Transect Report

Overview

This report provides summary statistics and figures for ongoing transect sampling. The first section of the report focuses on the current sampling (Winter 2020-2021) and how the collected data compare to last year's sampling (Winter 2019-2020). So far 12 days have been sampled this season. The second half of the report gives summaries of all of the data that have been collected since the beginning of the project (2010-05-27). In total, 105 days have been sampled over this entire project.

Definition of Localities

LOCALITY	LOCATION
$\overline{\mathrm{BT}}$	Big Trout
CK	Cedar Key
CR	Corrigan's Reef
HB	Horseshoe Beach
LC	Lone Cabbage
LT	Little Trout
NN	No Name

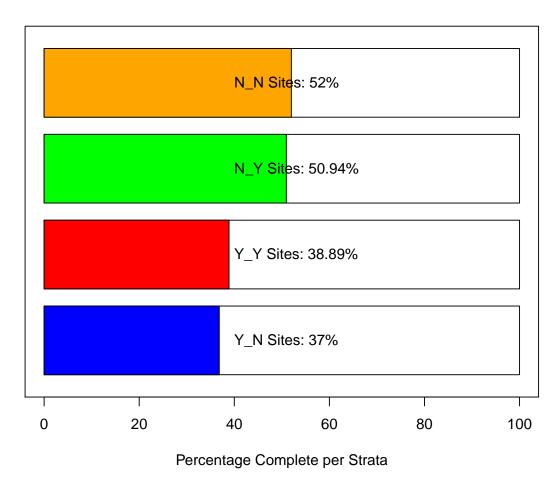
Definition of Strata

STRATA	DEFINITION
<u>Y_N</u>	Yes Harvest, No Rock
Y_Y	Yes Harvest, Yes Rock
N_N	No Harvest, No Rock
N_Y	No Harvest, Yes Rock
N_PILOT	No Harvest, Pilot Rocks

Current Sampling

Here, we provide a progress bar showing how much of the sampling has been completed for this season, plus summary tables and plots comparing live counts and density of oysters between this current season and last year. The current sampling period is period 22, and last year's sampling period is period 20.

Field Sites - Strata Progress



Summary Tables for Periods 20 and 22

These summary tables provide summary statistics on live counts and oyster densities for just periods 20 (Winter 2019-2020) and 22 (Winter 2020-2021).

Summary statistics include:

- Locality or Strata or Period Mean
- Median
- Standard Deviation (SD)
- Variance (Var)
- Coefficient of variation (CV)
- Standard Error (SE)

N_Y 145

Y N 202

Y_Y 151

- Lower 95% Confidence Interval assuming normal distribution (L95)
- Upper 95% Confidence Interval assuming normal distribution (U95)
- Bootstrap Mean (Bstrap Mean)
- Lower 95% Confidence Interval from Bootstrap Values (L95 Bstrap)
- Upper 95% Confidence Interval from Bootstrap Values (U95 Bstrap)

Summary of Live Counts for Periods 20 and 22

Live Oyster Counts by Locality	
Locality Mean Median SD Var CV SE L95 U95 Bstrap_Mean L	L95_Bstrap U95_Bstrap
BT 2219 766 3528 12445897 1.59 1578 -873 5312 2243	380 5416
LC 1644 1162 1879 3532249 1.14 247 1160 2127 1641	1203 2146
LT 1191 877 737 542939 0.62 246 709 1672 1192	799 1678
NN 888 747 768 589511 0.86 313 274 1503 888	447 1534
Live Oyster Counts by Strata	
Strata Mean Median SD Var CV SE L95 U95 Bstrap_Mean L95_	Bstrap U95 Bstrap
N N 1187 766 1509 2276206 1.27 271 656 1718 1190	773 1832
N_PILOT 356 356 NA NA NA NA NA 177	13 345
N_Y 3225 2898 2516 6330343 0.78 759 1738 4712 3201	1910 4671
Y_N 932 764 749 561550 0.80 153 632 1232 930	645 1222
Y_Y 2497 2080 2550 6504037 1.02 769 990 4004 2470	1332 3983
Live Oyster Counts by Period	
Period Mean Median SD Var CV SE L95 U95 Bstrap_Mean L95_Bs	
	1317 2493
22 1155 679 1269 1609202 1.1 228 709 1602 1166	755 1675
Live Density by Locality	
Locality Mean Median SD Var CV SE L95 U95 Bstrap_Mean L95_Bs	stran U95 Bstran
BT 286 140 299 89572 1.05 134 23.6 548 288	99 554
LC 173 166 120 14478 0.69 16 142.4 204 173	144 206
LT 339 370 159 25324 0.47 53 235.0 443 337	235 433
NN 245 154 295 86939 1.20 120 8.8 481 245	94 491
Live Density by Strata	
Strata Mean Median SD Var CV SE L95 U95 Bstrap_Mean L95_Bstrap	U95_Bstrap
N_N 251 174 208 43233 0.83 37 178 324 251 184	1 327
N_PILOT 102	3 99

145

202

149

111

146

105

177

270

198

170 61 3695 0.42 18 109 181

185 152 23092 0.75 31 141 263

122 83

6944 0.55 25 102 200

Live Density by Period

Period	${\tt Mean}$	${\tt Median}$	SD	Var	CV	SE	L95	U95	Bstrap_Mean	L95_Bstrap	U95_Bstrap
20	258	203	188	35185	0.73	27	204	312	258	210	316
22	125	121	67	4458	0.53	12	101	148	125	104	148

Summary of Dead Counts for Periods 20 and 22

Locality Mean		r CV SE L9	5 U95 Bstrap_Mea			
BT 244	114 270 7276			1 1 95		
LC 150	96 134 1805			19 116		
LT 235	141 175 3077			36 134		
NN 109	68 119 1422	7 1.10 49 13.	2 204 10	08 45	213	
Dead Oyster Cou	·	a. aaa.				
Strata Mean N			5 Bstrap_Mean LS			
N_N 182		0.91 30 124 24		131	238	
N_PILOT 9	9 NA NA			1	9	
N_Y 120	69 118 13925			63	193	
Y_N 160		0.92 30 102 21		104	213	
Y_Y 168	108 149 22241	0.89 45 79 25	6 167.9	92	257	
Dead Oyster Cou Period Mean Me	edian SD Var		Bstrap_Mean L98		-	
20 148		0.95 20 108 188	148	112	188	
22 185	108 164 27054	0.89 30 127 243	185	129	244	
•	nsity by Localit Median SD Var	•	U95 Bstrap_Mean	L95_Bstrap U	95_Bstrap	
BT 42	28 25 641	0.61 11.3 19.5	64 42	22.4	61	
LC 23	12 24 558	1.05 3.1 16.4	29 23	16.8	29	
LT 63	72 34 1166	0.55 11.4 40.2	85 63	40.3	84	
NN 28	14 30 901	1.08 12.3 3.8	52 27	9.9	50	
Dead Oyster Der	• •					
Strata Mean M	ledian SD Var	CV SE L95	U95 Bstrap_Mean	n L95_Bstrap	U95_Bstrap	
N_N 40.5	32.5 30.2 913	0.75 5.43 29.8	51.1 40.4	30.4	50.6	
N_PILOT 2.6	2.6 NA NA	NA NA NA	NA 1.5	5 1.0	2.0	
N_Y 5.4		0.60 0.98 3.5	7.3 5.5		7.4	
Y_N 33.4	26.9 28.7 826	0.86 5.87 21.9	44.9 33.9	5 22.2	45.8	
Y_Y 11.4	10.6 5.4 29	0.48 1.64 8.2	14.6 11.4	8.4	14.4	
Dead Oyster Density by Period Period Mean Median SD Var CV SE L95 U95 Bstrap_Mean L95_Bstrap U95_Bstrap						
20 28	18 26 698 0.9	5 3.9 20 35	28	21	36	
22 30	15 31 980 1.0	4 5.6 19 41	30	21	42	

Summary Plots for Periods 18, 20 and 22

Live Oyster Density by Locality for Periods 18, 20, and 22

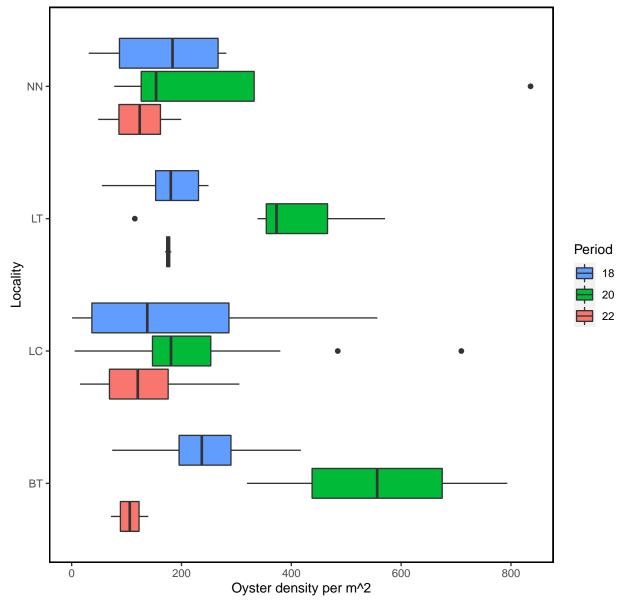


Figure- Calculated live oyster density by locality for periods 18 (Winter 2018-2019), 20 (Winter 2019-2020) and 22 (Winter 2020-2021) with the last sample date of period 22 as 2020-12-29.



