

Voyage Plan

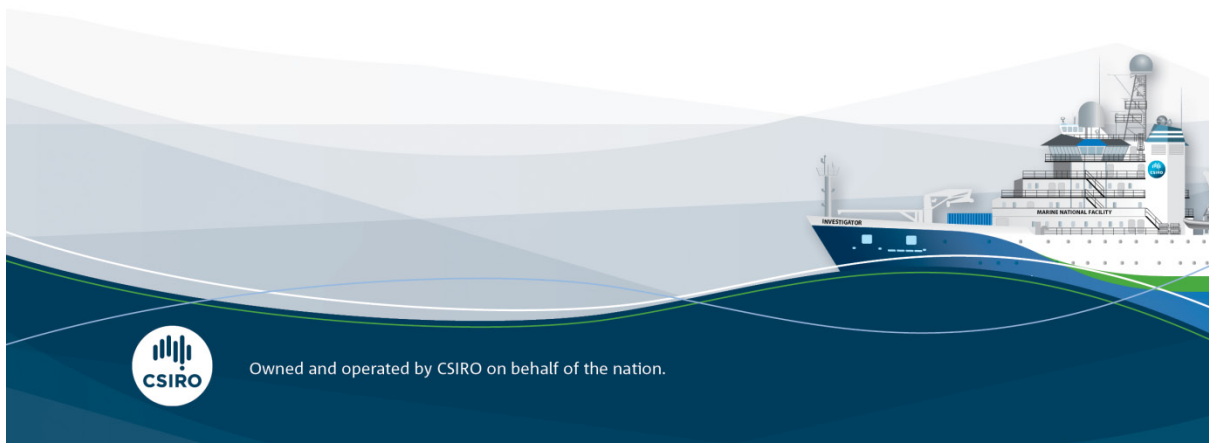
RV Investigator

Trial Voyage IN2014_E03

Hobart to Hobart
10 to 17 November 2014

Biological oceanography – testing equipment and
developing procedures

Version 4, 10 Nov 2014



Voyage Manager

Tegan Sime
Marine National Facility

Itinerary

Mobilise Hobart 0800, Monday 10 November, 2014

Depart Hobart 0800, Tuesday 11 November, 2014

Arrive Hobart 1300, Monday 17 November, 2014 and demobilise

Voyage Objectives

- Introduce key stakeholders and science teams to *Investigator*, MNF and ASP operations
- Safely undertake as many operations and processes using as much of *Investigator's* equipment, facilities and capabilities as is possible to train and familiarise MNF staff and visiting science teams
- Develop and implement procedures and JHAs for scientific operations:
 - CPR deployments
 - Triaxus deployments
 - CTD followed by N70 vertical haul
 - EZ net
 - Neuston net, and then simultaneously with EZ net
 - Bongo net to 200 m
 - Rectangular mid water trawl – as a backup for EZ net, and as a large neuston net.
- Identify any problems, issues and conflicts and include these in a voyage report
- Collect and process data and samples as for a research voyage to test laboratories, facilities and on board systems:
 - Regular downloads from OceanCurrent for dynamical oceanography (frontal eddies)
 - Procedures for fixation with formaldehyde and preservation in alcohol;
 - Chlorophyll extraction to calibrate fluorometers
- Undertake opportunistic testing and checks as per outstanding SFR list.
- Opportunistically collect physical and biological oceanography off the shelf break and explore frontal eddies by gaining meaningful data around Maria Island NRS, and across the 200 m isobath and “nose” of the East Australian Current

MNF Equipment

CTD, 24 bottle rosette and bottles with ecotriplet, transmissometer, PAR, fluorometers.

Triaxus and LOPC

Bongo net

EZ net

User Supplied Equipment

Continuous Plankton Recorder – CPR (Frank Coman, Clair Davies, IMOS)

