



Plankton Net Tow Log Sheet

Cruise #: 2018-01 Vessel: *Laurier* Page: *1*

Project(s): *Line P* Contact: *Mark B*

TSK Serial #: *70995294* RBR serial #: *79110*

Time offset = +

hrs = UTC (please record local time for samples)

Date: <i>20 Feb 18</i>	Station: <i>P2</i>	Time: <i>1114</i>	LOCAL
Net Event # <i>15</i>	CTD # <i>14</i>		
Latitude: <i>48° 36.15 N</i>	Longitude: <i>126° 00.06 W</i>		
deg min.dec	deg min.dec		
Wire out: <i>108</i>	Wire angle: <i>5</i>	Bottom Depth: <i>118</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>43166</i>	<i>44094</i>	Non-flow = pickled	

Notes: *UVIC took 3 small krill*

Date: <i>20 Feb 18</i>	Station: <i>P2</i>	Time: <i>1137</i>	LOCAL
Net Event # <i>16</i>	CTD # <i>14</i>		
Latitude: <i>48° 36.15 N</i>	Longitude: <i>126° 00.06 W</i>		
deg min.dec	deg min.dec		
Wire out: <i>108</i>	Wire angle: <i>5</i>	Bottom Depth: <i>118</i>	
Net Type: <i>Ring</i>	Tow Type: <i>VNH</i>		
Flow start <i>60654</i>	Flow end <i>61397</i>	Flow = frozen	
		Non-flow = pickled	

Notes: *Ring*

Date: <i>20 Feb 18</i>	Station: <i>P4</i>	Time: <i>04:31 UTC</i>	LOCAL <i>2031 start</i>
Net Event # <i>21</i>	CTD # <i>20</i>	<i>20:40 bottom</i>	
Latitude: <i>48° 39.006 N</i>	Longitude: <i>126° 39.995 W</i>		
deg min.dec	deg min.dec		
Wire out: <i>250</i>	Wire angle: <i>0</i>	Bottom Depth: <i>1310</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start <i>44159</i>	Flow end <i>45835</i>	Flow = frozen	
		Non-flow = pickled	

Notes: *lots of pyrosomes around ship*

Date: <i>20 Feb 18</i>	Station: <i>P4</i>	Time: <i>2135</i>	LOCAL <i>2035?</i>
Net Event # <i>22</i>	CTD # <i>20</i>		
Latitude: <i>48° 39.050 N</i>	Longitude: <i>126° 40.127 W</i>		
deg min.dec	deg min.dec		
Wire out: <i>1200</i>	Wire angle: <i>0</i>	Bottom Depth: <i>1310</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start <i>45835</i>	Flow end <i>53108</i>	Flow = frozen	
		Non-flow = pickled	

Notes:

WHITE NET TSK: 7099



Plankton Net Tow Log Sheet

Cruise #: 2018-01 Vessel: *Laurier* Page: 2

Project(s): *Line P* Contact:

TSK Serial #: *20995294* RBR serial #:

Time offset = +

hrs = UTC (please record local time for samples)

Date: <i>20 FEB 18</i>	Station: <i>P4</i>	Time: <i>2228</i>	LOCAL <i>me</i>
Net Event # <i>23</i>	CTD # <i>20</i>	<i>18.788 local</i>	
Latitude: <i>48° 39.07</i> N		Longitude: <i>126° 40.05</i> W	
deg min.dec		deg min.dec	
Wire out: <i>250</i>	Wire angle: <i>8</i>	Bottom Depth: <i>1310</i>	
Net Type: <i>Ring</i>	Tow Type: <i>VNH</i>		
Flow start <i>61400</i>	Flow end <i>62515</i>	Flow = frozen	
		Non-flow = pickled	

