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Supplement of

Effects of wastewater treatment plant effluent inputs on planktonic metabolic rates and microbial community composition in the Baltic Sea

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Table S1. Nutrients (in μM) and metabolic rates ($\text{mmol O}_2 \text{ m}^{-3} \text{ d}^{-1}$) for all days and treatments for the four experiments.

Experiment	Day	Sample	Mean TDN (μM)	SE	Mean NO_2^-	SE	Mean NO_3^-	SE	NH4	SE	DON	SE	Mean DPA (μM)	SE	Mean PO_4^{3-}	SE	NCP	SD	GPP	SD	CR	SD	Temp.	SD	Mean BP ($\mu\text{g C L}^{-1} \text{ h}^{-1}$)	SE	Mean Chl.a ($\mu\text{g/l}$)	SE	DOC (μM)	SE
WWTP-S	T0	C	16.51	0.08	0.01	0.00	0.50	0.09	0.24	0.00	15.76	0.12	0.17	0.01	0.03	0.01	15.40	9.26	42.82	11.20	-27.41	1.94			5.98	0.34	6.49	0.01		
WWTP-S	T0	CD	12.59	0.29			0.35	0.02	0.49	0.07	11.74	0.30	0.21	0.05	0.02	0.00	16.92	4.64	43.01	7.87	-26.09	3.23			6.02	0.69	7.12	0.11	274.30	2.30
WWTP-S	T0	1:10	64.04	0.88	2.92	0.05	28.87	0.45	13.26	0.15	19.00	0.99	0.50	0.07	0.05	0.00	23.12	4.24	47.36	2.89	-24.24	7.12			5.15	0.46	6.98	0.19	387.42	2.03
WWTP-S	T0	1:5	110.89	2.11	4.79	0.13	46.84	1.32	26.82	1.13	32.44	2.73	0.63	0.03	0.10	0.01	22.78	5.78	46.74	2.29	-23.96	8.07			4.60	0.53	5.21	0.10		
WWTP-S	T0	IN	48.84	0.97	6.48	0.03	27.33	0.68	0.55	0.09	14.49	1.19	0.10	0.04	0.11	0.00	11.73	3.01	33.41	2.93	-21.68	5.94			4.16	0.35	6.50	0.31	272.07	3.18
WWTP-S	T1	C	17.63	0.46	0.03	0.02	0.32	0.06	0.16	0.02	17.12	0.46	0.15	0.01	0.03	0.01	3.22	1.13	35.81	2.26	-32.59	1.12	18.49	0.00	3.77	0.20	6.49	0.08	340.19	1.87
WWTP-S	T1	CD	12.01	1.05	0.03	0.00	0.44	0.05	0.17	0.02	11.37	1.05	0.12	0.00	0.02	0.00	5.56	1.68	31.10	10.25	-25.55	8.57	18.49	0.00	4.14	0.35	6.52	0.38	270.34	3.50
WWTP-S	T1	1:10	63.72	0.41	3.00	0.02	29.66	0.55	12.30	0.16	18.76	0.70	0.44	0.04	0.04	0.01	1.78	2.87	29.76	12.84	-27.98	9.97	18.49	0.00	5.97	0.73	4.83	0.01	390.36	1.41
WWTP-S	T1	1:5	113.07	1.30	5.90	0.01	58.96	2.77	21.01	3.58	27.19	4.71	0.59	0.01	0.05	0.01	3.83	1.62	33.80	2.17	-29.97	3.78	18.49	0.00	7.86	0.85	5.31	0.02	494.36	1.76
