampling will begin at 1900 that evening.

On the of 4-8 November, the vessel will make a transect, on shore to offshore, along $41^{\circ} 50'S$ or south down $148^{\circ} 25'E$. During the day the vessel will return along the same transect conducting further sampling and return to the Bicheno area by 1900 each night.

On the night of 9 November the vessel will travel southward along 148° 25'E on it way back to Hobart. Sampling will cease at 0400 and following a CTD cast, the course will be set for Hobart.

It will be necessary to drop off and/or pick up a staff member at either Bicheno or Maria Island during the cruise.

On arrival in Hobart, the the ship will be unloaded, in preparation for immediate loading for the next cruise which sails during the morning of 11 November.

ORV EQUIPMENT REQUIRED

Navigation

EZ Net (Real Time Mode)

CTD

12 Bottle Rosette

Conductor Cable towing winch.

Biological Container

Thermosalinograph

Instrumental towing block (with tension)

ADCP

De-mountable boom on starboard bow

EQUIPMENT SUPPLIED BY USERS

Surface nets and frames

Towing wires for surface net

Sample bottles

Preservative

Towed Thermistor, radiometers and data acquisition system

Radiosonde release facility and conditioning cabinet (possibly)

GPS Receivers

PERSONNEL

CSIRO Division of Fisheries Research

B. Phillips - Chief Scientist **

S. Braine

D. Wright

S. Kelly

CSIRO Division of Atmospheric Research

Ian Barton
Bob Cechet

Tasmanian Department of Sea Fisheries

R. Kennedy

University of New South Wales (Surveying)

Wan Fu

CSIRO - ORV

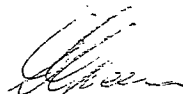
F.B. Griffiths **
D. Edwards - Cruise Manager
K. Suber
B. Barker

** The Chief Scientist may be delayed joining the cruise and F.B. Griffiths will deputise for him until his arrival.

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