Notes: *Ring Net*

Date: <i>21 FEB 2018</i>	Station: <i>P8</i>	Time: <i>14:38</i>	LOCAL
Net Event # <i>29</i>	CTD # <i>28</i>		
Latitude: <i>48 49.00</i> N		Longitude: <i>128 39.553</i> W	
deg min.dec		deg min.dec	
Wire out: <i>250</i>	Wire angle: <i>10</i>	Bottom Depth: <i>2497</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start <i>59989</i>	Flow end <i>62368</i>	Flow = frozen	
		Non-flow = pickled	

Notes: *SAT Surface for 5 mins before descent*

Date: <i>21 FEB 18</i>	Station: <i>P8</i>	Time: <i>15:40</i>	LOCAL
Net Event # <i>30</i>	CTD # <i>22</i>		
Latitude: <i>48 48.982</i> N		Longitude: <i>128 39.976</i> W	
deg min.dec		deg min.dec	
Wire out: <i>1200</i>	Wire angle: <i>8</i>	Bottom Depth: <i>2497</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>62368</i>	<i>72812</i>	Non-flow = pickled	

Notes: *Stopped @ every 100m to mark winch line on way down* * *Came straight through on 40*

Date: <i>21 FEB 18</i>	Station: <i>P8</i>	Time:	LOCAL
Net Event # <i>31</i>	CTD # <i>28</i>	<i>0026 UTC</i>	
Latitude: <i>48 48.982</i> N		Longitude: <i>128 39.976</i> W	
deg min.dec		deg min.dec	
Wire out: <i>250</i>	Wire angle: <i>5</i>	Bottom Depth: <i>2497</i>	
Net Type: <i>Ring</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>62515</i>	<i>63845</i>	Non-flow = pickled	

Notes: *Ring*



Plankton Net Tow Log Sheet

Cruise #: 2018-01 Vessel: *Lawner* Page: 3

Project(s): *Line P*

Contact:

TSK Serial #: *70995294*

RBR serial #:

Time offset = +

hrs = UTC (please record local time for samples)

Date: *22 Feb* Station: *P12* Time: *0923* LOCAL

Net Event # *34* CTD # *36*

Latitude: *48 58.17 N* Longitude: *130 39.88 W*
deg min.dec deg min.dec

Wire out: *250* Wire angle: *0* Bottom Depth: *3233*

Net Type: *Bongo* Tow Type: *VNH*

Flow start Flow end Flow = frozen

72935 *74960* Non-flow = pickled

Notes: *UVIC took 30-40 small copepods*

Date: *22 Feb 18* Station: *P12* Time: *0951* LOCAL

Net Event # *35* CTD # *36*

Latitude: *48 58.17 N* Longitude: *130 39.98 W*
deg min.dec deg min.dec

Wire out: *250* Wire angle: *0* Bottom Depth: *3233*

Net Type: *Ring* Tow Type: *VNH*

Flow start Flow end Flow = frozen

63845 *65255* Non-flow = pickled

Notes: *Ring*

Date: *26 Feb 18* Station: *P26* Time: *1304* LOCAL

Net Event # *54* CTD # *53*

Latitude: *49 59.96 N* Longitude: *144 59.69 W*
deg min.dec deg min.dec

Wire out: *250* Wire angle: *0* Bottom Depth: *4300*

Net Type: *Bongo* Tow Type: *VNH*

Flow start Flow end Flow = frozen

98165 *101488* Non-flow = pickled

Notes:

Date: *26 Feb 18* Station: *P26* Time: *1342* LOCAL

Net Event # *55* CTD # *53*

Latitude: *50 00.03 N* Longitude: *144.59.84 W*
deg min.dec deg min.dec

Wire out: *250* Wire angle: *0* Bottom Depth: *4300*

Net Type: *Ring* Tow Type: *VNH*

Flow start Flow end Flow = frozen

65255 *67808* Non-flow = pickled

Notes:

Ring

Deep
Bongo
for P12
next
page
Sorry!



