

FIGURE 1S

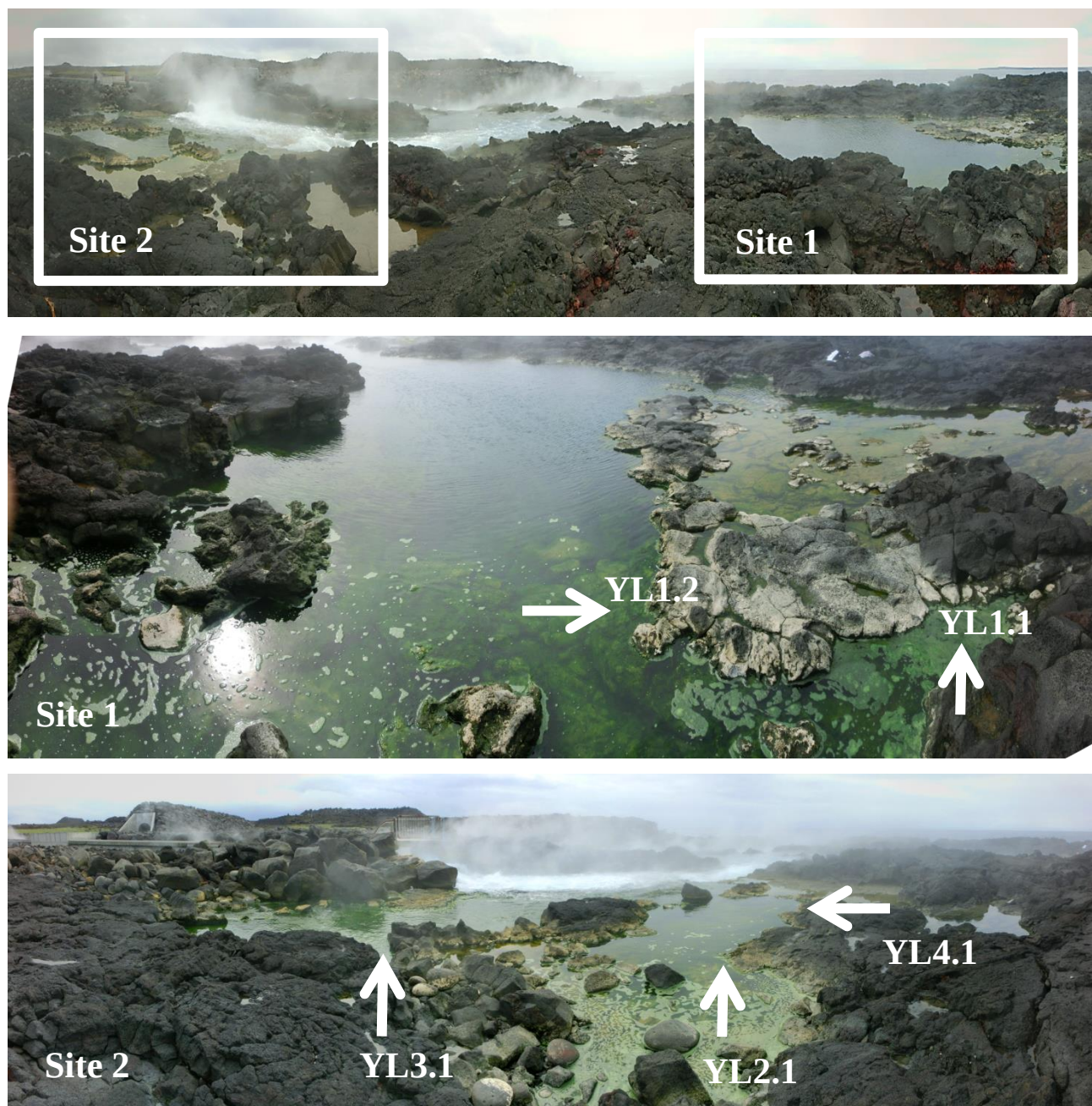


FIGURE 2S

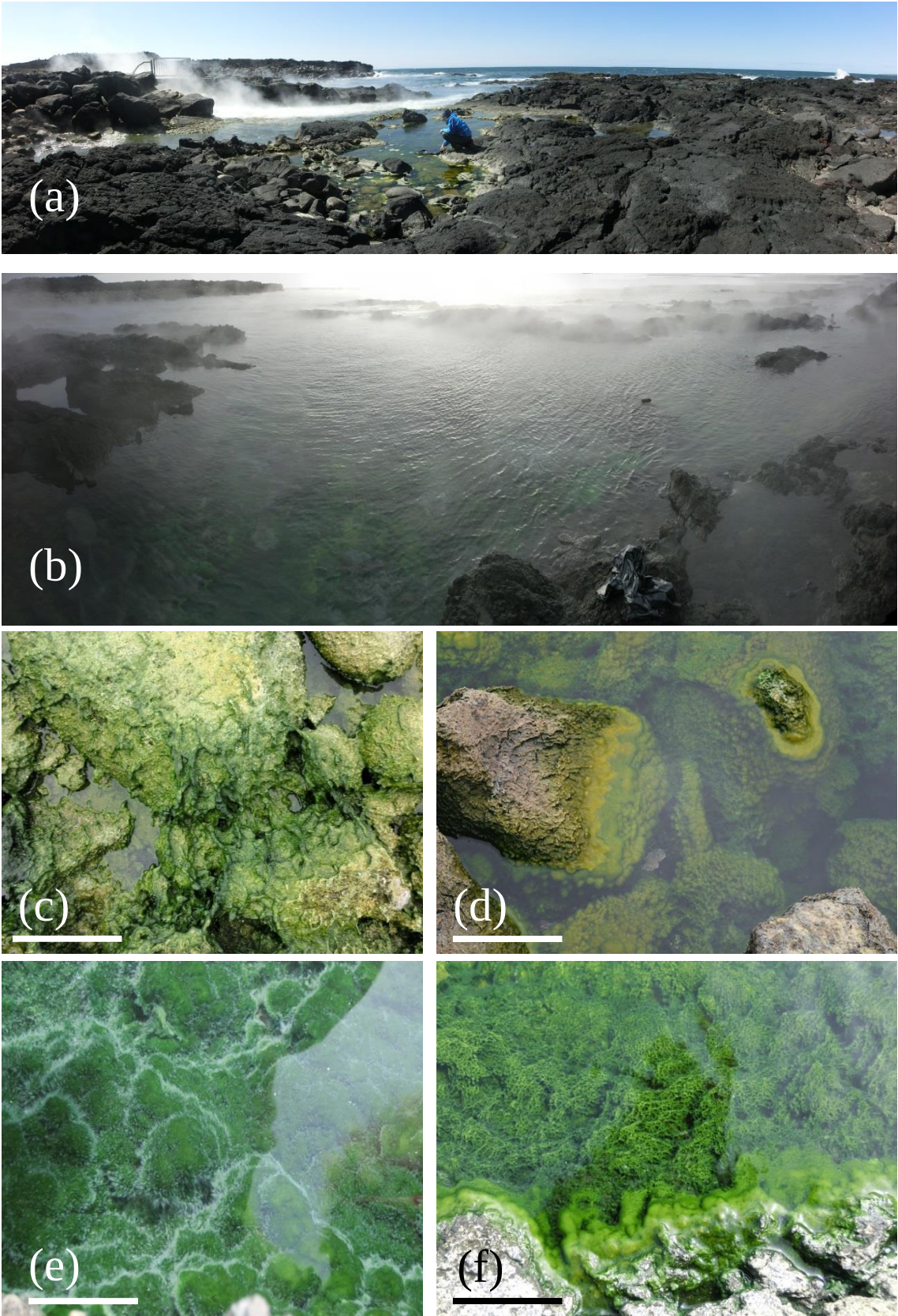


FIGURE 3S

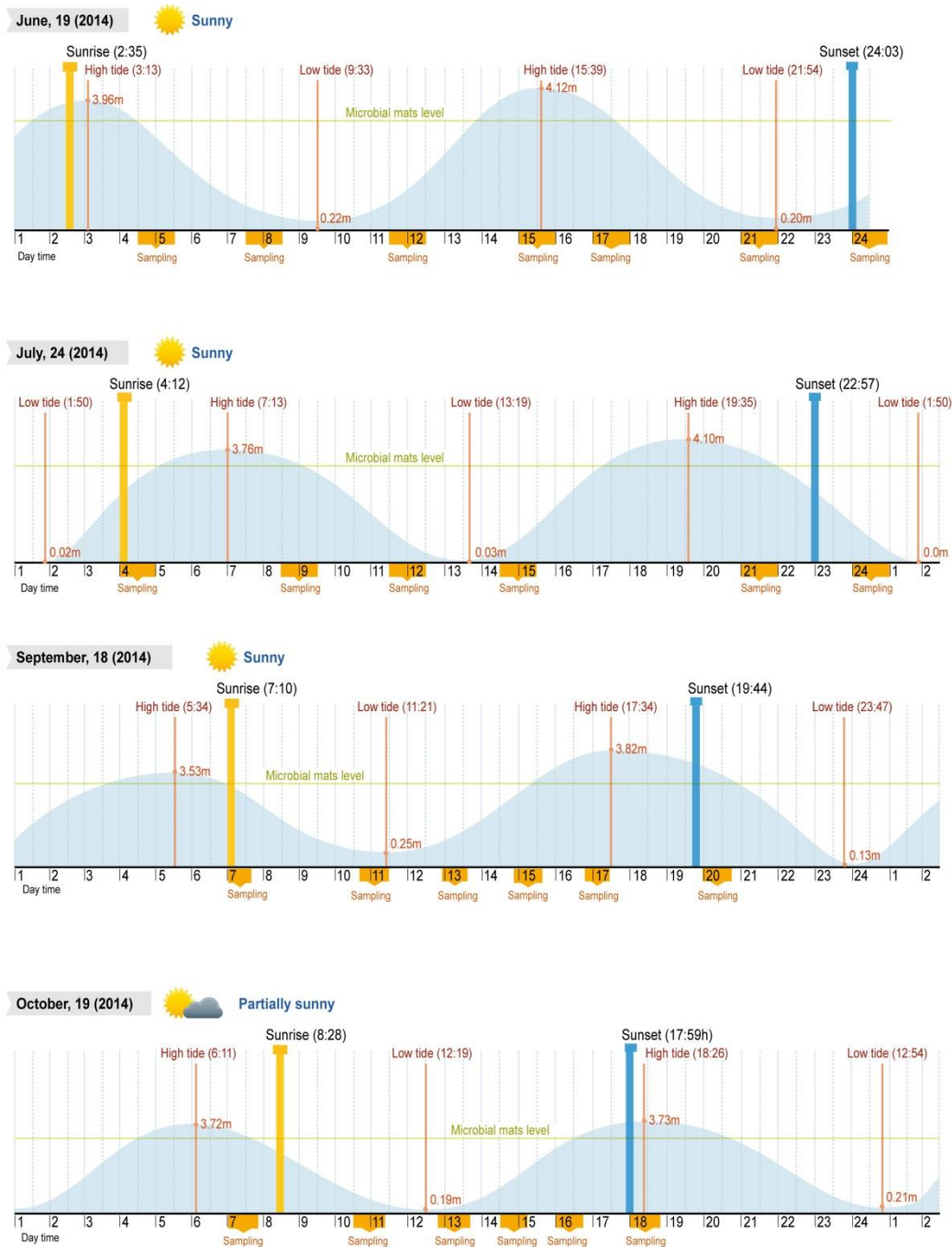