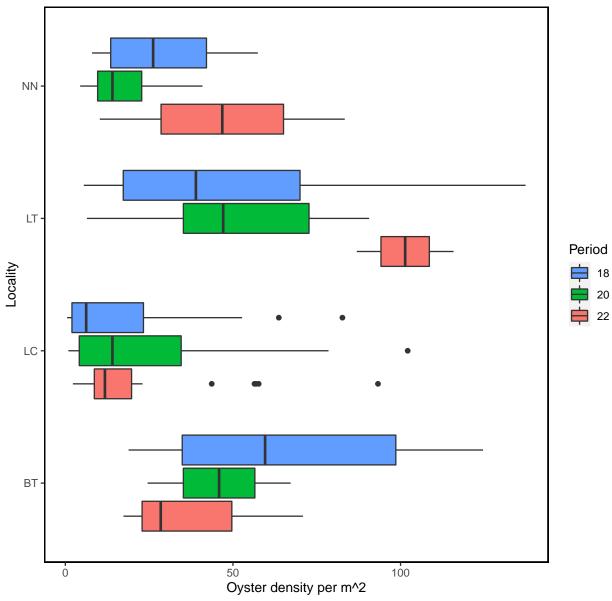


Figure- Calculated dead oyster density by locality for periods 18 (Winter 2018-2019), 20 (Winter 2019-2020) and 22 (Winter 2020-2021) with the last sample date of period 22 as 2020-12-29.



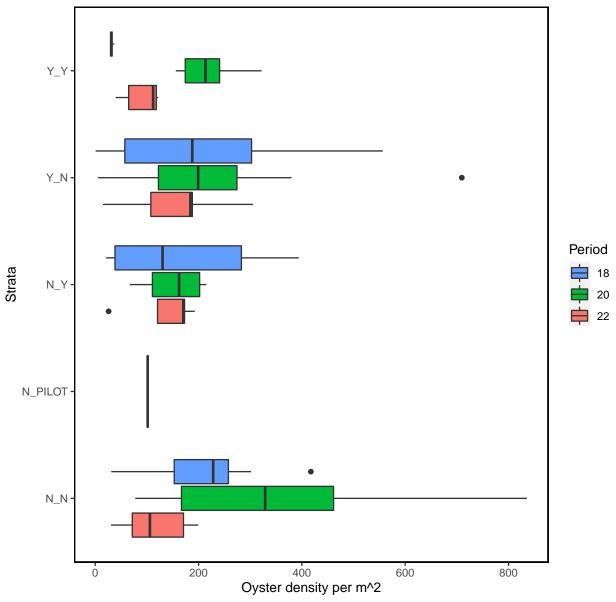


Figure- Calculated live oyster density by strata for periods 18 (Winter 2018-2019), 20 (Winter 2019-2020) and 22 (Winter 2020-2021) with the last sample date of period 22 as 2020-12-29.



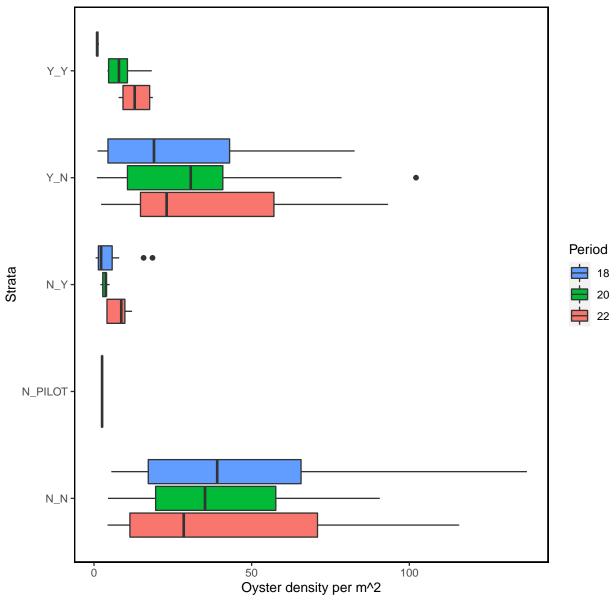


Figure- Calculated dead oyster density by strata for periods 18 (Winter 2018-2019), 20 (Winter 2019-2020) and 22 (Winter 2020-2021) with the last sample date of period 22 as 2020-12-29.

The following summary plot is calculated in R using the <code>geom_density</code> (https://ggplot2.tidyverse.org/reference/geom_density.html) statistical function in <code>ggplot</code>. The <code>geom_density</code> function computes and draws kernel density estimates, which is then represented as a smoothed version of a histogram.

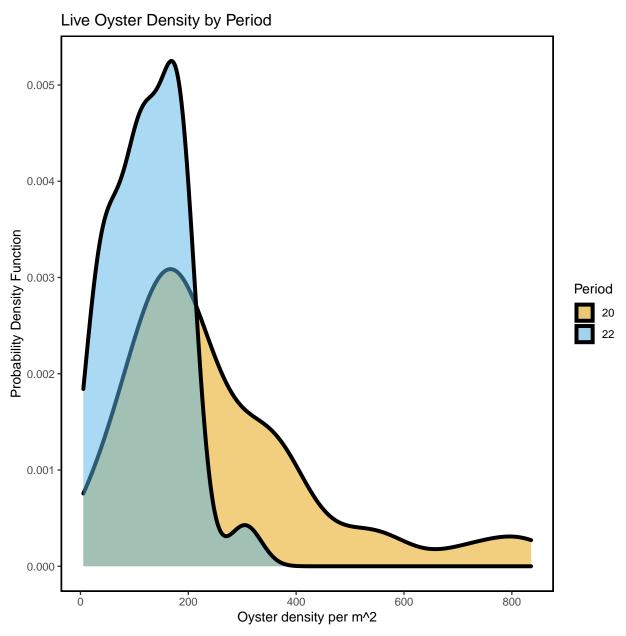


Figure- Calculated live oyster density by periods 20 (Winter 2019-2020) and 22 (Winter 2020-2021) using a probability density function with the last sample date of period 22 as 2020-12-29.

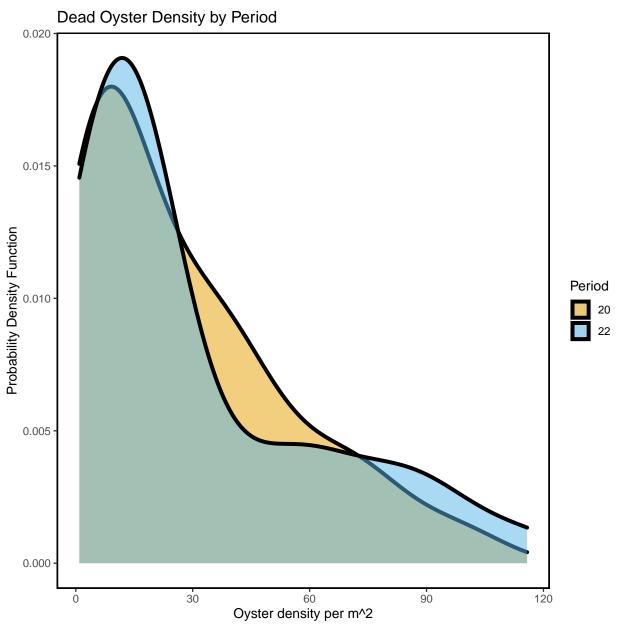


Figure- Calculated dead oyster density by periods 20 (Winter 2019-2020) and 22 (Winter 2020-2021) using a probability density function with the last sample date of period 22 as 2020-12-29.

Live and Dead Oyster Count Comparison of Periods 20 and 22

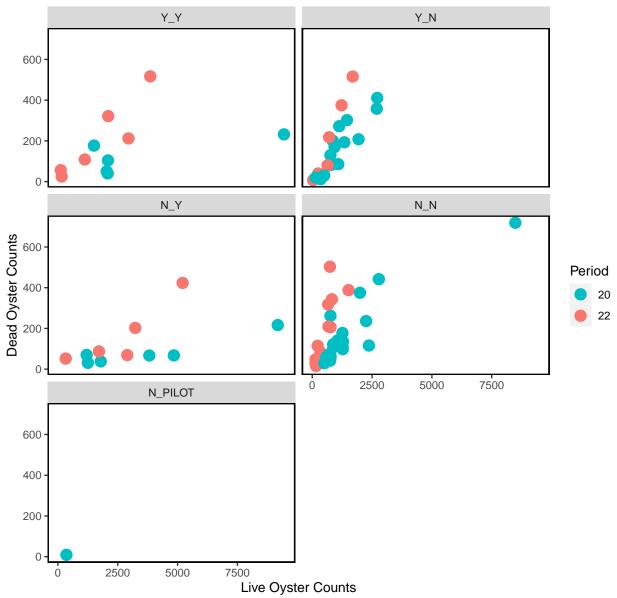


Figure- Live and dead oyster count comparison by periods 20 (Winter 2019-2020) and 22 (Winter 2020-2021), last sample date of period 22 as 2020-12-29.