Plankton Net Tow Log Sheet

Cruise #: 2018-01 Vessel: *Laurier* Page: 4

Project(s): *Line P* Contact:

TSK Serial #: *7099 5294* RBR serial #:

Time offset = +

hrs = UTC (please record local time for samples)

Date: <i>22 Feb 18</i>	Station: <i>P12</i>	Time: <i>1550</i>	LOCAL
Net Event # <i>39</i>	CTD # <i>40</i>		
Latitude: <i>48 58.11</i> N	Longitude: <i>130 39.91</i> W		
deg min.dec	deg min.dec		
Wire out: <i>1200</i>	Wire angle: <i>0</i>	Bottom Depth: <i>3233</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>74538</i>	<i>82662</i>	Non-flow = pickled	

Notes:

Date: <i>2 Mar 18</i>	Station: <i>P20</i>	Time: <i>17:15</i>	LOCAL
Net Event # <i>70</i>	CTD # <i>69</i>		
Latitude: <i>49 33.91</i> N	Longitude: <i>138 39.97</i> W		
deg min.dec	deg min.dec		
Wire out: <i>250</i>	Wire angle: <i>0</i>	Bottom Depth: <i>3965</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>01585</i>	<i>05185</i>	Non-flow = pickled	

Notes:

Date: <i>2 Mar 18</i>	Station: <i>P20</i>	Time: <i>18:16</i>	LOCAL
Net Event # <i>71</i>	CTD # <i>72</i>		
Latitude: <i>49 33.65</i> N	Longitude: <i>138 39 97</i> W		
deg min.dec	deg min.dec		
Wire out: <i>1200</i>	Wire angle: <i>0</i>	Bottom Depth: <i>3965</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>05185</i>	<i>16449</i>	Non-flow = pickled	

Notes:

Date: <i>3 Mar 18</i>	Station: <i>P16</i>	Time: <i>2140</i>	LOCAL
Net Event # <i>78</i>	CTD # <i>79</i>		
Latitude: <i>49 16.72</i> N	Longitude: <i>134. 39.75</i> W		
deg min.dec	deg min.dec		
Wire out: <i>250</i>	Wire angle: <i>0</i>	Bottom Depth: <i>3635</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>165108</i>	<i>18265</i>	Non-flow = pickled	

Notes:



Plankton Net Tow Log Sheet

Cruise #: 2018-01 Vessel: *Laurier* Page: 5

Project(s): *SOG* Contact:

TSK Serial #: *70995294* RBR serial #:

Time offset = +

hrs = UTC (please record local time for samples)

Date: <i>5 Mar 18</i>	Station: <i>5F2</i>	Time: <i>2206</i>	LOCAL
Net Event # <i>83</i>	CTD # <i>84</i>		
Latitude: <i>48 17.89</i> N	Longitude: <i>124 00.17</i> W		
deg min.dec	deg min.dec		
Wire out: <i>172</i>	Wire angle: <i>18°</i>	Bottom Depth: <i>182</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>18265</i>	<i>19411</i>	Non-flow = pickled	

Notes: *3 pteropods for Matt*

Date: <i>6 Mar 18</i>	Station: <i>11A059</i>	Time: <i>1346</i>	LOCAL UTC
Net Event # <i>85</i>	CTD # <i>86</i>	<i>05:53 local</i>	
Latitude: <i>48 35 756</i> N	Longitude: <i>123 14 930</i> W		
deg min.dec	deg min.dec		
Wire out: <i>220</i>	Wire angle: <i>10-15</i>	Bottom Depth: <i>231</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start <i>19412</i>	Flow end <i>20388</i>	Flow = frozen	
		Non-flow = pickled	

Notes:

Date: <i>6 Mar 2018</i>	Station: <i>56</i>	Time: <i>1721</i>	LOCAL UTC
Net Event # <i>87</i>	CTD # <i>88</i>	<i>09:29 local</i>	
Latitude: <i>48° 46 070</i> N	Longitude: <i>123 01 771</i> W		
deg min.dec	deg min.dec		
Wire out: <i>227</i>	Wire angle: <i>35</i>	Bottom Depth: <i>237</i>	
Net Type: <i>BONGO</i>	Tow Type: <i>VNH</i>		
Flow start <i>20385</i>	Flow end <i>22075</i>	Flow = frozen <i>green</i>	
		Non-flow = pickled <i>red.</i>	

Notes: *160° angle just before surface, likely to have rubbed bottom of ship.*

Date: <i>6 Mar 2018</i>	Station: <i>46</i>	Time: <i>1144</i>	LOCAL
Net Event # <i>89</i>	CTD # <i>90</i>		
Latitude: <i>48 51.25</i> N	Longitude: <i>123 10.42</i> W		
deg min.dec	deg min.dec		
Wire out: <i>168</i>	Wire angle: <i>0</i>	Bottom Depth: <i>178</i>	
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>		
Flow start	Flow end	Flow = frozen	
<i>22075</i>	<i>23032</i>	Non-flow = pickled	

Notes:



Plankton Net Tow Log Sheet

Cruise #: 2018-01 Vessel: *Lavender* Page: 6

Project(s): *So G / Line P* Contact:

TSK Serial #: *7099524* RBR serial #:

Time offset = +

hrs = UTC (please record local time for samples)

Date: <i>6 Mar 18</i>	Station: <i>42</i>	Time: <i>1422</i> LOCAL
Net Event # <i>91</i>	CTD # <i>92</i>	
Latitude: <i>49 01.70</i> N	Longitude: <i>123 26.19</i> W	
deg min.dec	deg min.dec	
Wire out: <i>308</i>	Wire angle: <i>0</i>	Bottom Depth: <i>318</i>
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>	
Flow start	Flow end	Flow = frozen
<i>23032</i>	<i>25030</i>	Non-flow = pickled
Notes: <i>5-10 Limacina picked</i>		

Date: <i>6 Mar 18</i>	Station: <i>41</i>	Time: <i>1602</i> LOCAL
Net Event # <i>93</i>	CTD # <i>95</i>	
Latitude: <i>49 03.24</i> N	Longitude: <i>123 22.39</i> W	
deg min.dec	deg min.dec	
Wire out: <i>230</i>	Wire angle: <i>0</i>	Bottom Depth: <i>240</i>
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>	
Flow start	Flow end	Flow = frozen
<i>25030</i>	<i>26563</i>	Non-flow = pickled
Notes:		

Date: <i>6 Mar 18</i>	Station: <i>GE01</i>	Time: <i>1941</i> LOCAL
Net Event # <i>96</i>	CTD # <i>98</i>	
Latitude: <i>49 15 02</i> N	Longitude: <i>123 45 07</i> W	
deg min.dec	deg min.dec	
Wire out: <i>250</i>	Wire angle: <i>0</i>	Bottom Depth: <i>402</i>
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>	
Flow start	Flow end	Flow = frozen
<i>26565</i>	<i>28130</i>	Non-flow = pickled
Notes:		

Date: <i>6 Mar 18</i>	Station: <i>GE01</i>	Time: <i>2006</i> LOCAL
Net Event # <i>97</i>	CTD # <i>98</i>	
Latitude: <i>49 15 04</i> N	Longitude: <i>123 45 07</i> W	
deg min.dec	deg min.dec	
Wire out: <i>392</i>	Wire angle: <i>0</i>	Bottom Depth: <i>402</i>
Net Type: <i>Bongo</i>	Tow Type: <i>VNH</i>	
Flow start	Flow end	Flow = frozen
<i>28130</i>	<i>30566</i>	Non-flow = pickled
Notes:		



Plankton Net Tow Log Sheet

Cruise #: 2618-01 Vessel: Laurier Page: 7
Project(s): SoG/Lin P Contact: Mark
TSK Serial #: 70995294 RBR serial #:
Time offset = + hrs = UTC (please record local time for samples)