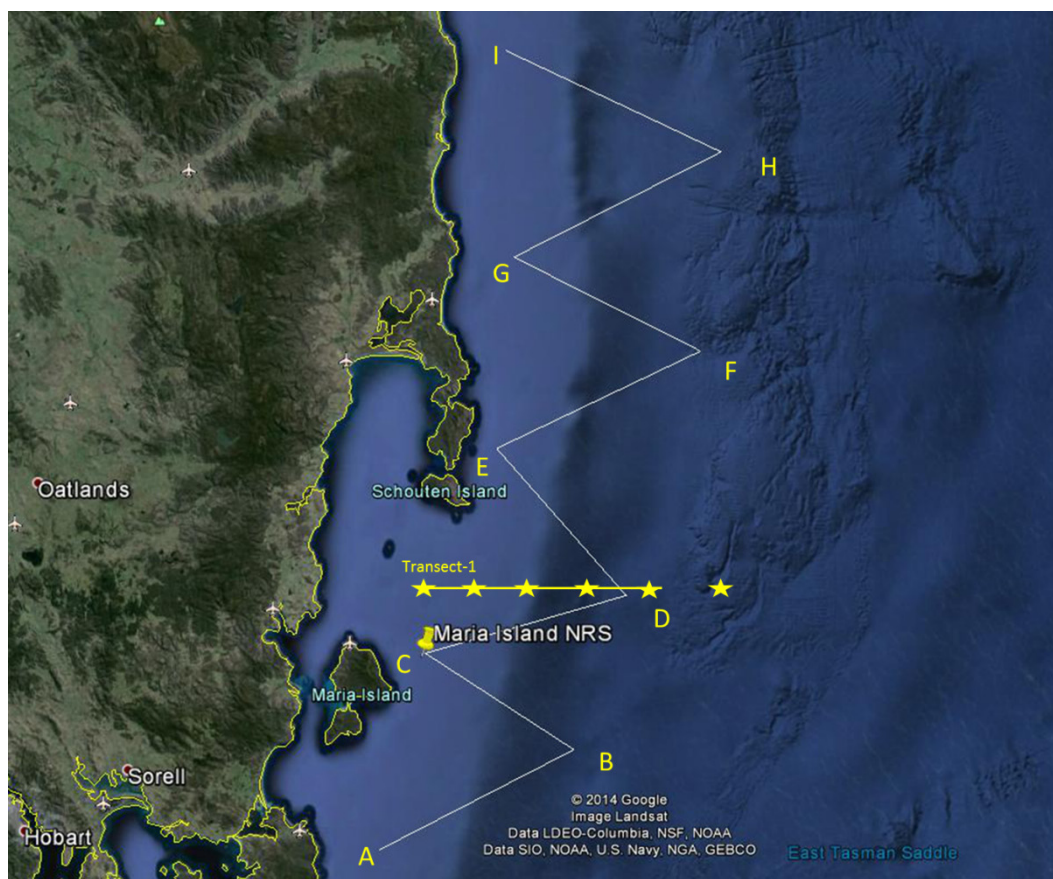
N70 vertical haul net (Suthers)

75 cm square neuston net (Suthers)

Rectangular Midwater Trawl – RMT (Suthers)

Piccaro 13C underway sensor – (Peter Davies, NSW-OEH)

Voyage Track



Waypoints and stations

<u>Station</u>	<u>Lat</u>	<u>Long</u>
A	-42.9183	148.1349
B	-42.7519	148.5776
C	-42.5906	148.2424
D	-42.495	148.696
E	-42.25	148.405
F	-42.0881	148.8626
G	-41.9316	148.4451
H	-41.756	148.9076
I	-41.5862	148.4267

Time Estimates

<u>Date</u>	<u>Nov. 2014</u>	<u>Time (local)</u>	<u>ACTIVITY</u>	<u>COMMENTS</u>	<u>Approx. CTD#</u>
Monday	10	10:00	Loading		
			Induction; QC-QA training for CTD		
			Loading, testing Triaxus and EZ net		
			Planning deployment methods		
		1500	Induction		
Tuesday	11	8:00	Depart Hobart for vicinity of Maria Island NRS	42° 35.80S, 148 14.00 E, (42.596667S 148.233333 E)	
		9:00	Muster drill		
		9:30-10:30	Voyage Managers and Chief Scientists Briefing – Brown Lounge (lounge 3, level 01)		
			Prepare Conductivity-Temperature-Depth rosette (CTD) and carry out drills		
		12:00	Trial CTD casts +N70 vertical haul	CTD to <500 m, 4/5 depths	1,2
			Then steam north to 42.5 S, 148.233		
			Prepare for 4 or 5 station CTD transect#1		
		14:00	Commence CTD transect#1 along latitude 42.5 S, at 148.233		3 to 8
			5 stations every 5 nautical miles ~ 7 minutes of longitude		

