

DAILY LOG BOOK

MISSION
NUMBER

2008-Ach-1
→ 2008-64

DATE:

VESSEL:

PROJECT:

From: Prince Rupert

to:

Port Hardy

Achiever

C30

INSTITUTE OF OCEAN SCIENCES
OCEAN SCIENCES AND PRODUCTIVITY DIVISION
SIDNEY, BC, CANADA

Captain: Ian Giles First Officer: Ian Jansma
Second Officer: Lori Constan Third Officer: _____

Mission Participants / Agencies: Ios and Raincoast Conservation Foundation

Scientific Personnel:

Party Chief: John Morrison

Name	Watch	Cabin	Name	Watch	Cabin
<u>Caroline Fox</u>					
<u>Helen Frost</u>					
<u>Eddy Carmack</u>					

Second leg of Mission:

Party Chief: _____

Name	Watch	Cabin	Name	Watch	Cabin

Data logging computer: (see John Morrison)

Data acquisition program: Seaterm AF

CTD deck unit make: SBE model: 55 serial number: 5549530-0012

Primary CTD

Make: SB model: 19+ serial number: 16P25902-4057

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: 45640

Fluorometer: Model _____ Cable gain: 100 X s/n: SCF2805 **P, S or NO pump?**

Oxygen sensor: 90370 Model: 43 s/n: 430052 **P, S or NO pump?**

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

Other sensors: Back scatter 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: RBR model: 620-XR serial number: 12862

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?**

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

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

Rosette Setup:

Number of bottles: 6
Manufacturer: Seabird
Volume of Bottles (litres): 4 liter

Winches:

1. Make: Custom	Model:	Serial #:	used for:
2. Make:	Model:	Serial #:	used for:
3. Make:	Model:	Serial #:	used for:

Comments on performance during cruise:

Salinometer:

Make: Model: Serial #:

Comments on performance during cruise:

Oxygen Kit #

Comments on performance of kit and chemicals:

Thermosalinograph System:

Program: Version:
Sampling interval (seconds):
Fluorometer sensor serial number:

Comments on performance during cruise:

ADCP Setup:

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

Comments:

CTD Test Cast Information

Test Cast at ^{Prince Rupert} ~~IOS~~ Jetty? (optional) yes ☒ no ☐

Comments: (i.e. how did everything work??)

Test cast in Saanich Inlet? (recommended) yes ☐ no ☐

If no, give reason:

Comments: (i.e. how did everything work??)

CTD pressure reading on deck (db):
(Should be 0.0 db ± 0.5)

Pumps working? yes ☐ no ☐
(i.e.. Was the red LED display on the deck unit 0011 and not still 0010?)

Secondary Temp- Primary Temp:
(Average from the Mixed Region)

Secondary Salinity- Primary Salinity:
(Average from the Mixed Region)

Additional Comments:

2008-04-11-01

2

— Sample #

018

—

STN 1

— STN

bottle

— bottle

DAILY LOG

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Month <i>October 2008</i>				Year			Ship <i>(M)</i>				Cruise ID				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
04	01	15:31		ROS	US	01	54°21.515	130°30'.576	55.4		1-3	3		*	Not cleaning trans.
04	02	18:31		CTD		02	54°21.387	130°32.921	80.5		/	0			Depth sonar reading not steady.
04	03	20:32		NET		03	54.21.088	130.36.677		40m - 30m	Z1	1			40m to 30m layer
		20:44		NET		04	54 21.072	130.36.861	117.2	100m	Z2	1			↑ phytoplankton
04	03	21:07		ROS	US	05	54 21 129	130.36.769	144m	135	4-9	6			about.
04	03	21:23		ROS	US	06	54 21.141	130°36.729	144?	135	4-9	6			bottles have event # 5 should be # 6.
04	03	22:01		ROS	US	07	54°21.160	130°36.811	144.	135	4-9	6			bottles have #5 should have #7
05	04	23:18		CTD		08	54°21.025	130°40.463	135	130	/	0			(going out better: power not on.)
05	04	23:43		CTD		09	54°20.816	130°40.319	135	130	/	0			Happy Winch! 😊
05	05	0:18		ROS	US	10	54°20.957	130°43.341	25	20	10-12				Smooth Ops.

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bottle firing method:

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INSERTS (HD Nov 2009)

Sample Plan

* Missing Salinity Caps for bottles.

* SAMPLE PLAN FOR TRANSECTS →

* STN 02 (CTD touched bottom?)
Eddy noted slack in wire.