Live Counts Double Pass Results

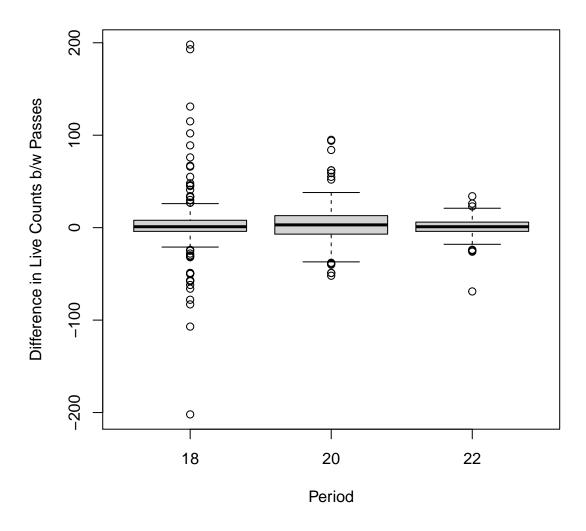


Figure- Boxplot of the difference in live counts between pass 1 and pass 2 (pass 1 live counts - pass 2 live counts) for period 18, 20, and 22

locality	period	CV_1	CV_2
BT	18	0.82	0.83
LC	18	1.34	1.43
NN	18	0.47	0.63
LC	20	0.83	0.80
LT	20	0.61	0.60
BT	22	0.39	0.52
LC	22	0.69	0.73
LT	22	0.47	0.43

Table- Coefficient variation between pass 1 and pass 2, aggregated by locality and period for live counts

Dead Counts Double Pass Results

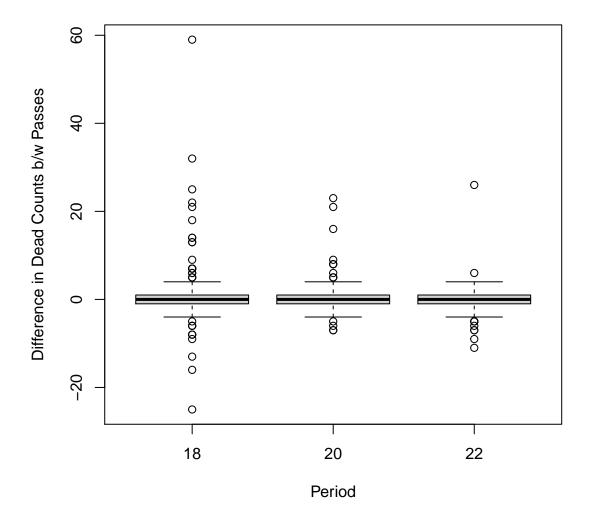


Figure- Boxplot of the difference in dead counts between pass 1 and pass 2 (pass 1 dead counts - pass 2 dead counts) for period 18, 20, and 22

locality	period	CV_1	CV_2
BT	18	0.78	0.82
LC	18	2.35	2.06
NN	18	0.55	0.73
LC	20	1.93	1.62
LT	20	0.76	0.67
BT	22	0.60	0.66
LC	22	0.75	0.78
LT	22	0.79	0.74

Table- Coefficient variation between pass 1 and pass 2, aggregated by locality and period for dead counts

Sampling for all Periods

Next, we provide summary tables and plots for all transect sampling. These data were collected between 2010-05-27 and 2020-12-29. The following are only for live oysters.

Definitions of Periods

PERIOD	SEASON	YEAR
1	Summer	2010
2	Winter	2010-2011
3	Summer	2011
4	Winter	2011-2012
5	Summer	2012
6	Winter	2012-2013
7	Summer	2013
8	Winter	2013-2014
9	Summer	2014
10	Winter	2014-2015
11	Summer	2015
12	Winter	2015-2016
13	Summer	2016
14	Winter	2016-2017
15	Summer	2017
16	Winter	2017-2018
17	Summer	2018
18	Winter	2018-2019
19	Summer	2019
20	Winter	2019-2020
21	Summer	2020
22	Winter	2020-2021

Summary of Effort for all Periods

Effort by Locality

19

19

CK

 ${\tt CR}$

These effort summaries show the total number of transects and total number of meters walked per locality, strata, locality per period, and strata per period. These tables contain all data collected on the ${\bf transects.}$

Effort by									
Locality	Number of Transect	ts Total Length	n (m)						
BT	;	11	424						
CK		26	712						
CR		46	1330						
НВ		45	1129						
LC		183 9099							
LT		15	406						
NN	<u> </u>	10	255						
Effort by	Strata								
Strata 1	Number of Transects	s Total Length	(m)						
N_N	106	3	3537						
N_PILOT	13	3	799						
_ N_Y	24	4	2502						
Y_N	178		5078						
_	1!								
Y_Y	1;		1437						
Effort by	Period								
Period Nu	umber of Transects	Total Length	(m)						
1	42	10	086						
2	30	7	753						
3	25	6	319						
6	33		374						
7	8		528						
10									
	8		512						
11	8		511						
16	8		528						
18	61	26	332						
19	35	Ç	921						
20	47	25	556						
22	31	18	333						
Effort by	Locality and Perio	ad							
•	•		1 T						
	ocality Number of 1		_						
1	CK	9	242						
1	CR	10	300						
1	HB	12	293						
1	LC	11	250						
10	LC	8	512						
11	LC	8	511						
16	LC	8	528						
18	BT	6	238						
18	LC	45	2128						
18	LT	6	182						
18	NN	4	84						

221

227

9

9

		_	
19	HB	9	247
19	LC	8	226
2	CR	9	283
2	HB	11	271
2	LC	10	199
20	BT	2	96
20	LC	34	2163
20	LT	7	171
20	NN	4	126
22	BT	3	90
22	LC	24	1646
22	LT	2	52
22	NN	2	46
3	CR	9	269
3	HB	7	184
3	LC	9	167
6	CK	8	248
6	CR	9	250
6	HB	6	134
6	LC	10	242
7	LC	8	528

Effort by Strata and Period Period Strata Number of Transects Total Length (m)

eriod	Strata	Number	of	Transects	Total	Length	(m)
1	N_N			8			149
1	Y_N			34			937
10	N_N			4			256
10	N_PILOT			4			256
11	N_N			4			255
11	N_PILOT			4			256
16	N_N			4			264
16	N_PILOT			4			264
18	N_N			18			571
18	N_Y			13			962
18	Y_N			26			723
18	Y_Y			4			376
19	N_N			5			80
19	Y_N			30			841
2	N_N			8			148
2	Y_N			22			605
20	N_N			18			590
20	N_PILOT			1			23
20	N_Y			6			888
20	Y_N			17			602
20	Y_Y			5			454
22	N_N			13			372
22	N_Y			5			652
22	Y_N			7			202
22	Y_Y			6			607
3	N_N			8			147
3	Y_N			17			472
6	N_N			8			178
6	Y_N			25			695
7	N_N			8			528

Effort Plot Summaries for all Periods

Total Transect Length Sampled by Locality

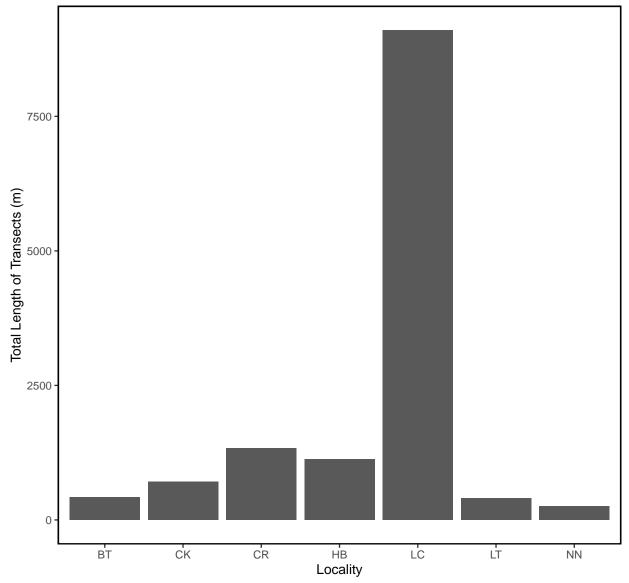


Figure – Bar plot of total transect length in meters sampled by locality for all periods.

Total Transect Length Sampled by Strata

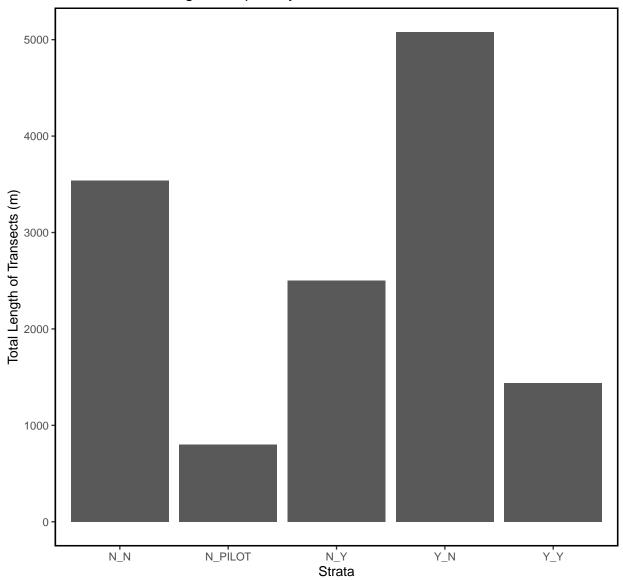


Figure – Bar plot of total transect length in meters sampled by strata for all periods.

