

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2015-22

DATE:

From: 4 Mar 2015

to:

VESSEL:

Charter - Salacia

PROJECT(S):

SOG Zooplankton

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
North Saanich, BC, Canada

WaterProperties.ca

Captain: John Plant First Officer: Piper Harris
Second Officer: _____ Third Officer: _____
Fishing Master: _____

Mission Participants / Agencies: PSF DFO

Scientific Personnel: Chief Scientist: Moira Galbraith/Kelly Young

Name	Watch	Cabin	Name	Watch	Cabin
TRIP1: <u>Kelly Young</u>	<u>4-6 Mar</u>	_____	_____	_____	_____
TRIP2: <u>Kelly, Piper, John + Wislyson Thomas</u>	<u>16-19 March 2015</u>	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Second leg of Mission:

Name	Chief Scientist:	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Data logging computer: _____

Data acquisition program: _____
CTD deck unit make: SEA model: _____ serial number: _____

Primary CTD

Make: SB model: 25 serial number: 2553726-0456

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____

Model: _____ s/n: _____

Fluorometer: Model Wet Labs FLETD Cable gain: _____ s/n: 2214 P S or NO pump?

Oxygen sensor: SB 43 Model: _____ s/n: 431592 P S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____

Other sensors: _____ s/n: _____ P S or NO pump?

Other sensors: _____ s/n: _____ P S or NO pump?

Other sensors: _____ s/n: _____ P S or NO pump?

Other sensors: _____ s/n: _____ P S or NO pump?

Secondary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____

Model: _____ s/n: _____

Fluorometer: Model _____

Cable gain: _____ s/n: _____ P S or NO pump?

Oxygen sensor: _____

Model: _____ s/n: _____ P S or NO pump?

PAR sensor: _____

Model: _____ s/n: _____

Other sensors: _____

s/n: _____ P S or NO pump?

Other sensors: _____

s/n: _____ P S or NO pump?

Other sensors: _____

s/n: _____ P S or NO pump?

Other sensors: _____

s/n: _____ P S or NO pump?

CTD calibration bottle location (height above CTD in metres): _____

Rosette Setup:

Number of bottles: _____

Manufacturer: _____

Volume of bottles (litres): _____

Winches:

1. Make: electric Model: _____ Serial #: _____ Used for: _____
2. Make: _____ Model: _____ Serial #: _____ Used for: _____
3. Make: _____ Model: _____ Serial #: _____ Used for: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Salinometer:

Make: _____ Model: _____ Serial Number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Oxygen Kit(s):

Make: _____ Model: _____ Kit Number: _____
Make: _____ Model: _____ Kit Number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Thermosalinograph System (SBE21):

Program: _____ Version: _____
Sampling interval (seconds): _____
Fluorometer sensor serial number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

ADCP Setup:

Computer time zone: _____ User Exits: Name: _____ Exit points: _____
Sampling interval (sec): _____ Name: _____ Exit points: _____
Bin Length: (2^x): _____ Name: _____ Exit points: _____
Pulse Length: _____ Work File: _____
Buffer (bytes): _____
Gyro Offset: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

CTD Test Cast Information

Test Cast along side?

Yes No

Comments

Test Cast in Saanich Inlet or other location?

(Yes) No

Comments SC-04 station

CTD pressure reading on deck (db), before cast: _____ after cast: _____

Pumps working?

Yes (0011) No (0010)

Secondary Temp – Primary Temp:

(Average from the mixed region)

Secondary Salinity – Primary Salinity:

(Average from the mixed region)

Additional Comments:

SC08 net, TSK 7057 w/ RBR solo # 108
CTD internally logging.
CTD: 2 minutes wait once CTD turned on - down 10m + up to surface
to wait 120 secs.

CTD startup:
finish

switch ON, start 2 min timer, put CTD in water.

Go down 10m, up to surface, wait at surface for end of 2 min. timer.

At 2min, start cast. * Go to 10m off bottom. (Fire Niskin if needed)

* if doing deep SAL sample, attach Niskin 5m above CTD now + cont. cast.

Recover CTD, switching off immediately after cast (switch off as it's taken out of water).