* after CTD up - brought up underway CTD for programming.

Weather Notes.

04 - morning:
Very calm!!
> 10 kn wind
overcast
Drizzle

(delicious lunch!)

04 - afternoon.
Wind picked up
boat drifts quickly
then
by Cast # 8
Very calm

Z STN.

20m

1

ROS

(W water)

2

CTD

(No water)

3

ZOOP + ROS

(Full STN)

4

CTD

(no water)

5

ZOOP + CTD.

(no water)

CTD (JM)

Event #

STN #

#

from

65 = 01

01

STN 3 = Problem w wind
break.

66 = 02

02

See John H. for

67 = 05

03

details.

68 = 06

03

STN 4 = still have problems..

69 = 07

03

70 = 08

04

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Month				Year				Ship (M)				Cruise ID			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
05	06	1:16		ROS	US	11	54°16.377	130°44.488	154	145	13-18	6			
05	06	1:40		NET		12	54°16.369	130°44.375	154	100	Z3				
05	07	2:45		CTD		13	54°13.027	130°45.418	125m	40	/	Ø			CTD crossed the bottom.
05	P.R.	22:36		Innovation!		14	54°19.233	130°19.181			/				CTD moved to stern
05	P.R.	23:44		CTD leg		15	"	"	/	/	/	/			deployed leg removed leg?
06	Whiteley Point Anch.	14:22		CTD Leg		16	53°51.718	130°31.128	63	/	/	/			deployed leg.
06	08	15:27		ROS	US	17	53°48.523	130°38.967			19-21	3			W A Frame + Chla (seen)
06	09	16:02		CTD		18	53°47.987	130°41.632	100m		/				
06	10	16:51		ROS	US	19	53°47.128	130°45.008	120m	120	22-27	6			(a little tickle.)
06	10	17:18		NET		20	53°47.207	130°45.072	120	100m	Z4	2			2 bottles used for sample

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In Giles sketch of A-frame to be built. Oct 04 2008.

* Oct 05. 2 flocks / mangroves
Beam of Bribery Islets 17:43 05/2008.

ml 1 = 200 ml

III

* took 1st Chla sample @ ~ (16:00) / Should filter by. (18:11.) (A) = 600 ml.

II

(B) = 600 ml

* CT / Rosette a bit close to stern. A-frame adjusted accordingly.

* Slight delay from SN 9 - SN 10 because, Caroline informs us, the boys are "farting" and to the ZODE"

↓
will use
this
amount
for all
Chla.

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							N Latitude	W Longitude							
06	11	17:58		CTD	/	21	53.45.702	130.49.721	113	105	/	/			
06	12	18:46		CTD	/	22	53.43.955	130.55.900	61.4	50	/	/			
06	/	19:30-19:44		Photo ID		!					/	/			See whale (over) notes other side.
07	13	0:51		ROS		23	53.27.811	129.57.877	20	15	28-30.	3			delicious muffins gave us energy - Charles Loric
07	14	1:14		ROS		24	53.27.481	129.58.688	322	300	31-36.	6			
07	14	1:48		NET		25	53.27.491	129.58.649	322	100	25.	2			3.36 mins upcast.
07	15	2:16		CTD		26	53.27.122	129.59.442	20	15	/	/			
07	Jelly Bay	3:40		CTD leg		27	53.27.415	129.47.161	14m	/	/	/			Patterson Inlet North Finger
07	Jelly Bay	5:05		Subsea camera		28	53.27.414	129.47.178	14m	/	/	/			3-D Ocean!
07	Jelly Bay	5:15		Mammal CTD		29	53.27.414	129.47.178	14m	/	/	/			Fresh water layer?
07	en route	15:40		SAIL		* *	53.17.025	129.46.340							Pulled out Genoa

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④ — 53° 43.679 / 130° 50.258 (UTC 20:30)

Femal w small (34.80?) See Carolyn for details
+ larger (0.7)

* (Have pics of ♀ + 3 yr old) Caroline will try to ID from Catalogue I31?

STN 13 - Chla collected @ 2:11 (UTC) (600ml Duplicates taken)

STN 14 - 2m (Bottle 6) sample #36 is surface water
* Check bottle close file (see S. Harrison for details.)

Event

28 - Subsea Camera - Removed from Case - Power off - then full cycle - then deployed at surface - another cycle - then dropped to bottom for cycle - then Power off/on - ad camera failed 05 seconds after initial view on T.V. monitor.