FIGURE 4S

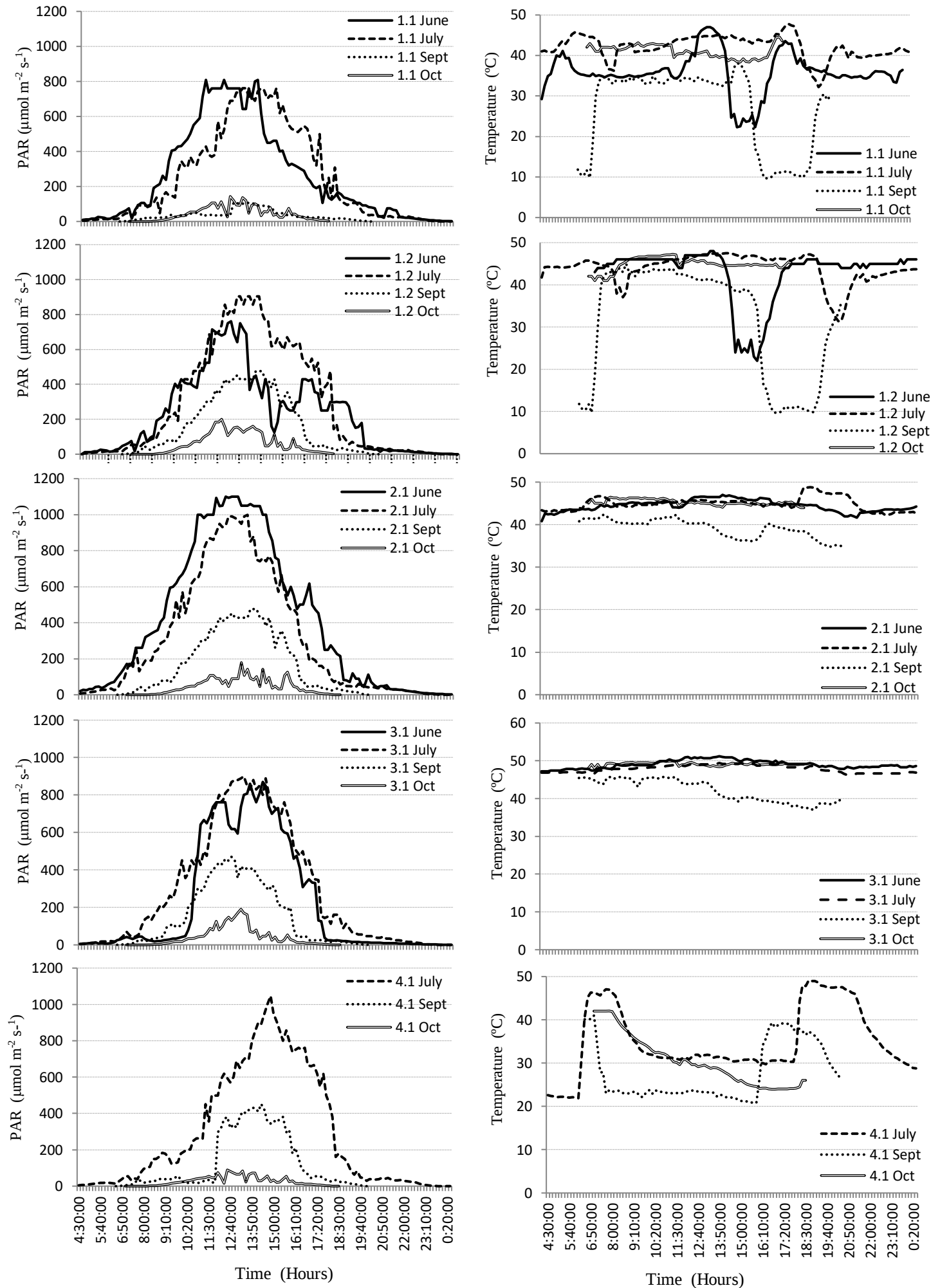


FIGURE 5S

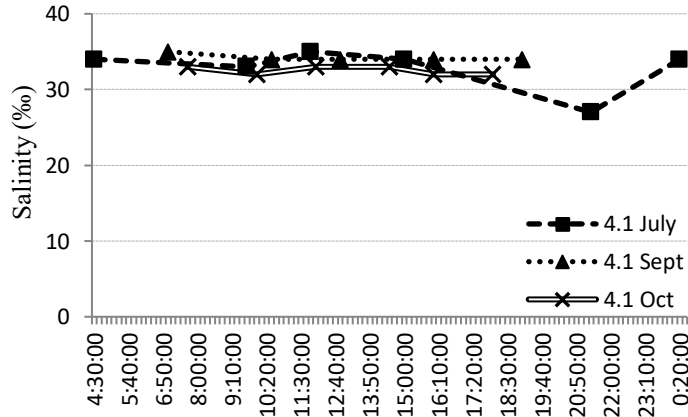
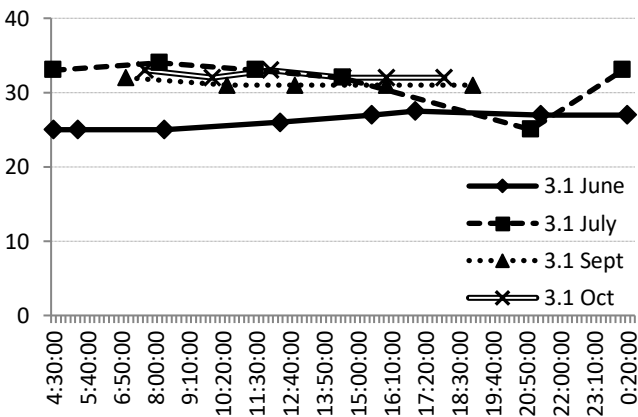