DAILY SCIENCE LOG

SURVEY # 2

Ocean Sciences Division, Institute of Ocean Sciences

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DAILY SCIENCE LOG															
Month March				Year 2015				Ship Salacia				Cruise ID 2015-22 #2			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
16	41	08:06	BE	CTD		26	49 03 28	123 22 32	250?		03	1			deep SAL
		12:14	BO				49 03 32	123 22 47		235					Cast 2
		23	EN				49 03 41	123 22 62							
	41	12:29	BE	NET		27	49 03 29	123 22 30	243						
		12:35	BO				49 03 33	123 22 34		235					
		12:40	EN				49 03 36	123 22 39							
	41	12:50	MR	BOT		28	49 03 43	123 22 53		5m	04	2			chl-a samples 0+5m 120m filtered phyto lugols 0m taken
16	38	13:44	BE	CTD		29	49 12 09	123 26 44	? 296 from list						No depth from sampler
		13:50	BO				49 12 12	123 26 45		285					Cast 3
		13:57	EN				49 12 16	123 26 45							
	38	2:02	BE	NET		30	49 11 90	123 26 43							
		2:10	BO				49 11 99	123 26 44		285					
		2:17	EN				49 12 00	123 26 45							
UTC: local + 7															
Transmissometer & Fluorometer are to be cleaned before each cast															

Cast Type:

BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
=

Bottle Firing Method:

US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Notes:

Time Code:

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Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014

Weather - overcast, very little sun.
file: 2015-22-0026_stn41.hex

Niskin 6m above CTD - SAL in dups.

Niskins 0 + 5 m, fired together. 120 ml filter, dups taken. Brown filters
file: 2015-22-0029_stn38.hex

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Month <u>March</u>			Year <u>2015</u>			Ship <u>Salacia</u>			Cruise ID <u>2015-22</u>						
Day	Station Name	Local Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
16	Hali Bank Buoy	3:36 (15:36)	MR	BOT		31	49 14 10	123 29 45		Ø	05 a+b	1			120 ml filtered rep
28		4:01 (16:01)	DE	CTD		32	49 24 12	123 45 29							cast 4
		4:06 (16:06)	BO				49 24 14	123 45 23	136	130					
		4:10 (16:10)	EN				49 24 14	123 45 20	136						
28		4:13 (16:13)	DE	NET		33	49 24 14	123 45 18	137						
		4:16 (16:16)	BO				49 24 15	123 45 14	140	130					
		4:19 (16:19)	EN				49 24 15	123 45 13							
— end day 1, heading to secret cove to tie up — UTC = local + 7															
17	24	7:51	BE	NET		34	49 30 31	124 06 03	—						No bottom reading
		8:02	BO				49 30 26	124 05 98		405					chart said 430m played it safe
		8:13	EN				49 30 23	124 05 97							
	24	8:19	BE	CTD		35	49 30 31	124 06 01	—					✓	cast 5
		8:31	BO				49 30 27	124 05 98		405					
		8:41	EN				49 30 22	124 05 97							

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labelled HB Buoy, sample 5a + b. Brown filter
porpoises in area (just before HB buoy, + just before stn 28 (S side))

file: 2015-22-0032-Stn28.hex

weather: calm + overcast, some sun

file: 2015-22-0035-Stn24.hex

20 transmission errors, get warning: scans invalid data
- tried uploading again on 18 Mar - worked fine

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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DAILY SCIENCE LOG				Ocean Sciences Division, Institution					Cruise ID 2015-22						
Month March				Year 2015			Ship Salacia								
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
17	22	9:53	BE	CTD		36	49 40.19	124 16.31	358?		06 a+b	1			Bottom SAC in dup
		9:58	BO				49 40.14	124 16.27		350					mud in tubing after cast →
		10:06	MR	(BOT)			49 40.07	124 16.24							Cast 6
	22	10:10	?	NET		27	49 40.05	124 16.24							
	22	10:19	EN	NET		37	49 39.99	124 16.24							
	22	10:21	BE	NET		37	49 39.96	124 16.23	?						
		10:31	BO				49 39.90	124 16.22		345					
		10:39	EN				49 39.80	124 16.22							
							49 42.36	124 43.38							
17	11	12:51	BE	NET		38	49 42.36	124 43.30	289?						
		12:58	BO				49 42.33	124 43.37		280					
		1:04	EN				49 42.32	124 43.36						✓	cast 7
	11	1:10	BE	CTD		39	49 42.30	124 43.35							
		1:18	BO				49 42.27	124 43.32		280					
		1:23	EN				49 42.26	124 43.30							
	11	1:27	MR	BOT		40	49 42.24	124 43.29		5	7 a+b	1			sm chla in dups →
	?	1:38	MR	BOT		41	49 42.20	124 43.26		0	8 a+b	1			Om chla in dups →
		1:48	MR	BOT		42	49 42.82	124 43.79		0	phyto	1			Lugols →
	UTC#7+														
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_ =

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Notes:

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Produced by the Water Properties Group, IOS

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file: 2015-22-0036 - Stn 22.hex

Depth from chart, no reading from Sounder.
Mud in CTD when recovered. Rinsed out with ΔH_2O .
messenger trip @ 2:10 minutes?