WWTP-S	T1	IN	45.50	0.59	6.07	0.20	25.98	1.13	0.12	0.02	13.33	1.26	0.12	0.01	0.06	0.02	3.95	0.44	26.87	7.20	-22.92	6.76	18.49	0.00	3.51	1.92	5.92	0.22	271.36	2.69
WWTP-S	T3	C	17.93	0.39			0.35	0.02	0.42	0.04	17.17	0.39	0.14	0.01	0.04	0.01	2.28	0.82	37.17	2.18	-34.89	1.35	18.50	0.00	4.28	0.22	5.63	0.05		
WWTP-S	T3	CD	12.92	0.21			0.51	0.11	0.15	0.05	12.26	0.24	0.19	0.08	0.03	0.01	1.47	1.69	31.85	2.84	-30.38	1.15	18.50	0.00	3.63	0.43	4.89	0.16	271.87	5.45
WWTP-S	T3	1:10	62.08	0.48	2.91	0.01	28.60	0.35	10.46	0.13	20.11	0.61	0.28	0.04	0.03	0.01	9.51	0.91	47.45	6.57	-37.94	5.66	18.50	0.00	4.24	0.20	8.83	0.15	387.63	1.76
WWTP-S	T3	1:5	107.64	0.76	5.86	0.02	59.08	1.03	24.24	0.22	18.45	1.30	0.56	0.03	0.03	0.01	9.86	0.04	43.71	9.20	-33.85	9.17	18.50	0.00	6.62	0.87	9.37	0.07	494.77	1.43
WWTP-S	T3	IN	44.58	1.36	6.22	0.04	25.40	1.01	0.09	0.03	12.87	1.70	0.10	0.01	0.02	0.00	10.39	1.03	45.27	10.96	-34.88	9.93	18.50	0.00	3.35	0.15	9.43	0.07	268.82	1.02
WWTP-S	T5	C	17.09	0.29	0.02	0.01	0.32	0.03	0.60	0.01	16.16	0.29	0.18	0.01	0.03	0.01	3.83	3.62	36.19	4.64	-32.36	1.02	18.37	0.00	5.25	0.79	5.90	0.00	349.01	2.42
WWTP-S	T5	CD	13.74	0.39	0.01	0.00	0.42	0.02	0.03	0.01	13.28	0.39	0.15	0.02	0.02	0.00	4.74	0.24	35.68	4.05	-30.93	3.81	18.37	0.00	2.83	0.21	5.31	0.11	275.01	1.79
WWTP-S	T5	1:10	59.98	0.54	2.73	0.02	28.52	1.03	9.32	0.12	19.41	1.17	0.31	0.01	0.03	0.00	10.89	0.57	42.75	4.15	-31.86	4.72	18.37	0.00	5.83	0.16	9.38	0.36	484.84	1.51
WWTP-S	T5	1:5	105.59	1.78	5.61	0.00	58.79	1.40	-0.47	0.06	41.66	2.26	0.49	0.03	0.03	0.00	15.23	2.63	56.52	1.11	-41.29	1.52	18.37	0.00	8.06	0.76	11.27	0.08	628.47	1.20
WWTP-S	T5	IN	41.75	0.18	5.83	0.02	22.92	0.34	18.70	0.56	-5.70	0.68	0.09	0.02	0.03	0.01	15.35	1.69	52.71	6.12	-37.36	4.43	18.37	0.00	5.71	0.16	11.48	0.57	488.08	2.38
WWTP-S	T7	C	16.77	0.63	0.01	0.01	0.36	0.05	0.01	0.00	16.40	0.63	0.12	0.03	0.03	0.00	20.17	5.78	54.16	5.31	-33.99	11.09	18.33	0.04	2.84	0.20	6.41	0.30	483.62	3.64
WWTP-S	T7	CD	13.99	1.03			0.33	0.03	0.06	0.03	13.60	1.03	0.11	0.01	0.03	0.00	8.20	7.29	36.11	11.34	-27.91	4.05	18.33	0.04	2.10	0.16	5.12	0.37	345.86	0.90