Total Transect Length Sampled by Period

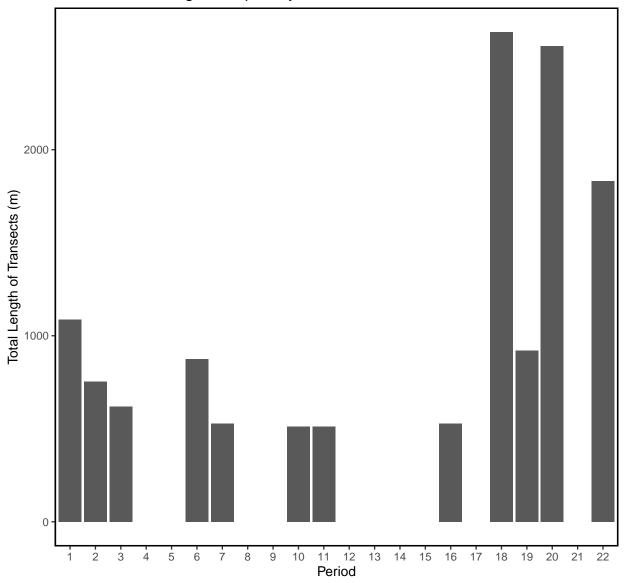


Figure – Bar plot of total transect length in meters sampled by period for all periods.

Summary Tables for all Periods

These summaries display summary statistics of live oysters by locality, strata, and period. These contain all data collected on the oyster transects.

The summary statistics include:

- Locality or Strata or Period Mean
- Median
- Standard Deviation (SD)
- Variance (Var)
- Coefficient of variation (CV)
- Standard Error (SE)
- Lower 95% Confidence Interval assuming normal distribution (L95)
- Upper 95% Confidence Interval assuming normal distribution (U95)
- Bootstrap Mean (Bstrap Mean)
- Lower 95% Confidence Interval from Bootstrap Values (L95 Bstrap)
- Upper 95% Confidence Interval from Bootstrap Values (U95 Bstrap)

Live Count Statistics for all Periods

Live Oyster Co	unts by L	ocality								
Locality Mean	Median	SD	Var	CV	SE	L95	U95	Bstrap_Mean	L95_Bstrap	U95_Bstrap
BT 1805	897 2	435 5931	263 1	.35	734	366	3245	1809	732	3442
CK 857	444 1	.091 1190	933 1	.27	214	438	1277	856	483	1281
CR 1026	716 1	.035 1072	2162 1	.01	153	727	1325	1028	754	1340
HB 902	364 1	.047 1095	622 1	.16	158	592	1211	897	602	1205
LC 1038	677 1	.318 1737	645 1	. 27	98	845	1230	1036	860	1238
LT 1054	877	645 416	505 0	.61	167	728	1381	1048	761	1392
NN 720	649	644 414	1522 0	.89 :	204	321	1119	729	405	1134
T: 0	. 1 0									
Live Oyster Co	•			777	an.		1105	D	105 D .	HOE D
Strata Mean						L95		Bstrap_Mean		
N_N 995		87 11817					1203	995	815	1216
N_PILOT 1046			353 0.6				1386	1051	730	1384
N_Y 2194		26 45193						2177		3066
Y_N 793			984 1.3			656		791	662	940
Y_Y 1956	1506 23	49 55201	.47 1.2	20 6	07	767	3145	1932	1003	3193
Live Oyster Co	unts by P	Period								
Period Mean M	•		ar C	ı çı	r i	95	1105 1	Bstrap_Mean 1	O5 Retran I	105 Retran
1 1404	1018 128							1406	1053	1795
2 890	476 94		27 1.06				1234	897	547	1225
3 738	296 81		34 1.1				1065	725	421	1038
6 433	176 53		01 1.23			245	621	434	266	632
7 50			36 1.12			11	90	49	20	91
10 1207	1074 67		0.56				1672	1211	786	1689
11 886	776 67		0.7				1356	882	446	1361
16 494	366 46		55 0.9			170	817	503	215	820
18 982	695 93		33 0.9				1217	981	752	1213
19 555	329 57		31 1.03			365	745	553	366	738
20 1844	1253 212							1844	1304	2491
22 1155	679 126	9 160920	2 1.10	228	8 7	709	1602	1163	769	1626

Live Density Statistics for all Periods

Live Dens	ity by	y Local	ity										
Locality	Mean	Median	SD	Var	CV	SE	L95	U95	Bstr	ap_Mean	L95_Bstra	ap U95	_Bstrap
ВТ	262	218	207	42972	0.79	63	140	385		262	16	36	380
CK	241	112	321	102795	1.33	63	118	365		241	12	28	372
CR	288	181	294	86231	1.02	43	203	373		290	20)9	374
HB	257	101	303	92052	1.18	46	168	347		254	16	66	341
LC	155	121	152	23011	0.98	3 11	133	177		155	13	33	177
LT	274	239	152	23145	0.56	39	197	351		276	20)6	350
NN	215	154	234	54714	1.09	74	70	360		213	10)6	363
N_N N_PILOT N_Y Y_N	Mean 1 262	Median 183 111 136 117	SD 264 60 99 221	Var 69745 1 3604 0 9743 0 48797 1 7937 0	.01 2 .54 1 .67 2 .15 1	26 2: .7 : 20 1: .7 1:	12 31 79 14 08 18 59 22	13 14 87 24		_Mean L9 262 111 149 191 119	95_Bstrap 211 82 110 159 77		strap 311 145 187 225 162
Live Dens	ity by	y Perio	d										
Period M	ean Me	edian	SD	Var	CV	SE	LS	95	U95	Bstrap_1	Mean L95_H	Bstrap	U95_Bstra
1	393 3	300.8 3	62.6	131444						_	97.0	289.2	
2	255 :	119.0 2	85.2	81348	1.12	53	151.	3 3!	58.9	2	53.7	160.0	365.
3	23/	85 3 2	60 3	72523	1 15	55	126	1 3/	11 6	2.	33 N	135 8	335

nsity	by Per	iod								
Mean	${\tt Median}$	SD	Var	CV	SE	L95	U95	${\tt Bstrap_Mean}$	L95_Bstrap	U95_Bstrap
393	300.8	362.6	131444	0.92	56	283.8	503.1	397.0	289.2	515.6
255	119.0	285.2	81348	1.12	53	151.3	358.9	253.7	160.0	365.5
234	85.3	269.3	72523	1.15	55	126.1	341.6	233.0	135.8	335.7
122	72.2	150.9	22769	1.24	27	68.6	174.9	119.5	68.3	171.6
5	2.9	5.6	31	1.12	2	1.1	8.9	5.1	1.8	9.3
124	113.3	67.4	4536	0.54	24	76.9	170.3	123.8	83.5	170.0
90	79.5	67.8	4596	0.75	24	43.4	137.4	91.0	51.3	136.4
49	36.3	46.4	2154	0.95	16	16.9	81.2	49.6	22.3	80.0
177	154.5	130.8	17117	0.74	17	144.3	210.0	177.5	146.0	211.5
160	85.6	171.9	29552	1.08	29	102.9	216.8	159.6	107.5	215.7
258	202.8	187.6	35185	0.73	27	204.4	311.7	257.4	206.9	318.2
125	120.6	66.8	4458	0.53	12	101.5	148.5	125.1	102.0	148.8
	Mean 393 255 234 122 5 124 90 49 177 160 258	Mean Median 393 300.8 255 119.0 234 85.3 122 72.2 5 2.9 124 113.3 90 79.5 49 36.3 177 154.5 160 85.6 258 202.8	393 300.8 362.6 255 119.0 285.2 234 85.3 269.3 122 72.2 150.9 5 2.9 5.6 124 113.3 67.4 90 79.5 67.8 49 36.3 46.4 177 154.5 130.8 160 85.6 171.9 258 202.8 187.6	Mean Median SD Var 393 300.8 362.6 131444 255 119.0 285.2 81348 234 85.3 269.3 72523 122 72.2 150.9 22769 5 2.9 5.6 31 124 113.3 67.4 4536 90 79.5 67.8 4596 49 36.3 46.4 2154 177 154.5 130.8 17117 160 85.6 171.9 29552 258 202.8 187.6 35185	Mean Median SD Var CV 393 300.8 362.6 131444 0.92 255 119.0 285.2 81348 1.12 234 85.3 269.3 72523 1.15 122 72.2 150.9 22769 1.24 5 2.9 5.6 31 1.12 124 113.3 67.4 4536 0.54 90 79.5 67.8 4596 0.75 49 36.3 46.4 2154 0.95 177 154.5 130.8 17117 0.74 160 85.6 171.9 29552 1.08 258 202.8 187.6 35185 0.73	Mean Median SD Var CV SE 393 300.8 362.6 131444 0.92 56 255 119.0 285.2 81348 1.12 53 234 85.3 269.3 72523 1.15 55 122 72.2 150.9 22769 1.24 27 5 2.9 5.6 31 1.12 2 124 113.3 67.4 4536 0.54 24 90 79.5 67.8 4596 0.75 24 49 36.3 46.4 2154 0.95 16 177 154.5 130.8 17117 0.74 17 160 85.6 171.9 29552 1.08 29 258 202.8 187.6 35185 0.73 27	Mean Median SD Var CV SE L95 393 300.8 362.6 131444 0.92 56 283.8 255 119.0 285.2 81348 1.12 53 151.3 234 85.3 269.3 72523 1.15 55 126.1 122 72.2 150.9 22769 1.24 27 68.6 5 2.9 5.6 31 1.12 2 1.1 124 113.3 67.4 4536 0.54 24 76.9 90 79.5 67.8 4596 0.75 24 43.4 49 36.3 46.4 2154 0.95 16 16.9 177 154.5 130.8 17117 0.74 17 144.3 160 85.6 171.9 29552 1.08 29 102.9 258 202.8 187.6 35185 0.73 27 204.4	Mean Median SD Var CV SE L95 U95 393 300.8 362.6 131444 0.92 56 283.8 503.1 255 119.0 285.2 81348 1.12 53 151.3 358.9 234 85.3 269.3 72523 1.15 55 126.1 341.6 122 72.2 150.9 22769 1.24 27 68.6 174.9 5 2.9 5.6 31 1.12 2 1.1 8.9 124 113.3 67.4 4536 0.54 24 76.9 170.3 90 79.5 67.8 4596 0.75 24 43.4 137.4 49 36.3 46.4 2154 0.95 16 16.9 81.2 177 154.5 130.8 17117 0.74 17 144.3 210.0 160 85.6 171.9 29552 1.0	Mean Median SD Var CV SE L95 U95 Bstrap_Mean 393 300.8 362.6 131444 0.92 56 283.8 503.1 397.0 255 119.0 285.2 81348 1.12 53 151.3 358.9 253.7 234 85.3 269.3 72523 1.15 55 126.1 341.6 233.0 122 72.2 150.9 22769 1.24 27 68.6 174.9 119.5 5 2.9 5.6 31 1.12 2 1.1 8.9 5.1 124 113.3 67.4 4536 0.54 24 76.9 170.3 123.8 90 79.5 67.8 4596 0.75 24 43.4 137.4 91.0 49 36.3 46.4 2154 0.95 16 16.9 81.2 49.6 177 154.5 130.8 17117	Mean Median SD Var CV SE L95 U95 Bstrap_Mean L95_Bstrap 393 300.8 362.6 131444 0.92 56 283.8 503.1 397.0 289.2 255 119.0 285.2 81348 1.12 53 151.3 358.9 253.7 160.0 234 85.3 269.3 72523 1.15 55 126.1 341.6 233.0 135.8 122 72.2 150.9 22769 1.24 27 68.6 174.9 119.5 68.3 5 2.9 5.6 31 1.12 2 1.1 8.9 5.1 1.8 124 113.3 67.4 4536 0.54 24 76.9 170.3 123.8 83.5 90 79.5 67.8 4596 0.75 24 43.4 137.4 91.0 51.3 49 36.3 46.4 2154 0.95 1

