

Dr John Wallace
Officer-in-Charge
Division of Fisheries
Hobart

DIVISION OF FISHERIES

1994 RESEARCH VESSEL PROGRAM

CRUISE PLAN

**FRV SOUTHERN SURVEYOR
CRUISE SS02/94**

17-25 FEBRUARY 1994

CSIRO DIVISION OF FISHERIES
MARINE LABORATORIES
GPO BOX 1538
HOBART TAS 7001
AUSTRALIA

TELEPHONE (002) 325 222
TELEX AA 57-812
FAX (002) 325 000

OBJECTIVES ARE TO:

1. Describe the physical oceanography of coastal and offshore waters between Tasmania and southern NSW to provide a summer comparison to autumn and winter data previously collected on SSO2/92 and SSO4/93.
2. Describe the summer distribution of ichthyoplankton with respect to major water masses and frontal zones in offshore waters of the south Tasman Sea.
3. Investigate the biomass of zooplankton and micro nekton within the area.
4. Investigate the broad scale cross-shelf distribution of ichthyoplankton in southern NSW and eastern Victorian waters.
5. Describe the summer cross-shelf fish and invertebrate assemblages in the vicinity of Eden for comparison with information collected during winter 1993 (SSO5/93).
6. Collect stomach contents and muscle and liver samples from fish of all available trophic levels for trophodynamic analyses for comparison with similar collections made on SSO5/93.
7. Collect benthic sediment samples for analysis of phytoplankton pigments and breakdown products.
8. Continue benthic mapping of habitat types in the SEF using acoustic methods.

SECONDARY OBJECTIVES

1. Collect specimens of oreosomatids (oreos) from 400-1000m off southern NSW for genetic and taxonomic analysis.
2. Collect jack mackerel (*Trachurus declivis*) and specimens of other *Trachurus* species for genetic analysis.
3. Collect specimens of other SEF species for taxonomic analysis.
4. Opportunistically rear commercial and non commercial fish species to confirm identifications of field collected eggs and larvae.

Stomach samples, muscle samples for stable isotope analysis and otoliths will be taken from selected species.

Benthic samples will be retained for subsequent identification. Sediment samples will be retained for subsequent analysis.

Time Allocated is three days.

Benthic mapping of habitat types using the Roxanne system will continue throughout this section of the cruise. Underway measurements of both nutrients and fluorescence will be conducted during the first two sections of the cruise.

If time permits a demersal trawl in 400-1000m will be undertaken off southern NSW to obtain oreosomatids (oreos) for genetic and taxonomic analysis.

PERSONNEL

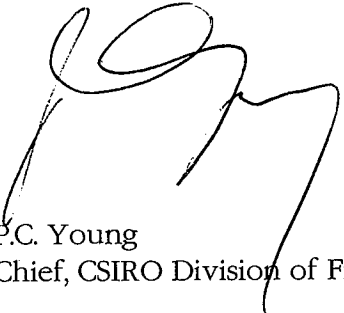
Mr Barry Bruce	Cruise Leader
Ms Caroline Sutton	
Mr David Mills	
Mr Mark Lewis	
Mr Gary Critchley	
Mr Ron Plaschke	
Mr Jeff Cordell	
Mr Rodney Stephenson	
Mr Jock Young	(17-22 February)
Mr Tim Lamb	(17-22 February)
Mr Russell Bradford	(17-22 February)
Ms Sue Spinks	(17-22 February)
Dr Peter Last	(22-25 February)
Dr Sebastian Rainer	(22-25 February)
Ms Stephanie Davenport	(22-25 February)
Mr Ross Daley	(22-25 February)

CONTACTS

For further information about this cruise contact:

Mr Barry Bruce
CSIRO Division of Fisheries
GPO Box 1538
Hobart Tasmania 7001
Phone (002) 325 413
Fax (61) (002) 325 000

Mr Clive Liron
Vessels Operations Manager
CSIRO Division of Fisheries
GPO Box 1538
Hobart Tasmania 7001
Phone (002) 325 413
Fax (61) (002) 325 000