WWTP-S	T7	1:10	58.39	0.42	2.50	0.06	28.36	0.96	8.27	0.11	19.26	1.06	0.31	0.01	0.04	0.01	15.59	19.91	46.15	23.02	-30.56	3.11	18.33	0.04	3.95	0.77	9.68	0.14	554.98	12.74

Experiment	Day	Sample	Mean TDN (μM)	SE	Mean NO ₂ ⁻	SE	Mean NO ₃ ⁻	SE	NH ₄ ⁺	SE	DON	SE	Mean DPA (μM)	SE	Mean PO ₄ ³⁻	SE	NCP	SD	GPP	SD	CR	SD	Temp.	SD	Mean BP (μg C L ⁻¹ h ⁻¹)	SE	Mean Chl.a (μg/l)	SE	DOC (μM)	SE	
WWTP-S	T7	1:5	101.79	1.71	5.31	0.01	57.37	0.52	19.07	0.25	20.04	1.81	0.49	0.01	0.03	0.01	27.31	9.77	77.98	14.45	-50.67	4.68	18.33	0.04	5.85	0.51	15.23	0.34			
WWTP-S	T7	IN	39.64	0.42	5.69	0.01	21.18	0.22	0.01		12.76	0.48	0.10	0.02	0.04	0.00	36.69	1.49	85.67	7.13	-48.97	5.64	18.34	0.04	4.52	0.91	10.45	0.25	327.21	27.23	
WW-F	T0	C	20.99	0.34	0.21	0.05	2.64	0.32	0.23	0.03	17.91	0.47	0.24	0.03	0.39	0.02									0.39	0.04	1.76	0.04	318.45	9.42	
WW-F	T0	CD	16.84	0.37	0.21	0.02	2.57	0.26	0.47	0.01	13.59	0.45	0.19	0.02	0.50	0.03									0.29	0.03	1.66	0.12	245.16	3.20	
WW-F	T0	1:10	66.17	0.69	2.34	0.06	31.44	0.73	16.84	0.19	15.55	1.02	0.56	0.10	0.65	0.02									0.37	0.05	1.64	0.27	320.71	1.28	
WW-F	T0	1:5	114.85	1.26	2.97	0.10	42.80	1.77	31.29	0.23	37.79	2.18	0.78	0.04	0.47	0.02									0.37	0.01	1.60	0.04	393.78	3.56	
WW-F	T0	IN	63.11	0.44	2.89	0.15	30.75	1.80	0.21	0.01	29.26	1.85	0.03	0.01	0.40	0.03									0.32	0.02	1.30	0.11	274.08	14.45	
WW-F	T1	C	19.98	0.37	0.30	0.01	3.43	0.22	0.08	0.01	16.17	0.43		0.70	0.08	-8.83		14.61		-23.44			7.69	0.13	0.59	0.04	1.16	0.08	299.29	2.72	
WW-F	T1	CD	16.85	0.27	0.22	0.04	2.66	0.29	0.23	0.01	13.74	0.39		0.46	0.09	-10.86	0.08	13.31	1.96	-24.17	1.88		7.78	0.00	0.57	0.03	0.90	0.06	285.17	22.24	
WW-F	T1	1:10	58.25	3.82	2.09	0.05	29.62	1.26	16.43	0.13	10.11	4.03		0.56	0.03	-10.30		9.03		-19.04	0.41		7.69	0.13	0.69	0.02	0.89	0.14	434.00	10.94	
WW-F	T1	1:5	117.31	1.88	3.45	0.23	51.58	3.51	28.97	0.86	33.31	4.06		0.51	0.03	-9.49		6.59		-17.24	1.63		7.69	0.14	0.61	0.03	0.82	0.03	429.91	5.41	
WW-F	T1	IN	63.81	0.56	4.26	0.06	49.16	0.87	0.18	0.02	10.21	1.03		0.60	0.03	-10.15	2.49	5.28	1.41	-15.43	1.08		7.78	0.00	0.56	0.06	0.70	0.07	291.84	25.46	