Date: <u>6 Mar 18</u>	Station: <u>CPI1</u>	Time: <u>2313</u>	LOCAL
Net Event # <u>99</u>	CTD # <u>100</u>		
Latitude: <u>49 22 02</u> N	Longitude: <u>124 04 82</u> W		
deg min.dec	deg min.dec		
Wire out: <u>235</u>	Wire angle: <u>0</u>	Bottom Depth: <u>245</u>	
Net Type: <u>Bongo</u>	Tow Type: <u>VN14</u>		
Flow start	Flow end	Flow = frozen	
<u>30566</u>	<u>32112</u>	Non-flow = pickled	

Notes:

Date:	Station:	Time:	LOCAL
Net Event #	CTD #		
Latitude:	N	Longitude:	W
deg min.dec		deg min.dec	
Wire out:	Wire angle:	Bottom Depth:	
Net Type:	Tow Type:		
Flow start	Flow end	Flow = frozen	
		Non-flow = pickled	

Notes:

Date:	Station:	Time:	LOCAL
Net Event #	CTD #		
Latitude:	N	Longitude:	W
deg min.dec		deg min.dec	
Wire out:	Wire angle:	Bottom Depth:	
Net Type:	Tow Type:		
Flow start	Flow end	Flow = frozen	
		Non-flow = pickled	

Notes:

Date:	Station:	Time:	LOCAL
Net Event #	CTD #		
Latitude:	N	Longitude:	W
deg min.dec		deg min.dec	
Wire out:	Wire angle:	Bottom Depth:	
Net Type:	Tow Type:		
Flow start	Flow end	Flow = frozen	
		Non-flow = pickled	

Notes:

Station PAPA Ring Net Information

Station	Pos'n & time deployed	Pos'n & time at bottom	Pos'n & time at surface	Depth
P26 Bongo 250m	50° 00.04 144° 59.85 1220	50° 00.04 144° 59.79 1281	50° 00.04 144° 59.79 1235	Aborted Bongo
RING NET 250m	50° 00.04 144° 59.79 1231	50° 00.03 144° 59.86 1342	50° 00.05 144° 59.84 1346	Ringnet SS
BONGO 1200m	13			
P26 BONGO 250m	50° 00.12 144° 59.85 1246	49° 59.96 144° 59.73 1304	49° 59.97 144° 59.69 1309	Bongo SS

P26:

*redo.

Station PAPA Ring Net Information

Station	Pos'n & time deployed	Pos'n & time at bottom	Pos'n & time at surface	Depth
P2 BONGO	48° 36.095' N 126° 00.052' W 1104	48° 36.119' N 126° 00.053' W 1110	48° 36.157' N 126° 00.058' W 1115	116 m
P2 RINGNET	48° 35.980' N 126° 125° 59.980' W 1126	48° 36.062' N 126° 00.400' W 1135	48° 36.107' N 126° 00.500' W 1139	118 m
P4 BONGO	AFT LAB HAS THESE NUMBERS			
P4 BONGO				
P4 RINGNET				
P2 BONGO				
P2 RINGNET	48° 58.1591' N 130° 39.9025' W 0914	48° 58.1159' N 130° 39.8970' W 0923	48° 58.0935' N 130° 39.8879' W 0928	250 m
P2 RINGNET	48° 58.2415' N 130° 40.0103' W 0913	48° 58.1782' N 130° 39.9848' W 0951	48° 58.1648' N 130° 40.0034' W 0956	250 m
P2 ERIC	48° 58.1723 136° 39.9200 1444	48° 58.1677 130° 39.9125 1446	48° 58.1538' N 130° 39.9500' W 1453	60 m
P2 BONGO	48° 58.1705 130° 40.0122 1509	48° 58.1169' N 130° 39.9782' W 1550	48° 58.115' N 130° 39.980' W 1609	1200 m