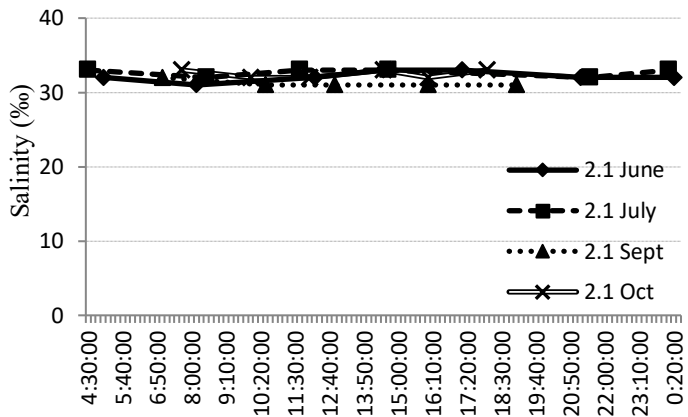
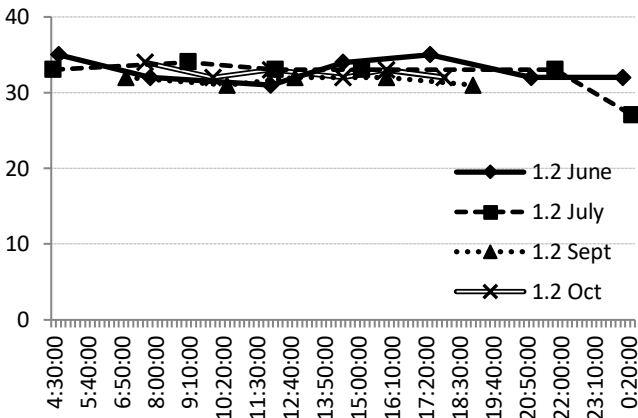
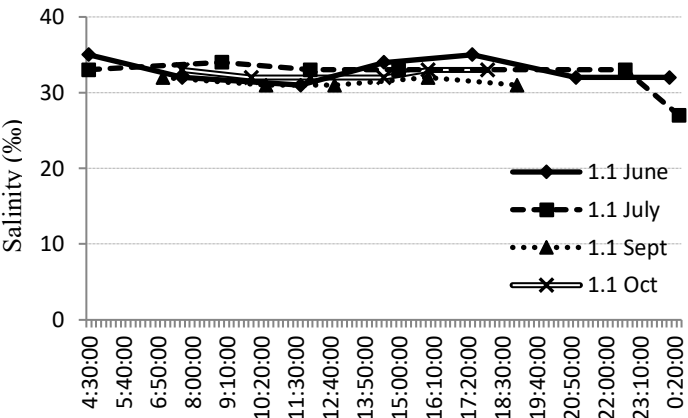


TABLE 1S. Results of Analysis of Variance (ANOVA) of $rETR_{max}$ and F_v/F_m values using day hours and month conditions as factors.

Source of Variation	rETR _{max}		F _v /F _m	
	F	P	F	P
Hour	46.065	<0.001	4.731	<0.001
Month	71.277	<0.001	31.203	<0.001
Hour x Month	8.990	<0.001	2.522	<0.005

All Pairwise Multiple Comparison Procedures (Holm-Sidak method).