WW-F	T3	C	19.99	0.59	0.28	0.05	3.20	0.26	0.05	0.01	16.46	0.64	0.14	0.04	0.68	0.07	2.89	1.64	22.38	3.02	-19.48	1.39		7.18	0.00	0.66	0.05	1.48	0.05	297.31	6.59
WW-F	T3	CD	15.47	0.76	0.12	0.02	2.24	0.10	0.09	0.01	13.02	0.76	0.16	0.01	0.32	0.05	1.76	1.21	21.09	0.85	-19.32	0.36		7.18	0.00	1.47	0.21	1.19	0.01	292.95	6.68
WW-F	T3	1:10	68.07	0.72	1.89	0.38	27.53	6.32	16.17	0.14	22.49	6.35	0.34	0.01	0.49	0.11	1.44	0.77	18.12	0.09	-16.68	0.68		7.18	0.00	1.86	0.49	1.52	0.04	311.10	6.53
WW-F	T3	1:5	116.68	0.84	3.12	0.02	47.73	1.13	31.29	0.33	34.53	1.45	0.70	0.03	0.45	0.02	1.25	0.46	14.79	1.05	-13.54	0.59		7.18	0.00	2.54	0.25	1.54	0.10	361.20	4.06
WW-F	T3	IN	61.72	1.20	2.53	0.48	28.50	5.42	-0.02	0.01	30.72	5.53	0.03	0.01	0.32	0.08	0.36	0.37	10.56	1.81	-10.20	1.44		7.18	0.00	1.14	0.04	0.97	0.04	227.31	2.33
WW-F	T5	C	18.74	0.53	0.30	0.01	3.44	0.06	0.29	0.01	14.72	0.53	0.15	0.03	0.86	0.02	2.23	1.17	25.77	0.54	-23.54	0.64		7.27	0.00	0.54	0.03	2.19	0.06	284.40	1.80
WW-F	T5	CD	15.63	0.22	0.23	0.03	2.59	0.18	0.26	0.00	12.55	0.28	0.10	0.01	0.54	0.05	2.90	0.08	27.08	1.63	-24.17	1.71		7.27	0.00	1.03	0.04	1.61	0.11	248.63	10.06
WW-F	T5	1:10	66.36	0.46	2.57	0.02	38.24	0.78	12.27	2.53	13.29	2.69	0.36	0.03	0.60	0.01	2.68	1.11	24.23	3.39	-21.55	2.28		7.27	0.00	1.84	0.09	3.65	0.20	294.46	2.23
WW-F	T5	1:5	117.00	0.86	5.05	0.06	80.66	2.08	30.36	0.50	0.93	2.31	0.65	0.01	0.69	0.04	3.24	0.47	20.29	0.10	-17.06	0.57		7.27	0.00	3.08	0.37	3.47	0.14	379.90	3.11
WW-F	T5	IN	63.35	0.45	3.83	0.67	44.56	8.75	0.04	0.02	14.92	8.74	0.05	0.02	0.52	0.10	2.24	2.27	15.68	1.79	-13.44	0.49		7.27	0.00	0.96	0.03	1.29	0.11	228.92	1.62

Experiment	Day	Sample	Mean TDN (μM)	SE	Mean NO ₂ ⁻	SE	Mean NO ₃ ⁻	SE	NH ₄ ⁺	SE	DON	SE	Mean DPA (μM)	SE	Mean PO ₄ ³⁻	SE	NCP	SD	GPP	SD	CR	SD	Temp.	SD	Mean BP (μg C L ⁻¹ h ⁻¹)	SE	Mean Chl.a (μg/l)	SE	DOC (μM)	SE
WW-F	T7	C	17.21	0.61	0.14	0.00	1.97	0.34	0.06	0.00	15.04	0.70	0.12	0.08	0.69	0.00	17.83	10.29	43.69	3.98	-25.86	6.30	7.16	0.07	0.54	0.04	4.87	0.21	307.88	15.57