Dead Count Statistics for all Periods

22 185

Dead Oyst	er Cou	ints b	y Lo	cality									
Locality	Mean	Media	n S	D Var	CV	SE	L95	U95	Bstrap_Me	ean L95_E	Sstrap	U95_Bstra	ıр
BT	348	17	8 33	3 111065	0.96	100.5	151.0	545	3	347	173	55	52
CK	78	3:	2 10	6 11170	1.36	37.4	4.3	151		78	17	15	52
CR	60	4	7 3	8 1444	0.63	12.7	35.2	85		60	39	8	36
HB	44	2	1 4	5 2000	1.02	14.9	14.8	73		44	19	7	72
LC	102	6	0 11	2 12502	1.10	9.4	83.7	120	1	103	87	12	22
LT	240	21	0 20	2 40850	0.84	52.2	137.2	342	2	241	148	34	ŀ7
NN	100	6	8 10	0 10018	1.00	31.7	38.1	162	1	L00	52	15	59
Dead Oyst	er Cou	ints b	y St	rata									
Strata	Mean N	Median	SD	Var	CV SI	E L95 T	J95 Bs ⁻	trap_	Mean L95_	Bstrap U	J95_Bst	rap	
N_N	156	78	197	38955 1	27 23	3 111 2	201		156	114		203	
N_PILOT	82	87	46	2136 0	56 13	3 57 :	108		82	60		110	
N_Y	74	54	91	8199 1	23 18	38	110		75	44		114	
Y_N	105	64	116	13559 1	11 13	3 79 :	131		106	82		132	
Y_Y	127	56	144	20777 1	14 37	7 54 2	200		127	63		205	
Dead Oyst	er Cou	ints b	у Ре	riod									
Period M	lean Me	edian	SD	Var (ev s	SE L	95 U95	Bsti	cap_Mean I	.95_Bstra	p U95	_Bstrap	
7	29	18	30	898 1.0	3 10	.6 8	.2 50		29	1	.1	49	
10	80	88	65	4245 0.8	32 23	.0 34	.5 125		80	3	39	126	
11	50	40	25	620 0.4	9 8	.8 33	.2 68		50	3	34	67	
16	44	28	41	1708 0.9	3 14	.6 15	.6 73		44	1	.9	71	
18	133	55	192	36903 1.4	4 24	.6 85	.1 182		134	8	38	186	
19	63	44	67	4548 1.0	8 11	.6 40	.0 85		63	4	<u>1</u> 2	86	
20	148	107	140	19727 0.9	5 20	.5 107	.6 188		148	11	.2	190	

184

127

246

108 164 27054 0.89 29.5 127.0 243

Dead Density Statistics for all Periods

Dead Oys	Dead Oyster Density by Locality										
Locali	ty Mean	Media	an SD	Var	CV	SE	L95 U	195 Bs	trap_Mean L9	5_Bstrap U9	5_Bstrap
I	3T 55	50.	.8 37	1332	0.66	11.0	33.8	77	55	34.7	77
(CK 21	11.	.3 28	757	1.29	9.7	2.3	40	22	6.0	41
(CR 20	13.	.8 15	235	0.77	5.1	10.0	30	20	11.7	30
I	HB 13	8.	0 14	201	1.12	4.7	3.4	22	13	5.5	23
]	LC 17	8.	5 21	425	1.23	1.7	13.4	20	17	13.6	20
]	LT 58	47.	1 40	1570	0.68	10.2	38.2	78	58	40.2	78
I	NN 28	16.	1 26	668	0.91	8.2	12.5	45	29	14.3	45
	_										
Dead Oys		•	•		arr	a =		***	5		
	a Mean) Var					Bstrap_Mean		
_	32.5						24.9		32.5	25.3	40.3
_	Г 8.5						6.1		8.5	6.4	11.2
_	Y 5.2						3.4		5.3	3.6	7.2
_	N 23.6		1 24.2				18.2			18.6	28.9
Y_Y	Y 8.6	7.9	6.6	3 43	0.76	1.70	5.3	12.0	8.6	5.6	11.9
Dead Oys	ster De	nsity	by Pe	eriod							
Period		•	•		- CV	SE	L95	U95	Bstrap_Mean	L95_Bstrap	U95_Bstrap
7	2.9	1.8	3.0	8.9	1.03	1.05	0.82	4.9	2.9	0.93	4.9
10	8.2	8.9	6.6	44.0	0.81	2.35	3.58	12.8	8.2	4.21	12.7
11	5.2	4.1	2.6	6.6	0.49	0.91	3.41	7.0	5.2	3.72	6.9
16	4.4	2.8	4.1	16.9	0.93	1.45	1.55	7.2	4.5	1.99	7.4
18	26.4	15.7	31.3	980.1	1.19	4.01	18.54	34.3	26.5	19.09	34.3
19	18.1	13.1	19.3	370.6	3 1.07	3.30	11.59	24.5	18.1	12.01	24.7
20	27.9	18.4	26.4	697.6	0.95	3.85	20.38	35.5	27.9	20.98	35.7
22	30.1	15.0	31.3	979.8	3 1.04	5.62	19.05	41.1	30.3	19.22	41.9

Summary Density Plots for all Periods

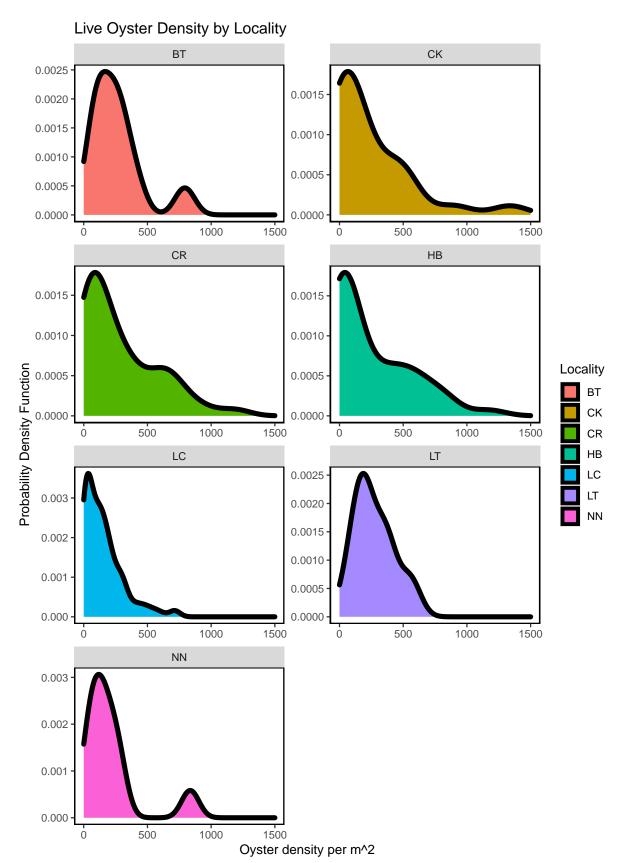


Figure – Calculated live oyster density by locality for all periods including period 22 (current period).