Comparisons for factor: **Hour**. D=Dawn; MM=MidMorning; N=Noon; E=Evening; Ni=Night

Hour	rETR _{max}		F _v /F _m	
	t	P	t	P
N vs. D	11.844	<0.001	0.129	0.898
N vs. Ni	10.626	<0.001	1.515	0.343
N vs. E	8.040	<0.001	1.753	0.343
MM vs. D	7.177	<0.001	3.773	<0.010
MM vs. Ni	5.959	<0.001	2.129	0.241
N vs. MM	4.667	<0.001	3.644	<0.010
E vs. D	3.804	<0.001	1.882	0.313
MM vs. E	3.373	<0.010	1.891	0.348
E vs. Ni	2.586	<0.050	0.238	0.965
Ni vs. D	1.218	0.224	1.644	0.347

Comparisons for factor: **Month**

Month	rETR _{max}		F _v /F _m	
	t	P	t	P
June vs. Oct	11.515	<0.001	8.290	<0.001
July vs. Oct	11.402	<0.001	6.997	<0.001
June vs. Sept	8.959	<0.001	6.253	<0.001
July vs. Sept	8.846	<0.001	8.290	<0.001
Sept vs. Oct	2.556	<0.001	5.293	<0.050
June vs. July	2.113	<0.050	5.037	<0.050

TABLE 2S. Results of Analysis of Variance (ANOVA) of $rETR_{max}$ and F_v/F_m values for YL1.1 microbial mat using day hours and month conditions as factors.

Source of Variation	rETRmax		Fv/Fm	
	F	P	F	P
Month	8092.038	<0.001	712.157	<0.001
Hour	1435.004	<0.001	44.234	<0.001
Month x Hour	1024.315	<0.001	106.701	<0.001

All Pairwise Multiple Comparison Procedures (Holm-Sidak method).

Comparisons for factor: **Hour**. D=Dawn; MM=MidMorning; N=Noon; E=Evening; Ni=Night

Hour	rETRmax		Fv/Fm	
	t	P	t	P
N vs. D	60.169	<0.001	1.489	0.263
N vs. Ni	53.970	<0.001	3.164	<0.010
MM vs. D	50.689	<0.001	10.888	<0.001
MM vs. Ni	44.489	<0.001	6.235	<0.001
N vs. E	40.092	<0.001	2.047	0.129
MM vs. E	30.611	<0.001	11.447	<0.001
E vs. D	20.077	<0.001	0.558	0.579
E vs. Ni	13.878	<0.001	5.211	<0.001
N vs. MM	9.480	<0.001	9.399	<0.001
Ni vs. D	6.199	<0.001	4.653	<0.001

Comparisons for factor: **Month**

Month	rETRmax		Fv/Fm	
	t	P	t	P
July vs. Oct	135.966	<0.001	29.882	<0.001
July vs. Sept	133.695	<0.001	41.702	<0.001
July vs. June	94.496	<0.001	9.988	<0.001
June vs. Oct	41.470	<0.001	19.894	<0.001
June vs. Sept	39.199	<0.001	31.713	<0.001
Sept vs. Oct	2.271	<0.005	11.820	<0.001

TABLE 3S. Results of Analysis of Variance (ANOVA) of $rETR_{max}$ and F_v/F_m values for YL1.2 microbial mat using day hours and month conditions as factors.

Source of Variation	$rETR_{max}$		F_v/F_m	
	F	P	F	P
Month	1316.550	<0.001	88.781	<0.001
Hour	1570.122	<0.001	12.431	<0.001
Month x Hour	380.027	<0.001	29.222	<0.001

All Pairwise Multiple Comparison Procedures (Holm-Sidak method).

Comparisons for factor: **Hour**. D=Dawn; MM=MidMorning; N=Noon; E=Evening; Ni=Night

Hour	$rETR_{max}$		F_v/F_m	
	t	P	t	P
MM vs. D	68.806	<0.001	3.982	0.001
MM vs. Ni	57.971	<0.001	6.034	<0.001
N vs. D	48.297	<0.001	1.569	0.406
E vs. D	39.731	<0.001	1.629	0.437
N vs. Ni	37.463	<0.001	0.483	0.950
MM vs. E	29.075	<0.001	5.612	<0.001
E vs. Ni	28.896	<0.001	0.422	0.894
MM vs. N	20.508	<0.001	5.551	<0.001
Ni vs. D	10.835	<0.001	2.052	0.239
N vs. E	8.567	<0.001	0.0603	0.952