WW-F	T7	CD	14.42	0.16	0.10	0.01	1.89	0.04	0.16	0.01	12.28	0.16	0.22	0.08	0.56	0.02	14.46	4.54	43.99	4.76	-29.53	9.30	7.16	0.07	0.82	0.09	4.15	0.11	230.57	2.75
WW-F	T7	1:10	61.17	1.23	2.43	0.07	35.16	1.09	11.39	3.17	12.19	3.57	0.35	0.01	0.43	0.02	24.34	15.71	60.27	9.93	-35.94	25.64	7.16	0.07	1.15	0.07	8.53	0.38	308.80	5.90
WW-F	T7	1:5	109.23	4.55	4.64	0.04	73.25	3.25	27.90	0.13	3.44	5.59	0.43	0.07	0.49	0.03	19.46	9.87	73.62	45.72	-54.16	55.59	7.16	0.07	1.66	0.10	9.25	0.35	367.72	3.67
WW-F	T7	IN	63.34	0.98	4.66	0.06	54.92	0.37			3.76	1.04	0.09	0.00	0.58	0.02	9.86	7.88	41.84	20.24	-31.99	28.12	7.16	0.07	0.88	0.07	3.08	0.34	232.41	5.44
WW-J	T0	C	17.07	0.87	0.35	0.02	4.93	0.39	0.35	0.01	11.44	0.95	0.09	0.01	0.55	0.03									0.15	0.05	0.30	0.00	483.13	68.40
WW-J	T0	CD	13.10	0.80	0.31	0.01	3.36	0.06	0.27	0.02	9.15	0.80	0.08	0.01	0.48	0.01									0.09	0.06	0.59	0.05	339.56	123.9
WW-J	T0	1:10	101.14	1.95	1.08	0.06	11.68	0.88	75.23	0.59	13.15	2.22	0.97	0.03	0.77	0.07									0.06	0.01	0.30	0.00	467.47	20.41
WW-J	T0	1:5	174.65	3.08	2.16	0.18	27.23	0.35	129.69	3.16	15.56	4.42	1.78	0.03	1.30	0.09									0.05	0.01	0.34	0.01	570.45	35.83
WW-J	T0	IN	35.21	1.31	3.17	0.21	24.91	2.74	2.22	0.07	4.92	3.03	0.11	0.01	0.72	0.10									0.04	0.01	0.36	0.02	357.57	82.45
WW-J	T1	C	18.65	0.67	0.38	0.02	4.65	0.69	0.45	0.01	13.17	0.96	0.09	0.01	0.66	0.08	-2.84	5.76	4.17	2.23	-7.01	3.53	3.52	0.00	0.13	0.02	0.15	0.04	490.20	7.58
WW-J	T1	CD	13.18	1.18	0.31	0.03	3.17	0.08	0.37	0.06	9.34	1.18	0.10	0.01	0.46	0.02	-8.64	10.10	-3.72	8.81	-4.92	1.28	3.53	0.00	0.09	0.01	0.22	0.08	385.03	6.44
WW-J	T1	1:10	94.87	2.24	0.93	0.21	8.32	3.18	74.94	1.13	10.68	4.04	0.89	0.03	0.61	0.22	-16.64	17.69	-12.51	16.31	-4.13	1.38	3.49	0.06	0.11	0.04	0.24	0.04	522.23	5.19
WW-J	T1	1:5	191.30	1.79	2.07	0.20	20.58	1.56	137.57	1.63	31.08	2.88	1.81	0.05	1.50	0.05	-2.76	1.75	0.20	2.20	-2.96	0.45	3.53	0.00	0.08	0.03	0.24	0.05	647.05	8.99
WW-J	T1	IN	31.22	2.01	2.64	0.14	24.23	0.27	2.06	0.02	2.29	2.02	0.11	0.01	0.41	0.04	-0.79	3.14	0.15	1.77	-0.95	1.37	3.53	0.00	0.10	0.01	0.20	0.01	383.44	5.72