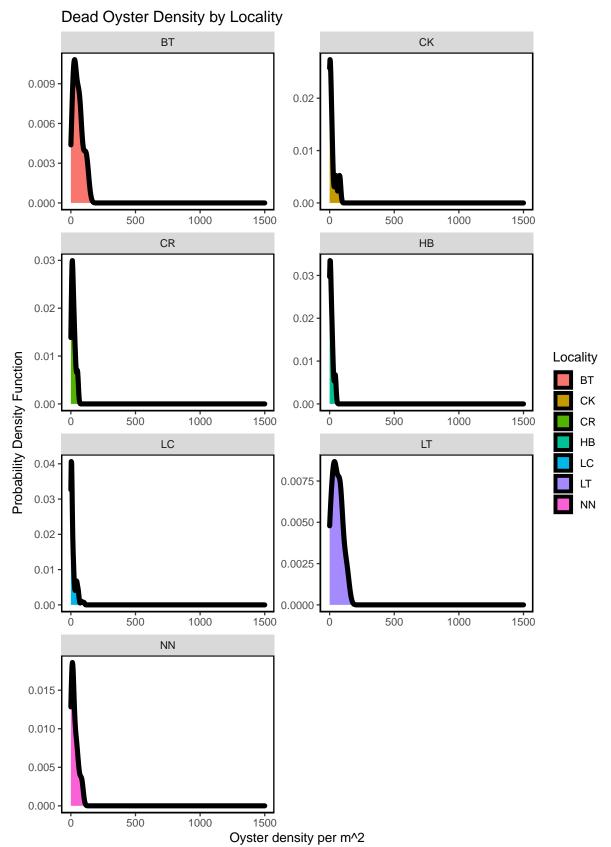


Figure – Calculated dead oyster density by locality for all periods including period 22 (current period).

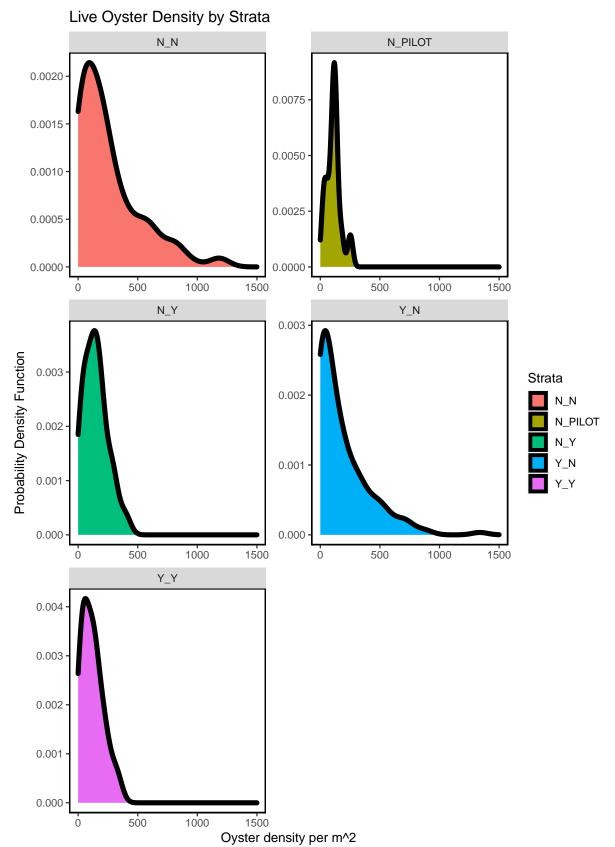


Figure – Calculated live oyster density by strata for all periods including period 22 (current period).

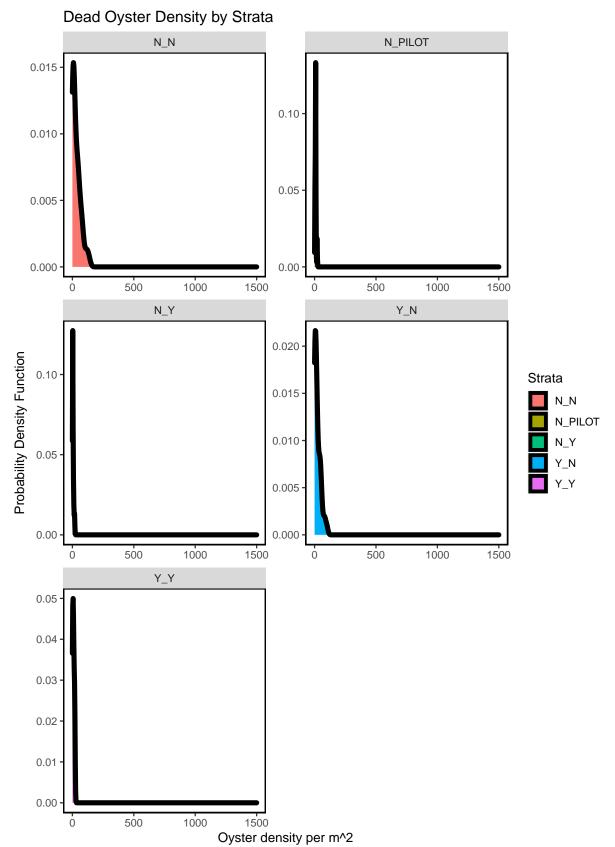


Figure – Calculated dead oyster density by strata for all periods including period 22 (current period).

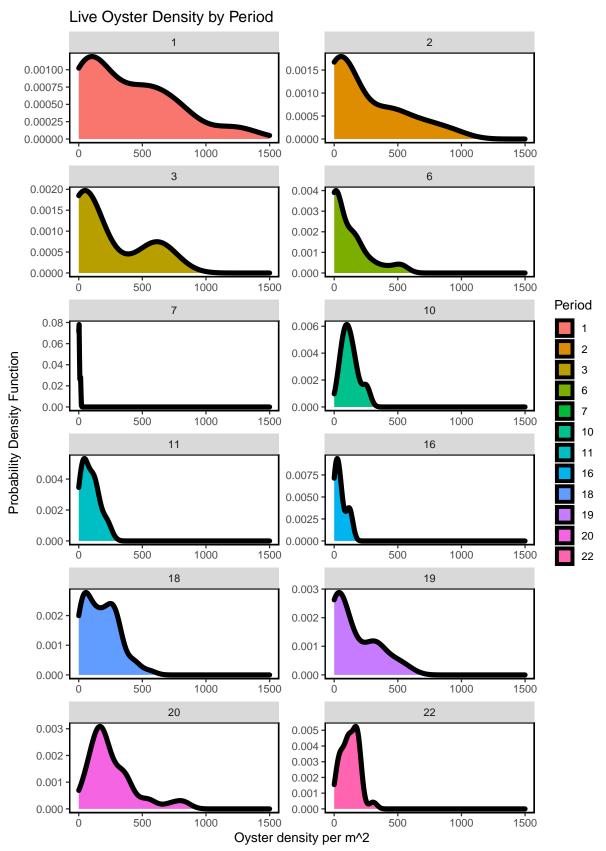


Figure – Calculated live oyster density for all periods including period 22 (current period) using a probability densit

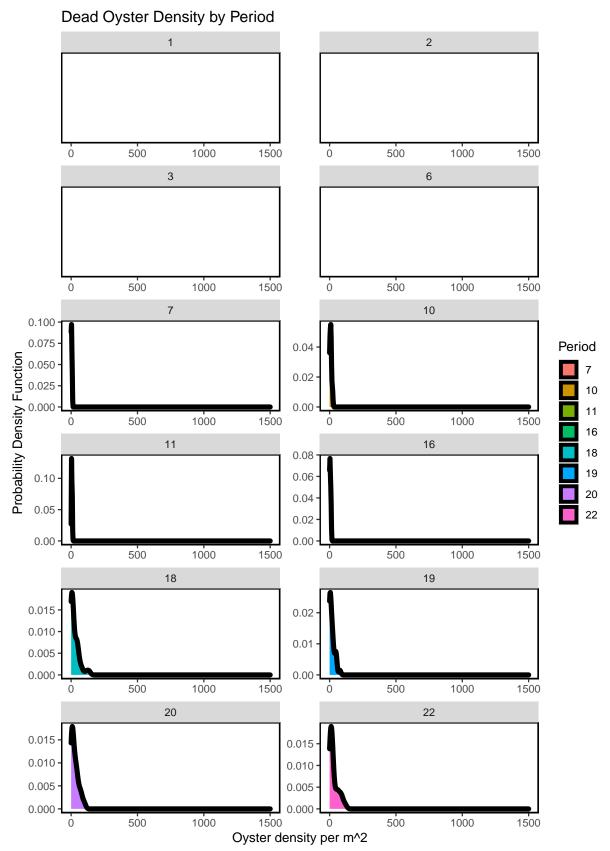


Figure- Calculated Dead oyster density for all periods including period 22 (current period) using a probability densit

Live Oyster Density by Locality

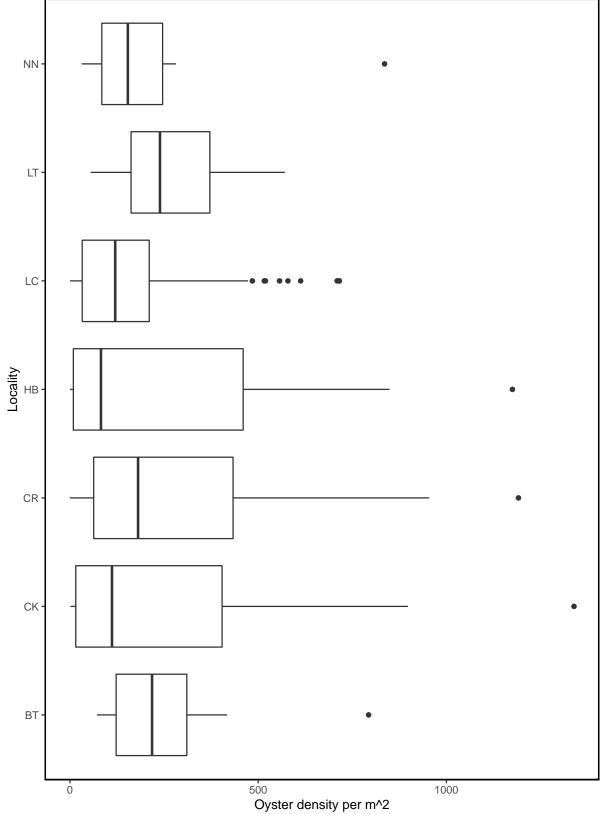


Figure – Box plot depicting live oyster density by locality for all periods including period 22 (current period).