RELIC:

$$\left(\frac{48^{\circ} 58.1600}{130^{\circ} 39.9253} \right)^{40}$$

$\left(\frac{48^{\circ} 58.1583}{130^{\circ} 39.9395} \right)^{10m}$

$\left(\frac{48^{\circ} 58.1634}{130^{\circ} 39.9187} \right)^{50m}$

15
1600

[illegible]

① Bongo (250m) DEPTH 1308m

	<u>DEPLOY</u>	<u>BOTTOM</u>	<u>RESURFACE</u>
TIME	2031	2040	2044
LAT	48°38.996' N	48°39.006' N	48°39.015' N
LONG	126°39.979' W	126°39.995' W	126°40.003' W

② Bongo (1200m)

	<u>DEPLOY</u>	<u>BOTTOM</u>	<u>RESURFACE</u>
TIME	2054 ²⁰	2135 ⁰⁰	2156 ⁰⁰
LAT	48°38.994' N	48°39.050' N	48°39.022' N
LONG	126°40.027' W	126°40.127' W	126°40.117' W

③ Ring (250m)

	<u>DEPLOY</u>	<u>BOTTOM</u>	<u>RESURFACE</u>
TIME	2218	2228	2232
LAT	48°39.00' N	48°39.07' N	48°39.07' N
LONG	126°40.00' W	126°40.05' W	126°40.05' W

P4 BONGOS

7 23
6 22
5 21
4 20

2018-01 ~~Ring~~ Net

IN	Angle	Bdep	Tdep	60654	END
22	S-10	119	109	60654	61397
P4	0	1308	250	61400	62515
P8	S	82497	250	62515	63845
P12	S-10		250	63845	65255
P12	✓	3200	1200	74588	72662
226		4300	1200	96935	AR. 1
226	✓	4300	250	98163	021128
226		4300	250	65255	62808
20		4000	250	01585	05185
270	0		1716	05145	16449
16		3950	250	16510	18265
F2	18°	182	172	18265	19411
bro 59	11°	231	220	19412	20388
56	35°	237	227	20385	22075
16	0	178	168	22075	23032
12	0	318	308	23032	25030
11	0	340	230	25030	26563
ED1	0	402	250	26563	28130
ED1	0	462	392	28130	30566
PF1	0	245	235	30566	32112

Rite in ink

2018-01

A		B	T	ANGLE	FLOW S	FLOW
ANGLE	STAY	DEPTH	DEPTH			
5	P2	118	108	44129	4406	
	P4			43168		
0	P4	1308	250	44159	4585	
0	P4	1308	1700	45835	5370	
10	P8	82497	250	59989	6236	
* set at surface	P8	82499	1200	62368	72281	
5-10	P12		250	72735	7496	

Rite in ink

2018-01 ~~King~~ Net

TN	Angle	Boep	Tdep	60654	END
2	S-10	119	109	60654	61397
24	8	1308	250	61400	62515
28	5	8249	7250	62515	63845
P12	S-10		250	63845	65255
P12	8	3200	1200	65255	67262
226		4300	1200	67262	68935
26		220	250	68935	70128
276		4300	250	70128	71808
20		4000	250	71808	73185
270	8		170	73185	74445
26		3950	250	74445	75865
P2	18	182	172	75865	77111
2059	11	231	220	77111	78388
26	35	237	227	78388	79775
16	0	178	168	79775	81032
12	8	318	208	81032	82330
11	0	240	230	82330	83563
501	8	407	250	83563	84830
501	8	467	292	84830	86166
DF1	8	245	235	86166	87412

Rite in the

2018-01

A		B	T	ANGLE	
ANGLE	STW	DEPTH	DEPTH	FLOW S	FLOW E
5	P2	118	108	44179	44096
	P4			43168	
0	P4	1308	250	44159	45831
0	P4	1308	1700	45835	53708
10	P8	8249	250	57959	62236
8	P8	8249	1200	62368	62251
5-10	P12		250	72735	74960

Rite in the