Comparisons for factor: **Month**

Month	$rETR_{max}$		F_v/F_m	
	t	P	t	P
June vs. Oct	53.695	<0.001	14.302	<0.001
June vs. Sept	44.717	<0.001	8.959	<0.001
July vs. Oct	41.558	<0.001	12.737	<0.001
July vs. Sept	32.581	<0.001	7.394	<0.001
June vs. July	12.137	<0.001	1.565	0.123
Sept vs. Oct	8.977	<0.001	5.343	<0.001

TABLE 4S. Results of Analysis of Variance (ANOVA) of $rETR_{max}$ and F_v/F_m values for YL4.1 microbial mat using day hours and month conditions as factors.

Source of Variation	rETRmax		Fv/Fm	
	F	P	F	P
Month	4363.291	<0.001	1.330	<0.001
Hour	506.964	<0.001	29.344	<0.001
Month x Hour	695.453	<0.001	18.723	<0.001

All Pairwise Multiple Comparison Procedures (Holm-Sidak method).

Comparisons for factor: **Hour**: D=Dawn; MM=MidMorning; N=Noon; E=Evening; Ni=Night

Hour	rETRmax		Fv/Fm	
	t	P	t	P
E vs. Ni	35.590	<0.001	0.352	0.925
E vs. D	34.152	<0.001	5.851	<0.001
MM vs. Ni	28.327	<0.001	0.000	1.000
MM vs. D	26.889	<0.001	5.499	<0.001
E vs. N	22.894	<0.001	8.248	<0.001
MM vs. N	15.631	<0.001	7.896	<0.001
N vs. Ni	12.696	<0.001	7.896	<0.001
N vs. D	11.258	<0.001	2.397	0.080
E vs. MM	7.262	<0.001	0.352	0.979
D vs. Ni	1.438	0.157	5.499	<0.001

Comparisons for factor: **Month**

Month	rETRmax		Fv/Fm	
	t	P	t	P
July vs. Oct	90.647	<0.001	1,529	0,349
July vs. Sept	64.874	<0.001	1,529	0,349
Sept vs. Oct	25.773	<0.001	1,256	0,385

TABLE 5S. Results of Analysis of Variance (ANOVA) of $rETR_{max}$ and F_v/F_m values for YL2.1 microbial mat using day hours and month conditions as factors.

Source of Variation	rETR _{max}		F _v /F _m	
	F	P	F	P
Month	7326.702	<0.001	64.685	<0.001
Hour	6949.901	<0.001	7.196	<0.001
Month x Hour	2403.682	<0.001	11.827	<0.001

All Pairwise Multiple Comparison Procedures (Holm-Sidak method).

Comparisons for factor: **Hour**: D=Dawn; MM=MidMorning; N=Noon; E=Evening; Ni=Night

Hour	rETR _{max}		F _v /F _m	
	t	P	t	P
N vs. D	147.497	<0.001	3.285	0.014
N vs. E	136.560	<0.001	1.202	0.551
N vs. Ni	117.367	<0.001	2.885	0.037
N vs. MM	97.603	<0.001	1.202	0.413
MM vs. D	49.895	<0.001	2.083	0.191
MM vs. E	38.957	<0.001	2.404	0.110
Ni vs. D	30.130	<0.001	0.401	0.690
MM vs. Ni	19.764	<0.001	1.683	0.337
Ni vs. E	19.193	<0.001	4.087	0.001
E vs. D	10.937	<0.001	4.487	<0.001

Comparisons for factor: **Month**

Month	rETR _{max}		F _v /F _m	
	t	P	t	P
June vs. Oct	142.538	<0.001	9.031	<0.001
June vs. Sept	102.747	<0.001	3.440	<0.001
July vs. Oct	75.875	<0.001	13.474	<0.001
June vs. July	66.662	<0.001	4.444	<0.001
Sept vs. Oct	39.791	<0.001	5.590	<0.001
July vs. Sept	36.085	<0.001	7.884	<0.001

TABLE 6S. Results of Analysis of Variance (ANOVA) of $rETR_{max}$ and F_v/F_m values for YL3.1 microbial mat using day hours and month conditions as factors.