Dead Oyster Density by Locality NN LT LC CR CK ВТ 50 100 Oyster density per m^2

Figure – Box plot depicting dead oyster density by locality for all periods including period 22 (current period).

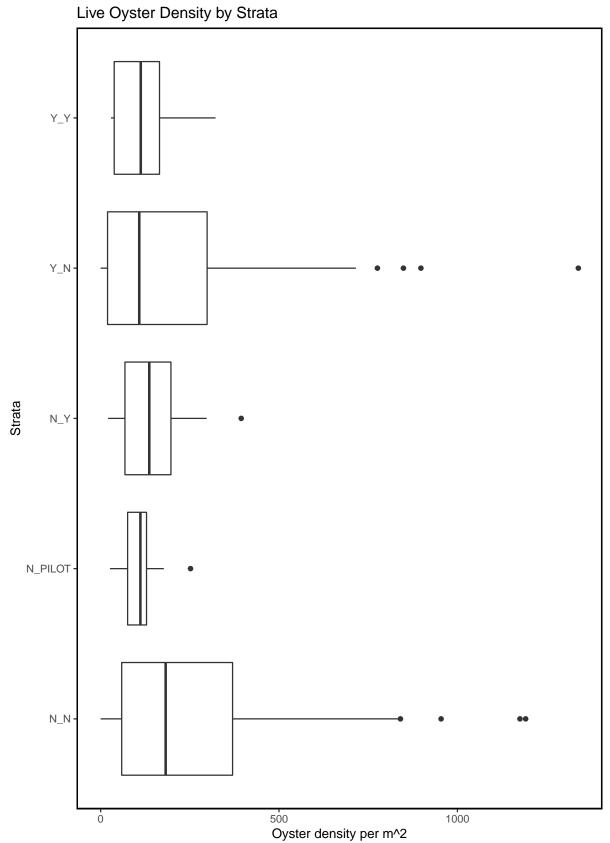


Figure – Box plot depicting live oyster density by strata for all periods including period 22 (current period).

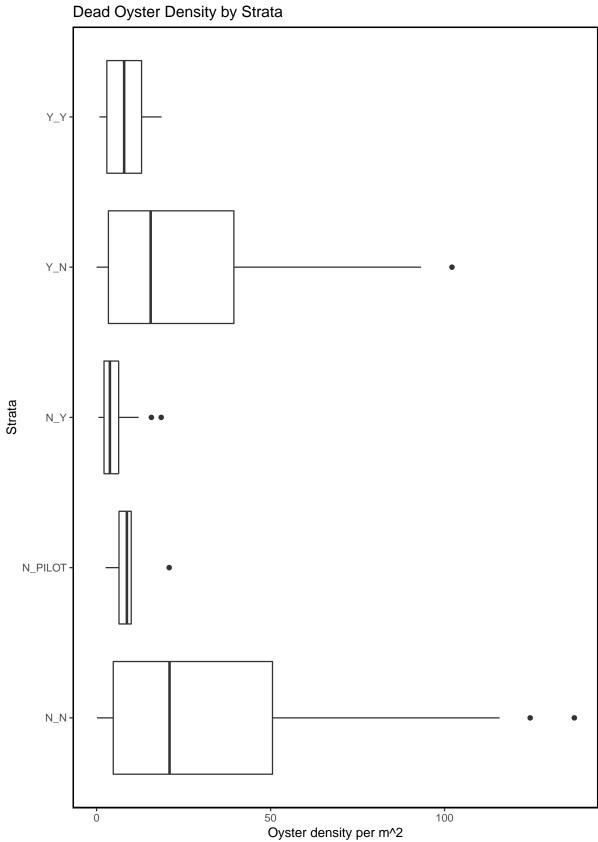


Figure – Box plot depicting dead oyster density by strata for all periods including period 22 (current period).

Live Oyster Density by Period

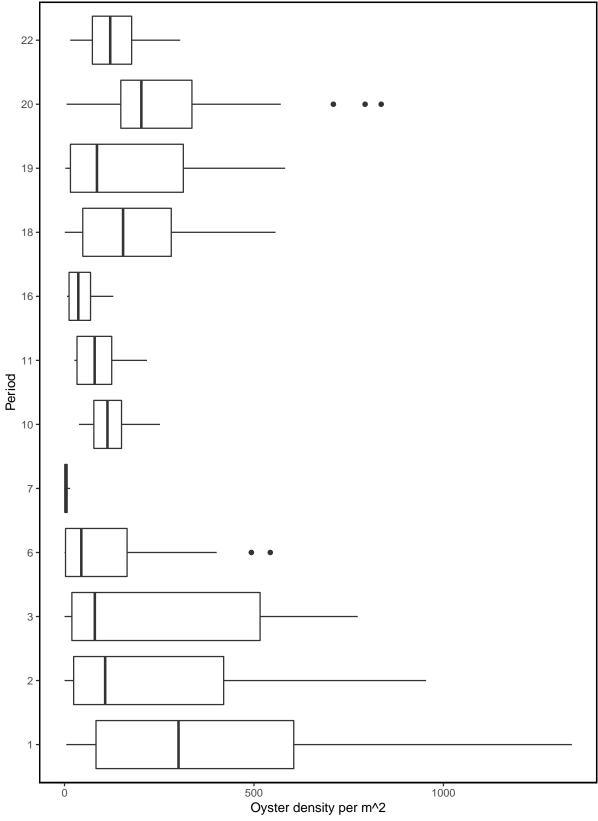


Figure – Box plot depicting live oyster density by period for all periods including period 22 (current period).

Dead Oyster Density by Period Period Oyster density per m^2

Figure – Box plot depicting dead oyster density by period for all periods including period 22 (current period).

Live Oyster Density by Locality and Period

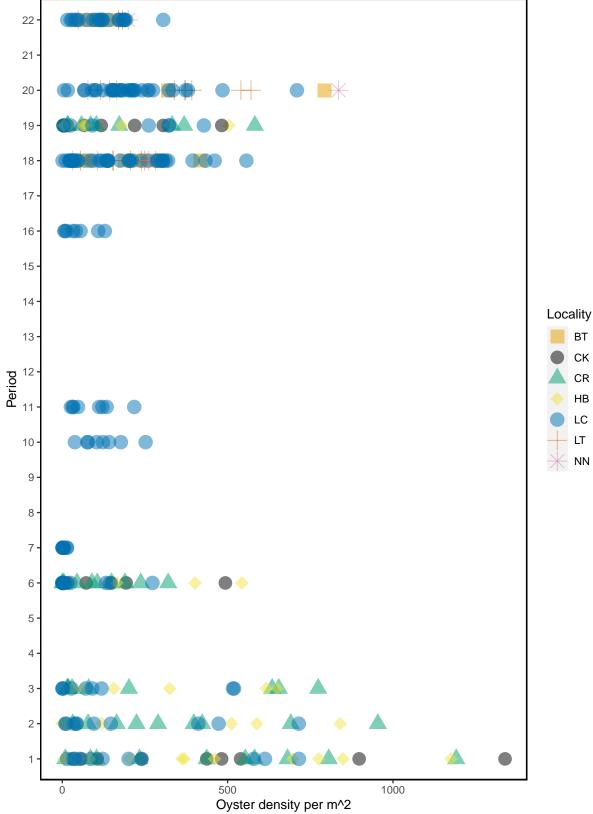


Figure – Live oyster density by locality and period for all periods including period 22 (current period).

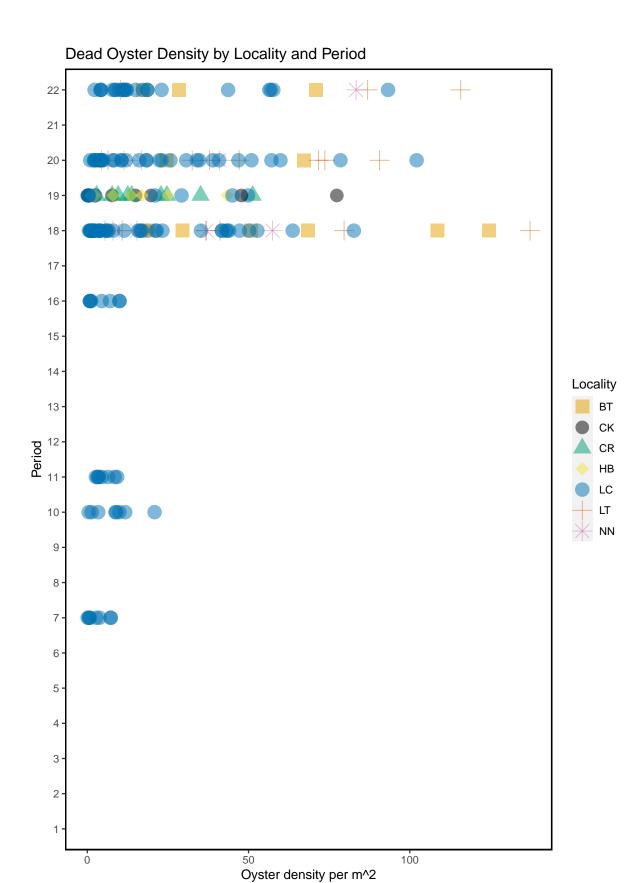


Figure – Dead oyster density by locality and period for all periods including period 22 (current period).