* } With The Genny on Port - slight heel that has caused the underway CTD to be "higher" from the bottom. (NB: it is very sunny + blue sky right now).

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Month				Year			Ship (M)					Cruise ID			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
07	16	20:55		RBR		30	53°01.784	130°08.843	298	?	/	/			heave to - but still moving too fast
07	17	23:53		CTD		31	53°09.246	129°42.553	66	60	/				Brought back up, then down again
08	18	0:25		ROS		32	53°10.341	129°37.826	165	155	37-42	6			Chla take + filtered 15 mins (after)
08	18	0:49		Nets.		33	53°10.383	129°37.489	165	100	Z6.				UTC 2009: up 13:53:17 17:55:01 start : end
08	19	1:32		CTD		34	53°11.877	129°32.357	265	255	/				
08	20	20:02		CTD		35	53°25.643	129°12.688	408	400	/	/			We are missing eddy
08	21	21:50		CTD		36	53°22.221	129°19.800	220	210	/	/			
08	22	23:35		CTD		37	53°12.566	129°20.684	60	50	/				Wind slightly off Centre Jan G. moved it
09	23	0:12		ROS		38	53°12.779	129°25.775	740	475"	43-48	6			hail →
09	23	1:04		NET		39	53°13.348	129°25.956	727	100	Z7				start: 2:07:08 end: 2:09:50 Up about 2m/s spilled

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(*) Eddies left on seaplane from Hartley Bay? ~ 1215 October 08.

STN #23 / Ship depth Snder not very accurate in deeper water. Auto log does not seem to work. This 740 depth is approx.
Chart specifies 262 Fathoms at this station.
→ going to pull out all the wire

STN 23 / Chla filtered within 15 mins of collection.

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
09	Paradise Bay.	2:48		CTD leg		40	53°08.251	129°32.093	10		—	—			removed log
09	Enroute	14:57		CTD leg		41	53°04.384	129°32.595	135	—	—	—			
09	24	16:28		CTD		42	52°54.282	129°33.006	286	275	—				off shore - sea state Force 3
09	25	17:57		CTD		43	52°53.612	129°43.301	122	120	—	—			force 4.
09	26	19:31		CTD		44	52°53.460	129°53.498	196	175	—	—			force 4 ++
09	26	20:10		Net.		45	52°53.579	129°53.715	297	100	78	1			depth 1 to 297 => 21:15:58/21:19:57 =>
09	enroute	21:15		Sail		**	52°53.564	129°44.664	240	—	—				engine off 7.8kn
09	27	23:29		ROS.		46	52°54.728	129°22.891	?	225?	49-54	6			Depth Sounder acting up. Chart = 121 fathoms
10	27	0:04		Net		47	52°54.828	129°23.667		100m	79				
10	28	1:14		CTD		48	52°55.243	129°13.894	226	215	—				

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Offshore station.

Sta # 26 297m depth $\frac{1}{2}$ way down

→ Net - almost an Solognac tow for a portion of the downcast.

Doyle
** Captain Giles "We are surfing".

Engine back on @ 23:45 as speed reduced to 6.0 knts (too slow/variable)
for bird counts.

Beaufort Key.

Force	Effects of Wind
0	Sea mirror
1.	Wave 0.1m ripples
2.	wave 0.2-0.3m Small wavelets.
3.	wave 0.6-1m Crests begin to break
4.	wave 1-1.5m numerous whitecaps
5.	wave 2-2.5m - some spray off whitecaps.
6.	wave 3-4m whitecaps everywhere lots of spray.
etc.	
↓	

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
10	29	13:51		ROS	US	49	52°55.551	129°11.762	30-40	20	55-57	3			Sunset - Moon up D
															Weeseam Bay
10	30	15:48		CTD		50	52°30.635	128°56.200	26	20	/	/			Is beautiful.
10	31	16:20		ROS	US	51	52°30.906	128°53.286	250	240	58-63	6			Chla filtered 15 min. 600 ml
10	31	16:47		NET	VNH	52	52°30.832	128°53.715	223	100	710				
10	32	17:20		ROS	US	53	52°31.074	128°49.952	26	20	64-66	3			Chla filtered 15 min. 600 ml
10	33	18:37		ROS	US	54	52°26.215	129°00.692	30	20	67-69	3			see movie of this station + great pics of JM.
10	34	19:00		CTD		55	52°25.376	129°02.738	50	45	/	/			
10	35	19:20		CTD		56	52°24.342	129°05.097	124	115	/	/			Smoked Salmon Wraps! Use picture.
10	36	19:56		CTD		57	52°22.455	129°09.101	161	150	/	/			Jm had to put his sun hat on.
10	37	20:49		ROS	US	58	52°20.085	129°14.617	126	120	70-75	6			*full Sal profile no chla.