Source of Variation	rETR _{max}		F _v /F _m	
	F	P	F	P
Month	2761.395	<0.001	97.508	<0.001
Hour	5907.339	<0.001	1.565	0.195
Month x Hour	1240.796	<0.001	1.904	0.052

All Pairwise Multiple Comparison Procedures (Holm-Sidak method).

Comparisons for factor: **Hour**: D=Dawn; MM=MidMorning; N=Noon; E=Evening; Ni=Night

Hour	rETR _{max}		F _v /F _m	
	t	P	t	P
N vs. Ni	135.110	<0.001	1.546	0.614
N vs. D	122.851	<0.001	4.292	1.000
N vs. E	115.280	<0.001	1.933	0.416
N vs. MM	90.729	<0.001	0.677	0.876
MM vs. Ni	44.381	<0.001	0.870	0.914
MM vs. D	32.122	<0.001	0.677	0.938
MM vs. E	24.551	<0.001	1.256	0.764
E vs. Ni	19.830	<0.001	0.387	0.910
D vs. Ni	12.259	<0.001	1.546	0.664
E vs. D	7.571	<0.001	1.933	0.450

Comparisons for factor: **Month**

Month	rETR _{max}		F _v /F _m	
	t	P	t	P
June vs. Oct	74.655	<0.001	8.039	<0.001
July vs. Oct	64.631	<0.001	1.383	0.172
June vs. Sept	62.058	<0.001	7.175	<0.001
July vs. Sept	52.034	<0.001	13.830	<0.001
Sept vs. Oct	12.597	<0.001	15.214	<0.001
June vs. July	10.024	<0.001	6.656	<0.001

TABLE 7S. Results of Analysis of Variance (ANOVA) of pigments values (Chl *a-b*, Phycobiliproteins and Carotenoids) using microbial mat and month conditions as factors.

Source of Variation	Chl <i>a-b</i>		Phycobiliproteins		Carotenoids	
	F	P	F	P	F	P
Microbial Mat	78.802	<0.001	48.100	<0.001	170.780	<0.001
Month	550.871	<0.001	505.966	<0.001	700.457	<0.001
Mat x Month	14.104	<0.001	19.882	<0.001	11.315	<0.001

All Pairwise Multiple Comparison Procedures (Holm-Sidak method).

Comparisons for factor: **Microbial Mat**

Microbial Mat	Chl <i>a-b</i>		Phycobiliproteins		Carotenoids	
	t	P	t	P	t	P
1.1 vs. 4.1	15,738	<0,001	9,882	<0.001	10.424	<0.001
2.1 vs. 4.1	13,556	<0,001	12,184	<0.001	17.268	<0.001
1.1 vs. 1.2	9,760	<0,001	4,879	<0.001	6.844	<0.001
1.1 vs. 3.1	8,266	<0,001	6,326	<0.001	13.881	<0.001
2.1 vs. 1.2	7,578	<0,001	7,181	<0.001	9.256	<0.001
3.1 vs. 4.1	7,472	<0,001	3,556	0,002	24.305	<0.001
2.1 vs. 3.1	6,084	<0,001	8,628	<0.001	7.037	<0.001
1.2 vs. 4.1	5,978	<0,001	5,003	<0.001	8.013	<0.001
1.1 vs. 2.1	2,182	0,061	2,302	0,046	2.411	0.017
3.1 vs. 1.2	1,494	0,138	1,446	0,151	16.293	<0.001

Comparisons for factor: **Month**

Month	Chl <i>a-b</i>		Phycobiliproteins		Carotenoids	
	t	P	t	P	t	P
Oct vs. June	38.035	<0.001	30.759	<0.001	40.711	<0.001
Oct vs. July	31.433	<0.001	27.639	<0.001	36.382	<0.001
Oct vs. Sept	22.637	<0.001	3.731	<0.001	17.473	<0.001
Sept vs. June	15.399	<0.001	27.028	<0.001	23.239	<0.001
Sept vs. July	8.797	<0.001	23.908	<0.001	18.909	<0.001
July vs. June	6.602	<0.001	3.120	0.002	4.329	<0.001