WW-J	T3	C	20.16	0.37	0.38	0.02	4.81	0.34	0.17	0.01	14.81	0.50	0.03	0.01	0.61	0.04	-4.00	1.97	5.88	0.93	-9.88	2.89	3.58	0.00	0.31	0.14	0.16	0.00	369.97	89.08
WW-J	T3	CD	15.46	0.21	0.35	0.02	3.30	0.10	0.26	0.03	11.55	0.23	0.05	0.01	0.41	0.03	1.09	0.06	6.79	0.35	-5.71	0.41	3.58	0.00	0.23	0.03	0.28	0.04	347.99	87.75
WW-J	T3	1:10	103.04	1.92	1.37	0.02	11.63	0.70	71.02	1.24	19.03	2.39	0.94	0.02	0.89	0.14	0.36	1.53	6.51	1.47	-6.15	0.05	3.58	0.00	0.23	0.03	0.29	0.02	453.15	59.10
WW-J	T3	1:5	184.83	3.92	2.00	0.18	27.87	0.66	134.52	2.45	20.45	4.66	0.09	0.00	1.14	0.08	-0.42	0.65	6.53	0.89	-6.95	1.54	3.58	0.00	0.24	0.02	0.22		570.89	93.60
WW-J	T3	IN	35.77	0.29	2.85	0.02	30.41	1.78	2.01	0.01	0.50	1.81	1.86	0.04	0.43	0.01	-1.22	0.34	5.01	1.78	-6.23	1.43	3.58	0.00	0.15	0.01	0.07		314.44	5.26
WW-J	T5	C	15.39	1.58	0.39	0.02	4.52	0.19	0.18	0.01	10.29	1.59	0.07	0.01	0.69	0.10	-3.27	1.01	2.03	2.00	-5.30	0.99	3.64	0.01	0.55	0.20	0.35	0.01	418.52	34.02
WW-J	T5	CD	14.94	0.24	0.37	0.03	3.45	0.40	0.02	0.00	11.10	0.47	0.06	0.01	0.44	0.09	-2.94	0.04	1.22	0.53	-4.17	0.56	3.65	0.00	0.40	0.02	0.28	0.08	312.04	19.34

Experiment	Day	Sample	Mean TDN (μM)		Mean NO_2^- SE		Mean NO_3^- SE		NH_4^+	SE	DON	SE	Mean DPA (μM)		Mean PO_4^{3-} SE		NCP	SD	GPP	SD	CR	SD	Temp.	SD	Mean BP ($\mu\text{g C L}^{-1}\text{ h}^{-1}$)		Mean Chl.a ($\mu\text{g/l}$)		DOC (μM)		
			SE	SE	SE	SE	SE	SE					SE	SE	SE	SE									SE	SE	SE	SE	SE	SE	
WW-J	T5	1:10	94.20	1.16	1.26	0.02	13.57	0.70	68.23	4.30	11.15	4.51	0.97	0.03	0.87	0.04	-4.76	0.16	0.14	1.91	-4.90	1.75	3.65	0.00	0.55	0.04	0.35	0.04	497.34	104.0	
WW-J	T5	1:5	188.49	3.16	1.78	0.12	26.49	0.82	121.77	3.39	38.46	4.71	1.70	0.05	1.12	0.05	-3.31	1.40	-0.37	0.24	-2.94	1.64	3.65	0.00	0.65	0.04	0.29	0.01	906.24	93.29	
WW-J	T5	IN	35.67	0.33	3.33	0.23	33.05	1.40	1.84	0.03	-2.54	1.42	0.05	0.02	0.71	0.20	-3.00	1.65	8.19	10.66	-11.19	9.01	3.65	0.00	0.29	0.04	0.21	0.05	321.31	33.29	
WW-J	T7	C	17.55	0.78	0.41	0.01	3.74	0.15	0.40	0.42	13.01	0.90	0.07	0.00	0.50	0.06	4.18	1.05	19.16	8.81	-14.98	9.87	3.72	0.01	0.62	0.02	0.36	0.01	446.54	57.58	