file: 2015-22-0039 - stn 11.hex

Only 1 Niskin working, did 2 casts to get 0+5m sample. (tubing came untied from Niskin, Fixed after station)
120 mL filtered for all chl-a

forgot Lugol's from 0m Niskin, stopped + collected surface bottle for Lugol's

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Month			Year			Ship			Cruise ID						
March			2015			Salacia			2015-22						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
17	BS-11	3:20	BE	CTD		43	49 28 98	124 45 99	63						cast 8
	15:22	3:23	BO				49 28 98	124 46 02		53					
		3:24	EN				49 28 98	124 46 04							
	15:25	3:25	BE	NET		44	49 28 98	124 46 06	60						
		3:27	BO				49 28 98	124 46 06		53					
	15:28	3:28	EN				49 28 99	124 46 08							
	CPF2	4:34	BL	NET		45	49 28 00	124 30 02	325?						Net tangled.
		4:41	BO				49 28 99	124 30 04		318					re-do cast
	*	4:49	EN				49 27 98	124 30 07							
		4:53	BL	NET		45	49 27 96	124 30 09							
	17:50	5:01	BO				49 27 94	124 30 11		315					
		5:10	BL				49 27 93	124 30 14							
		5:17	BL	CTD		46	49 27 95	124 30 10	325?					✓	cast 9
		5:26	BO				49 27 94	124 30 16		315					
		5:33	EN				49 27 93	124 30 19							
	— end day	2													—
		15:28	47												

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Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

(variety)
lots of birds sitting on the water in strait, on outside of N end Baynes Sound
file: 2015-22-0043-strBS-11.hex

No depth from depth sounder, 325m from ship

file: 2015-22-0046-strCPF-2.hex

Weather: flat calm + overcast, some sun through the clouds

CTD batteries = 11.0V at end of day.

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Month <u>March</u>				Year <u>2015</u>			Ship <u>Salacia</u>			Cruise ID <u>2015-22</u>					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. 20043 Cleaned	Comments
							Latitude	Longitude							
18	CPF1	7:54	BE	NET		47	492205	1240504	250?						No depth on sounder
		8:02	BO				492207	1240505		240					500ml jar
		8:08	EN				492207	1240503							
	CPF1	8:15	BE	CTD		48	492202	1240501						✓	cast 10
		8:23	BO				492203	1240519		240					
		8:30	EN				492205	1240498							
		10:14					491499	1234496							
18	GEO1	10:14	BE	NET		49	491490	1234497	406?						Swell. →
		10:30	BO				491489	1234497		375					No depth from sounder
		10:39	EN				491486	1234498							
18	GEO1	10:56	BE	CTD		50	491507	1234509	400?		9 a+b	1			deep SAL, 1150m Sm above CTD
		11:08	BO				1503	4512		425*					→
		11:25	EN				1495	4519							cast 11
18	GEO1	11:33	MR	BOT		51	1494	4524		5	10 + 11 a+b	2			0 + 3m chl, 3m phyto 120ml filtered
—	to Naviamo for fuel + lunch, back on water 14:40														

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on the water: 06:45

Weather: overcast, calling for winds 10-15 kn, $\uparrow$ to 25 by afternoon.

This page is for any notes or observations

file: 2015-22-0048-CPFI.hex Runtime error 52: Bad file name or # 1st try.

detour around WS.

Wire may have been slipping in motor block due to Surell, so stopped at 375m.

file: 2015-22-0050-GE01.hex

Not paying attention! went to 425m - oops. No slack in line tho.

Came up to 390m before stopping + releasing messenger (11:10). Started back up at 11:15.

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Month			Year				Ship				Cruise ID					Page	
March			2015				Salacia				2015-20					12 of	
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments		
							Latitude	Longitude									
18	40	4:37	BE	NET		52	49 08 60	123 36 71	147								
		4:43	BO				49 08 59	123 36 71		140					swell		
		4:47	EN				08 59	36 71									
	40	4:51	BE	CTD		53	08 62	36 75	140						CTD flushed dtho before cast		
		4:57	BO				08 65	36 82		135					cast 12		
		8:00	EN				08 64	36 84									
UTC = local + 7																	
— head to Silva Bay for the night — 18:00																	
19	back	on the water				07:30											
19	46	10:40	BE	NET		54	48 51 05	123 10 75	180								
		10:45	BO				48 51 35	123 10 73		170							
		10:50	EN				48 51 34	123 10 70									
		10:58	BE	CTD		55	48 51 40	123 10 80	178								
		11:02	BO				48 51 42	123 10 83		170					✓ cast 13		
		11:06	EN				48 51 45	123 10 86									
Cast Type: USW = Sea Water Loop Bottle Firing Method: Time of Day: 0000-2359																	

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file: 2015-20-0053... Stn 40, her

CTD batteries at end of day = 11.0V

Weather: cloud, rain + some wind.

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[illegible]

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