			Bottles at 4-5 depths to be determined		
			Prepare Continuous Plankton Recorder (CPR)		
		20:00	Deploy CPR all night , continue additional 20 nm zig-zag transects to North	10-12 knots	
			Ops room plots SST for any frontal features	Check OceanCurrent	
			Prepare for tomorrow's Triaxus tow		
Wednesday	12	8:45	Retrieve CPR around Station I		
		9:00	Deploy CTD for microbes		9
		10:00	Deploy Triaxus-1 across (E-W) any frontal feature (determined during the previous night)	8 knots, search for frontal eddies features ~5 hours	
		15:00	Retrieve Triaxus-1, steam to CTD transect		
		16:00	Commence CTD Transect#2+N70 8 or 9 station cross-shelf	Stations every 5 nm, aligned with Triaxus	10 to 16
			Continue CTD Transect #2 until 8 am	2 hours each incl steam, =~16 h	
			Steam to new oceanographic feature		
Thursday	13				
		9:00	Deploy Triaxus-2 across any other frontal feature		
			Retrieve Triaxus-2, prepare for EZ	~ 5 hours	
		14:00	Deploy small Neuston net practice + bongo?	Formalin procedures	

		16:00	Deploy EZ-1 net in frontal feature + Neuston (day)	At 3 knots, 3 nets: Thermocline, 40m, 10 m	
		18:00	CTD in frontal feature (day, at EZ-1)		17
		19:00	Steam to shelf		
		21:00	EZ-2 + Neuston on shelf (night)	At 3 knots, 3 nets: Thermocline, 40m, 10 m	
		23:00	CTD on shelf (night, at EZ-2)		18
		0:00	Steam back to frontal feature		
		2:00	EZ-3+ Neuston in frontal feature (night)	At 3 knots, 3 nets: Thermocline, 40m, 10 m	
		4:00	CTD in frontal feature (night, at EZ-3)		19
		5:00	Night neustons for phyllosoma + salps?	practice 75 cm square neuston techniques	
			Steam back to shelf		
Friday	14	8:00	EZ-4 + Neuston on shelf (day)	At 3 knots, 3 nets: Thermocline, 40m, 10 m	
		11:00	CTD on shelf (day, at EZ-4)		20
		12:00	Practice deploying RMT as mega-neuston net		
			Steam to new EZ net site		
		14:00	EZ-5 + Neuston on shelf (day)	Site to complement EZ-1 to 4	
		16:00	CTD at EZ-5		21
			Prepare RMT net as a mega-neuston net from side		
		17:00	Steam to new EZ net site		
		20:00	EZ-6 + neuston on shelf (night)	Site to complement EZ-1 to 4	
		22:00	CTD at EZ-6		22
			Completion of EZ net work, prepare Triaxus		
		0:00	deploy RMT-neuston net + steaming betw stns	For salps and phyllosomas	
		3:00	Cease RMT tows		

Saturday	15		Steam to Triaxus-3		
		9:00	Deploy Triaxus-3 across evolving frontal features	~ 5 hours	
		14:00	Commence CTD Transect #2 - +N70	Parallel to Triaxus-3 transect	22 to 28
				~10 hours	
			Complete CTD Transect #2		
		22:00	deploy RMT-neuston net + steaming betw stns	For salps and phyllosomas	
		2:00	Cease RMT tows, prepare CPR		
		2:00	Deploy CPR		
			Ops room plots SST for any frontal features	Check OceanCurrent	
Sunday	16		Prepare for tomorrow's Triaxus tow		
		10:00	Deploy Triaxus-4	~ 5 hours	
			Investigate further frontal eddies, N-S and E-W		
		15:00	Deploy a CTD for microbes, prepare CPR		29
		16:00	Deploy CPR		
			Ops room plots SST for any frontal features	Check OceanCurrent	
Monday	17				
			Retrieve CPR		
		13:00	Arrive Hobart		

Please note that a daily briefing will be held in lounge 3 (brown lounge). The time for each briefing will be posted on the morning of each day on the whiteboard in the data processing lab in the Operations area on the main deck.