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STN 33] Did not do Chla - as there are only 10 filters left.

⇒ Chla ^(not) taken @ this station (# 37)
SM 37 - Delay in cart - Rosette hit ransam - Spigot (5) broke (used Zip straps to keep closed)

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10	37	21:12		NET		59	52°20.002	129°14.738	126	100	711	2			Vis ↑ (~10m!) Very calm sea!
10	38	23:08		ROS	US	60	52°09.663	128°58.666	160	150	76-81	6			Chla (Vis ↑ ~10m) Vs. Narker str's at ~2m
10	38	23:34		NET		61	52°09.739	128°58.688	160	100	712				Mirror sea? Hecate Strait?
11	39	0:30		CTD		62	52°12.366	128°51.185	203	200	/	/			Weather arriving
11	40	1:10		CTD		63	52°13.636	128°47.004	216	210	/	/			Ridge of clouds advancing
11	41	1:43		CTD		64	52°14.425	128°44.646	157	150	/	/			#! Just crossed a → convergence zone
11	42	2:10		ROS	US	65	52°14.928	128°42.950	36	25	82-84	3			Jack went for a swim
11	Nook by Day Island	3:30		CTD leg		66	52°16.863	128°40.598	6m		/				CTD leg retrieve grub down low
11	Nook by Day Island	15:00		CTD leg		67	52°16.863	128°40.598	6m						Deploy
11	43	16:16		ROS	US	68	52°12.324	128°36.742	250?	225	85-90				Depth Sider acting up

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STN 40/4 long line of kelp along $E \leftrightarrow W$ heading, Ripples on offshore side +
very smooth water inshore, Upwelling?? ∇ from 210 - 243

Chla 3:16 finally processed (2 hours is max? - 2 hours too many?)

STN 43] Depth Snder - strong bottom on graph (at 240m) but veridmt loss (217m)
Setting a low frequency + $\uparrow$ gain

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11	43	16:46		Net		69	52°12.319	128°37.086	250	100m	Z13.				
11	44	17:40		ROS	US	70	52°10.305	128°31.442	10-50?	20	91-93	3			Depth Sader ↑ range due to kelp?
11	45	19:48		CTD		71	52°14.584	128°18.471	410	400	/	/			
11	Bella Bella	22:31		CTD (leg)		☹	52°10.112	128°08.132	/	/	/	/			echo sander kaput
11	Bella Bella	23:40		bottle scavenging		xxx	52°10.112	128°08.132	/	/	/	/			Tan Jansma mission impossible done!
12	46	1:29		CTD		72	52°11.489	127°50.378	483	425	/	/			10/10 Rosette launch!
12	enroute	17:20		Humpbacks		!⊗!	51°58.4	127°56.4	500m	/	/	/			see video footage Barge w dangerous cargo
12	47	17:37		CTD		73	51°57.438	127°57.424	38	20	/	/			
12	48	18:03		ROS.	US	74	51°57.296	127°56.517	400		94-99	6			Chla ✓
12	48	18:48		NET		75	51°56.927	127°56.664	400	100	Z14				Very calm - overcast & drizzle
12	49	19:24		ROS	US	76	51°57.192	127°54.638	32	20	100-102	3			No salt.

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105 owes:

$$25 + 24 + 20 = 69.$$

⇒ (***) [69] Corning 430791 15ml centrifuge tubes from SFM Field Stn. Will send replacement.

⇒ (***) [24] falcon tubes w 20ml ethanol in each - From Rain coast field station "Doug" also takes.