WW-J	T7	CD	15.55	0.16	0.37	0.04	4.16	0.23	0.09	0.01	10.92	0.27	0.04	0.00	0.42	0.02	10.07	9.13	-34.15	40.27	44.22	49.40	3.72	0.00	1.38	0.69	0.26	0.03	418.79	201.9	
WW-J	T7	1:10	99.55	2.89	1.40	0.05	17.44	0.95	76.98	1.14	3.72	3.25	0.96	0.21	0.89	0.06	2.74	4.03	11.03	17.02	-8.28	21.05	3.72	0.00	1.12	0.03	0.32	0.04	699.62	13.68	
WW-J	T7	1:5	194.64	1.29	2.16	0.18	24.89	0.86	134.58	5.56	33.01	5.77	1.94	0.05	1.08	0.11	0.76	1.07	4.68	5.96	-3.92	4.89	3.72	0.00	1.14	0.07	0.26	0.02	844.06	10.78	
WW-J	T7	IN	34.29	1.30	2.99	0.32	27.89	4.00	1.81	0.01	1.59	4.20	0.07	0.01	0.36	0.06	2.05	0.62	18.73	17.31	-16.68	17.92	3.72	0.00	0.63	0.02	0.27	0.02	427.80	115.8	
WW-A	T0	C	16.40	0.63	0.14	0.00	3.69	0.14	0.01	0.01	12.56	0.64	0.31	0.01	0.63	0.03									0.24	0.05	2.34	0.27	297.38	3.08	
WW-A	T0	CD	12.72	0.47	0.12	0.01	3.29	0.06	0.14	0.01	9.17	0.48	0.22	0.03	0.51	0.03									0.17	0.01	1.86		659.33	23.57	
WW-A	T0	1:10	103.16	1.16	0.84	0.00	17.43	0.41	76.91	0.50	7.97	1.33	1.95	0.39	0.48	0.03									0.18	0.01	2.35		441.38	47.67	
WW-A	T0	1:5	160.50	4.19	1.52	0.00	30.06	2.08	146.16	1.24	17.25	7.47	3.69	0.06	0.55	0.02									0.19	0.04	4.73	0.60	953.14	5.84	
WW-A	T1	C	15.24	0.89	0.19	0.01	3.75	0.08	0.01	0.01	11.29	0.89		0.90	0.07	0.78		15.12		-14.35		4.55		0.38	0.01	4.52	0.13				
WW-A	T1	CD	12.57	0.25	0.19	0.00	3.26	0.07	0.12	0.01	9.00	0.26		0.45	0.04	2.21		7.51		-5.30		4.55		0.27	0.06	2.33	0.27				
WW-A	T1	1:10	98.85	1.98	0.95	0.00	18.34	0.24	76.20	0.95	3.35	2.21		0.44	0.01	0.98	3.16	7.93	2.46	-6.95	5.62	4.55	0.00	0.25	0.01	2.28	0.17				
WW-A	T1	1:5	187.92	5.28	1.64	0.01	32.11	0.13	146.30	4.56	7.87	6.98		0.45	0.01									0.25	0.03	2.01	0.16				
WW-A	T1	IN	55.76	0.88	1.77	0.00	37.02	2.85	4.48	0.21	12.48	2.99	0.23	0.01	1.35	0.04	1.22	0.33	22.61	3.79	-21.39	4.12	4.55	0.00	0.33	0.04	4.06	0.41	559.29	8.31	
WW-A	T3	C	15.95	0.39	0.19	0.01	3.34	0.17	0.11	0.03	12.31	0.43	0.14	0.01	0.53	0.02	-3.99	6.42	20.28	8.09	-24.27	1.67	4.55	0.00	0.63	0.02	5.93	0.27	759.37	5.92	
WW-A	T3	CD	12.42	0.38	0.12	0.00	2.83	0.04	0.02	0.00	9.44	0.38	0.11	0.01	0.42	0.02	-0.13		22.42		-22.55		4.55		0.26	0.03	3.56	0.36	534.23	1.53	