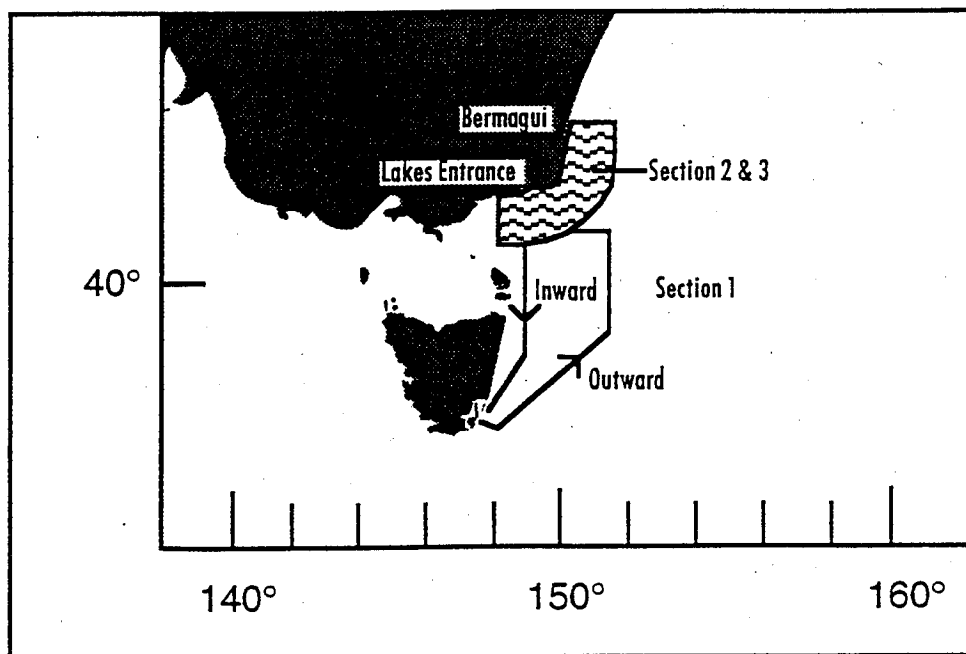


P.C. Young
Chief, CSIRO Division of Fisheries

APPENDIX 1: CRUISE TIME ESTIMATES

Activity	Time (hours)
1. Frontal zone sampling	
Depth stratified sampling (IYGPT)	12
CTD and surface tows	22
Steaming	40
2. Broad scale larval fish sampling	
Bongo sampling	20
CTD	20
Steaming	30
3. SEF Ecosystem	
Demersal trawls (2 transects)	18
CTD	6
Steaming (assuming return to Hobart)	48
Total	216 h (9 days)

FIGURE 1



DIVISION OF FISHERIES

1994 RESEARCH VESSEL PROGRAM

CRUISE PLAN

**FRV *SOUTHERN SURVEYOR*
CRUISE SS02/94 • LEG 2**

26 - 27 FEBRUARY 1994

**CSIRO DIVISION OF FISHERIES
MARINE LABORATORIES
GPO BOX 1538
HOBART TAS 7001
AUSTRALIA**

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ITINERARY

DEPARTURE: HOBART 1700 ON SATURDAY, FEBRUARY 26, 1994

RETURN: TBA (PM) ON SUNDAY, FEBRUARY 27, 1994

AREA OF OPERATION

Near Pedra Branca south of Tasmania (44o 12S, 146o 06E)

RESEARCH BACKGROUND

As part of the Trophodynamics project, a current meter and sediment trap mooring was placed at about 44o12S, 147o06E on 10 April 1993. The mooring was to have been recovered on 16 February 1994 during SS 1/94. The mooring was not recovered, and another attempt will be made to recover it on this leg.

CRUISE PLAN

Southern Surveyor will steam from Hobart as soon as she has been unloaded from Leg 1 to the mooring site. During the night, the vessel will attempt to precisely locate the mooring, and conduct extensive surveys of the bottom using echo sounders. Surface current direction and speed will be established from the ships drift. At first light, an attempt will be made to release the mooring using the acoustic release system. If this is again unsuccessful, we will try and hook the mooring by trawling, using wire strops between the boards. If the mooring is not recovered by dark, the recovery will be abandoned.

OBJECTIVES ARE TO:

1. Recover the current meter/sediment trap mooring laid on 10 April 1993.

PERSONNEL

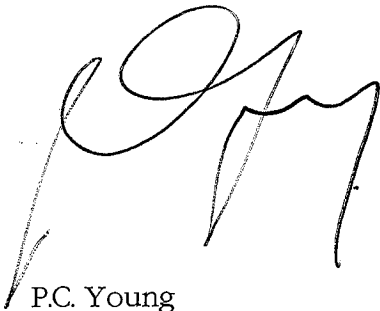
Mr Brian Griffiths Cruise Leader
Mr Matt Sherlock
Mr. Rudy Kloser

CONTACTS

For further information about this cruise contact:

Mr. Brian Griffiths
CSIRO Division of Fisheries
GPO Box 1538
Hobart Tasmania 7001
Phone (002) 325 338
Fax (61) (002) 325 000

Mr Clive Liron
Vessels Operations Manager
CSIRO Division of Fisheries
GPO Box 1538
Hobart Tasmania 7001
Phone (002) 325 413
Fax (61) (002) 325 000



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Chief, CSIRO Division of Fisheries

APPENDIX 1: CRUISE TIME ESTIMATES

Activity	Time (hours)
Steaming to mooring site	7
Survey and location	6
Recovery (maximum)	13
Steaming to Hobart	7
Total	33 hours