⇒ Chla 1st are filtered < 15 mins after collection. 2nd one 1/2 hour after 1st.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month				Year			Ship				Cruise ID				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
12	50	20:19		CTD		77	51°55.988	127°50.087	146	140	—	—			Went through kelp →
12	51	21:58		Ros	US	78	51°46.488	127°52.920	45	20	103-105	3			KOEYE! NO salt
12	52	22:39		Ros	US	79	51°45.705	127°55.709	375 400	375	106-111	6			Salt No chla. →
12	<u>53</u>	23:18		Net	VNA	80	51°45.620	127°56.015	377	100m	Z15	1			*This should be Station #52.
12	54	23:40		CTD		81	51°44.852	127°59.312	450	425	—	—			
13	55	0:39		Ros		82	51°43.446	128°03.963	320 310	285	112-114	3			no salt no chla. →
13	56	1:48		CTD		83	51°41.756	128°12.416	130	120	—	—			night approaches the penultimate cast
13	57	2:38		Ros		84	51°40.576	128°19.299	136	125	115-120	6			Salt + chla fres Noir
13	57	3:01		NET		85	51°40.648	128°19.432	136	100	Z16.				Caroline et l'on Ateau!

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* Kelp convergence (20:13) 51.56 013N 127°49.947

was (HIS 2005 Nov)

= STN 52: OOPS - Jim told several times depth = 400. But actually (upon closer inspection) depth sensor reads 375.
Consequently we tickled the bottom again.
When Rosette at 2 meters - bottle already triggered ∴

* look at data file to verify depths
where Niskins closed

Niskin Label.

bot 1 = 0

2 = bt # 1

3 = bt # 2

4 = bt # 3

5 = bt # 4

6 = bt # 5

surface buoy = bt # 6

NB
Digital readout
was way off

!!

Stn. 55 // Using new NUT tubes.
to see if any difference:
old tube bt 12a, b, c
new tube bt 13a, b, c.

→ ALSO NB - Right in a TIDE LINE - white frothy surface.

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13	58	16:26		CTD		86	51°25.762	127°53.089	33	20	/	/			
13	59	16:52		ROS	US	87	51°23.820	127°50.657	113	100	121-126	(5)			No bot. #6. chla (5+5.) →
13	59	17:11		NET		88	51°23.863	127°50.924	114	100	Z17	(2)			Pencultimate Net!
13	60	17:52		ROS	US	89	51°22.566	127°48.698	50	20	127-129	3			Slight delay bring up Rosette because →
13	61	18:47		CTD		90	51°26.081	127°40.810	250	240	/	/			3 seals in Major Brown Rk.
13	enroute	23:10		Sail		**	50°58.884	127°45.455	144	/	/	/			engine off NW 15
14	enroute			ORCA		!⊕!	50°52.856	127°35.231	57	/	/	/			3 brothers? See video
	enroute			DallP		!⊗!	50°50.724	127°30.534	200						15 min visit.
14	PH near			CTD leg		91	50°44.722	127°28.194	136						removed
14	PH.	1730		Mudibrail		!⊗!	50°42.844	127°29.406							what a sight!
14	62	18:48		CTD leg		92	50°46.277	127°29.100	45	/	/	/			deployed leg
14	62	19:09		CTD		93	50°46.265	127°29.193	23.2		/	/			Vig@ 15m!!

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NB!!! No^{SAMPLE} # 126 - skipped to # 127 @ STN 60.

* STN 59 / 2nd Chla sampled @ 20:05 (~ 45 mins after 1st)

Rep Ba bt #3. / O¹⁸ bt #5 / Nut bt #5.

STN 60 → An Owl (Caroline's Ia willing to ID) flew by - Spotted by Captain Giles who has a strong connection with them? That is really for him to say.
(ID): Possibly Shorteared - based on wings.

(possible relation) ✓

⇒ A1 pod (A32 ♂, A37 ♂, A46 ♂) Their Mother born in 1947 - now deceased.

- What looked like a Hooded Nudibranch (*Melibe leonina*) swam past us at the dock right by Achiever's bow! (We were inspecting the scrapes left by a large deadhead we had struck the night before.)

STN 62 / 2 eagles + Nest on shore.

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14	63	19:24		CTD	/	94	50°47.070	127°28.326	358	350	/	/			Very calm high overcast.	
14	64	20:20		ROS	US	95	50°49.432	127°25.399	236	230	130-135	6			CTD on/off	
14	64	20:45		NET		96	50°49.308	127°25.499	227	100	Z18	Z				
14	65	21:31		CTD		97	50°51.528	127°23.022	140	130?	/	/			Sea down surfaced	
14	66	22:12		ROS	US	98	50°53.781	127°20.152	26.5	20	136-138	3			Sun came out.	
15	near PM	1:21		CTD log		99	50°35.824	127°05.192	10.	/	/	/			removed,	
15	Docked	1:42		Fixi		100	50°35.508	127°05.438	4	/	/				Cast fini	

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