Personnel List

A shift 2 pm – 2 am

B shift 2 am – 2 pm

Name (cabin #)	Role on vessel	Organisation	Mobile
Iain Suthers	Chief Scientist - A	SIMS-UNSW	0414 385 351
Jock Young	Alt chief scientist - B	CMAR	0429 568 152
Natasha Henschke (completed PhD)	B	UNSW	0412 934 014
Derrick Cruz (completing PhD)	A	UNSW	0405 334 386
Hayden Schilling (commencing PhD)	B	UNSW	034 535 098
Adam Schultz (PhD student)	B	University of Adelaide	
Martin Ostrowski	A	Macqu U	0435 749 177
Deepa Varkey (completing PhD student)	B	Macqu U	
Linda Armbrecht (completed PhD)	A	Macqu U	
Peter Davies	B	NSW-OEH	
Mark Brown	B	UNSW	
Frank Coman	A	CSIRO-Brisbane	0429 358 195
Clare Davies	B	CSIRO-Brisbane	
Brendan Kelaher	A	SCU	0437 163 277
Euan Provost (Honours)	B	SCU	
Jake Wallis (MSc student)	A	U.Tas	
Louise Watson (3 rd year student)	A	U.Tas	
Eldene O'Shea (Student + STCW95 certificate)	B	U.Tas	
Tegan Sime	Voyage Manager	CSIRO MNF	0477 397 545
Don McKenzie	Deputy Voyage Manager	CSIRO MNF	
Mark Rayner	Hydrochem	CSIRO MNF	
Cassie Schwanger	Hydrochem	CSIRO MNF	
Carol Anstey	Hydrochem	CSIRO MNF	
Christine Rees	Hydrochem	CSIRO MNF	
Peter Hughes	Hydrochem	CSIRO MNF	
Pamela Brodie	DAP Support	CSIRO MNF	
Hugh Barker	DAP Support	CSIRO MNF	
Stewart Wilde	DAP Support	CSIRO MNF	
Brett Muir	SIT Support	CSIRO MNF	
Ian McRobert	SIT Support	CSIRO MNF	
Will Ponsonby	SIT Support	CSIRO MNF	
Mark Lewis	SIT Support	CSIRO MNF	
Bernadette Heaney	GSM Support	CSIRO MNF	
Amy Nau	GSM Support	CSIRO MNF	
Terje Aanderbakk		Rapp Hydema	

Please note: The MNF support staff numbers in this table are a guide and will vary depending on the activities being undertaken on the trial voyage. It may include Hydrochemists in addition to the other groups.

The MNF would like to take this early opportunity to thank the equipment champions and associated scientific personnel for their cooperation and assistance in establishing *Investigator* as world class multi-purpose research vessel for the Australian marine community and their international collaborators.

Tegan Sime

Voyage Manager

[IN2014_E03] CABIN ALLOCATION

	Name	Position/Role	Watch	Organisation	Cabin Type	No.
1	Tegan Sime	Voyage Manager	Float	CSIRO	Voyage Manager	301
2	Iain Suthers	Chief Scientist	A	UNSW	Chief Scientist	302
3	Jock Young	Lead Principal Investigator	B	CSIRO	Single Scientist 1	303
4	Martin Ostrowski	Lead Principal Investigator	A	MaqU	Single Scientist 2	304
5	Brett Muir	SIT	Float	CSIRO	Single Scientist 3	305
6	Don McKenzie	Deputy Voyage Mgr	Float	CSIRO	Double Scientist 1	306A
						306B
7	Cassie Schwanger	Hydrochem	A	CSIRO	Double Scientist 2	307A
8	Christine Rees	Hydrochem	B	CSIRO		307B
9	Mark Rayner	Hydrochem	Float	CSIRO	Double Scientist 3	308A
						308B
10	Bernadette Heaney	GSM	A	CSIRO	Double Scientist 4	309A
11	Amy Nau	GSM	B	CSIRO		309B
12	Will Ponsonby	SIT	A	CSIRO	Double Scientist 5	310A
13	Ian McRobert	SIT	B	CSIRO		310B
14	Hugh Barker	DAP	A	CSIRO	Double Scientist 6	311A
15	Stewart Wilde	DAP	B	CSIRO		311B
16	Terje Aanderbakk		Float	RAPP	Double Scientist 7	312A
						312B
17	Mark Lewis	SIT	Float	CSIRO	Single Scientist 1	111
18	Frank Coman		A	CSIRO	Double Scientist 1	112A
19	Peter Hughes	Hydrochem	B	CSIRO		112B
20	Peter Davies		B	NSW-OEH	Double Scientist 2	113A
						113B
21	Natasha Henschke		B	UNSW	Double Scientist 1	101A
22	Claire Davies		B	CSIRO		101B
23	Linda Armbrecht		A	MaqU	Double Scientist 2	102A
24	Deepa Varkey		B	MaqU		102B
25	Brendan Kelaher		A	SCU	Double Scientist 3	103A
26	Euan Provost		B	SCU		103B

27	Louise Watson		A	UTAS	Double Scientist 4	104A
28	Eldene O'Shea		B	UTAS		104B
29	Jake Wallis		A	UTAS	Double Scientist 5	105A
30	Hayden Schilling		B	UNSW		105B
31	Derrick Cruz		A	UNSW	Double Scientist 6	106A
32	Adam Schultz		B	Uni of Adelaide		106B
33	Carol Anstey	Hydrochem	A	CSIRO	Double Scientist 7	107A
34	Pamela Brodie	DAP	B	CSIRO		107B
35	Mark Brown		B	UNSW	Double Scientist 8	108A
						108B