Live Oyster Density by Strata and Period

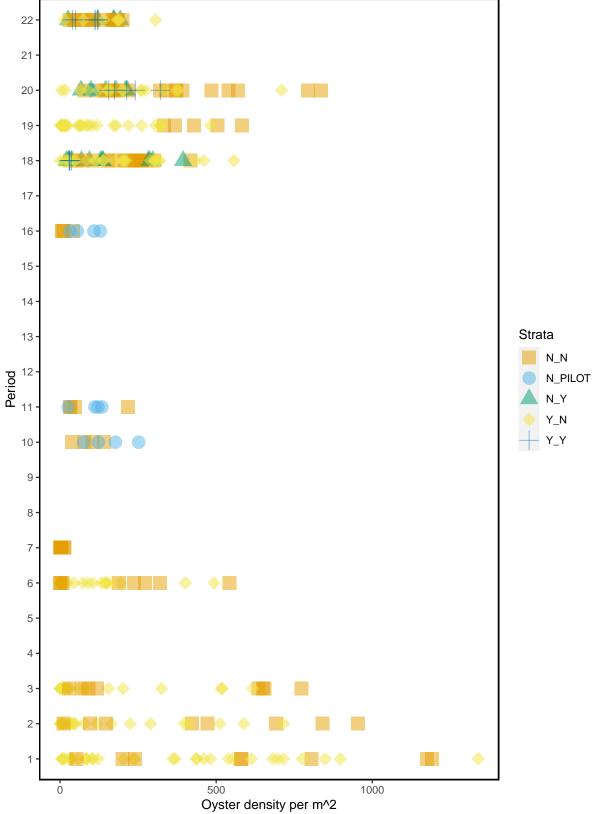


Figure – Live oyster density by strata and period for all periods including period 22 (current period).

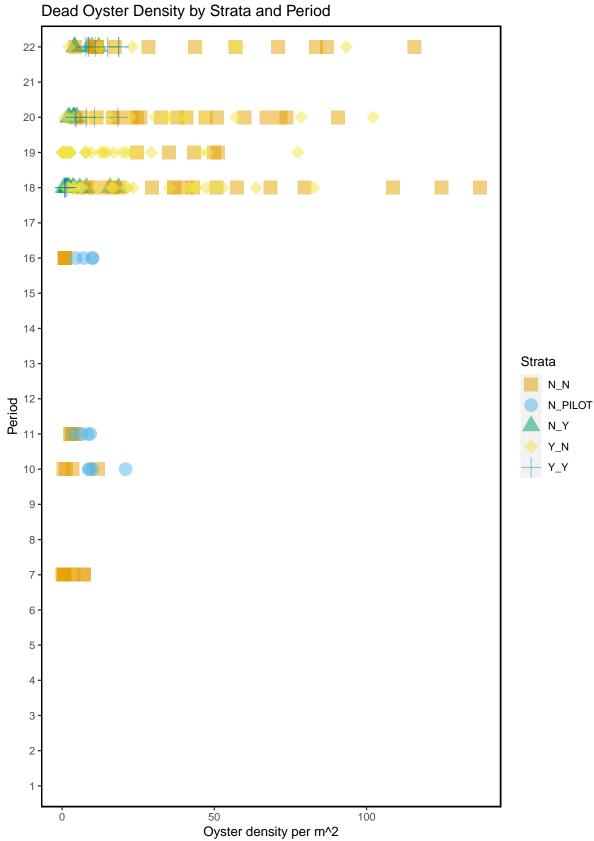


Figure – Dead oyster density by strata and period for all periods including period 22 (current period).

Live and Dead Count Comparison For All Periods

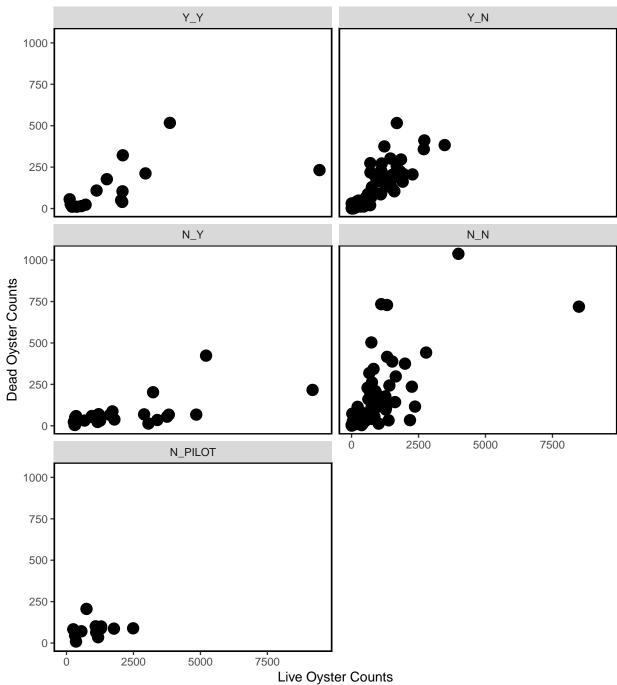


Figure- Live and dead oyster comparison for all periods, last sample date of period 22 is 2020-12-29.

Summary Plots for Pilot Study Sites

A subset of the oyster transect locations were sampled over time for a pilot study. Here we provide plots of live oyster counts and density for these pilot stations with Lone Cabbage (LCO10B, LCO11A, LCO8B, LCO9A).

Average Density by Station and Period

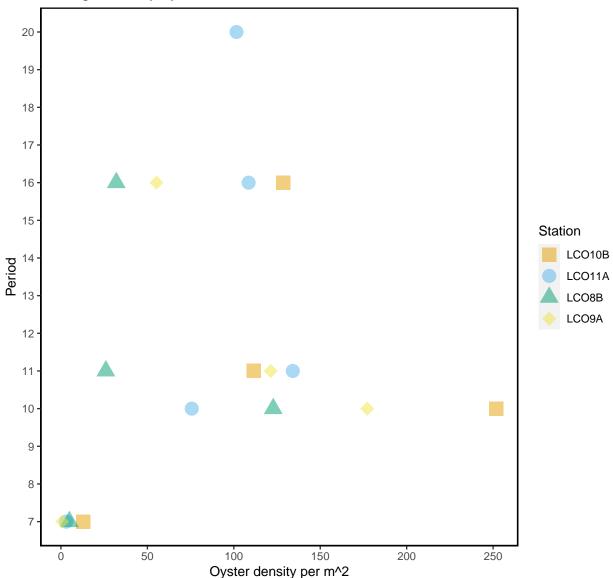


Figure - Average live oyster density comparison by station and period for all stations that were sampled during the pilc

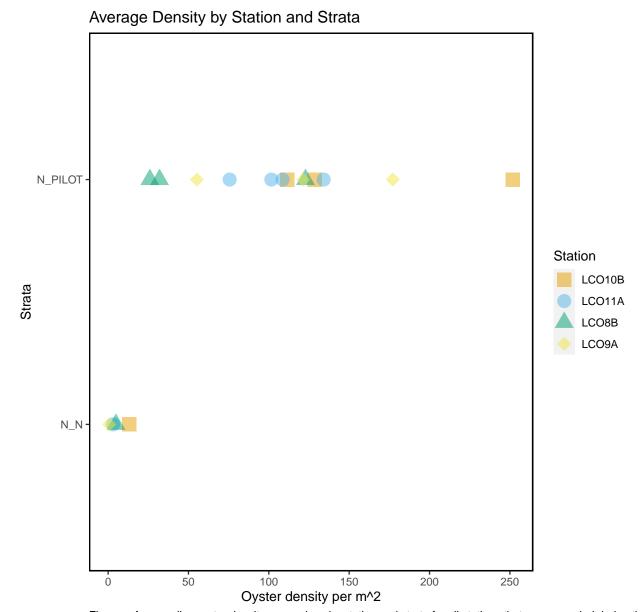


Figure – Average live oyster density comparison by station and strata for all stations that were sampled during the

Latest Data Entered

Displayed are the entries for the last date of sampling (2020-12-29).

date	${\tt station}$	$tran_length$	count_live	${\tt count_dead}$	${\tt treatment}$	strata
2020-12-29	LC022	2.5	22	7	rocks	Y_Y
2020-12-29	LC022	5.0	22	12	rocks	Y_Y
2020-12-29	LC022	7.5	8	3	rocks	Y_Y
2020-12-29	LC022	10.0	9	9	rocks	Y_Y
2020-12-29	LC022	12.5	18	14	rocks	Y_Y
2020-12-29	LC022	15.0	26	5	rocks	Y_Y
2020-12-29	LC022	17.5	14	6	rocks	Y_Y
2020-12-29	LC022	19.8	0	0	rocks	Y_Y
2020-12-29	LC021	2.5	7	2	rocks	Y_Y
2020-12-29	LC021	5.0	6	1	rocks	Y_Y
2020-12-29	LC021	7.5	1	0	rocks	Y_Y
2020-12-29	LC021	10.0	0	0	rocks	Y_Y
2020-12-29	LC021	10.5	0	0	rocks	Y_Y
2020-12-29	LC021	2.5	20	4	rocks	Y_Y
2020-12-29	LC021	5.0	69	6	rocks	Y_Y
2020-12-29	LC021	7.5	22	8	rocks	Y_Y
2020-12-29	LC021	10.0	32	4	rocks	Y_Y
2020-12-29	LC021	10.5	0	0	rocks	Y_Y