WW-A	T3	1:10	98.52	4.45	0.91	0.00	16.88	0.79	76.33	1.38	4.40	4.72	1.94	0.04	0.40	0.01	0.20	0.23	28.07	5.50	-27.87	5.73	4.55	0.00	0.76	0.02	4.21	0.20	655.29	9.47	
WW-A	T3	1:5	177.63	8.99	1.57	0.01	32.33	0.44	148.83	1.08	-5.10	9.06		0.40	0.04	0.41		22.43		-22.02		4.55		0.79	0.04	2.88	0.07	715.55	6.04		
WW-A	T3	IN	52.52	0.12	1.63	0.09	40.46	0.52	3.92	0.07	6.51	0.53		1.32	0.03	-2.75	0.05	10.46	0.21	-13.21	0.16	4.46	0.00	0.77	0.06	6.43	0.78	606.74	2.58		

Experiment	Day	Sample	Mean TDN (μM)	SE	Mean NO ₂ ⁻	SE	Mean NO ₃ ⁻	SE	NH ₄ ⁺	SE	DON	SE	Mean DPA (μM)	SE	Mean PO ₄ ³⁻	SE	NCP	SD	GPP	SD	CR	SD	Temp.	SD	Mean BP (μg C L ⁻¹ h ⁻¹)	SE	Mean Chl.a (μg/l)	SE	DOC (μM)	SE
WW-A	T5	C	12.44	1.27	0.12	0.00	2.64	0.03	1.27	0.61	8.41	1.41	0.24	0.02	0.46	0.02	-1.41	2.12	12.26	1.73	-13.67	0.40	4.46	0.00	0.55	0.07	6.64	0.88	735.79	36.12
WW-A	T5	CD	13.14	1.13	0.09	0.00	2.73	0.04	0.05	0.01	10.26	1.13	0.25	0.01	0.44	0.04	-2.89		6.51		-9.40		4.46		0.97	0.01	4.14	1.09	835.92	58.43
WW-A	T5	1:10	102.73	3.19	0.85	0.00	17.83	0.24	74.61	2.16	9.43	3.86	1.78	0.04	0.30	0.01	-2.07	1.82	4.33	0.18	-6.40	1.64	4.46	0.00	1.07	0.08	6.54	0.69	980.53	29.25
WW-A	T5	1:5	189.21	3.81	1.53	0.03	24.25	9.71	147.34	0.91	16.09	10.47	3.67	0.06	0.33	0.02	-3.17		5.92		-9.09		4.46		1.21	0.04	4.99	0.09	1130.24	80.36
WW-A	T5	IN	52.47	1.26	1.70	0.00	39.76	0.86	3.10	0.02	7.91	1.53	0.27	0.01	1.21	0.01	14.50		31.74		-17.24		4.44		1.08	0.10	7.96	0.88	917.62	29.18
WW-A	T7	C	15.73	1.09	0.12	0.00	2.62	0.14	0.54	0.20	12.44	1.12	0.26	0.01	0.48	0.02	11.00		25.23		-14.23		4.44		0.88	0.06	6.49	0.39	293.67	1.10
WW-A	T7	C	14.13	0.28	0.11	0.01	2.38	0.03			11.64	0.28	0.20	0.03			4.93		21.40		-16.47		4.44		0.46	0.01	7.54	0.46	304.99	4.17
WW-A	T7	CD	11.43	0.52	0.05	0.01	2.21	0.03	0.23	0.01	8.94	0.52	0.22	0.04	0.30	0.04	11.13		23.95		-12.82		4.56		1.31	0.23	6.21	0.45	1245.32	4.32
WW-A	T7	CD	12.33	0.55	0.05	0.01	1.95	0.21	0.51	0.01	9.82	0.59	0.29	0.11			5.15		13.80		-8.65		4.44		0.89	0.02	7.70	1.42	1775.29	6.94
WW-A	T7	C	14.93	0.57	0.12	0.01	2.50	0.08	0.54	0.26	11.77	0.63	0.23	0.02	0.48	0.02	8.03	4.39	22.68	1.81	-14.65	2.58	4.50	0.09	0.67	0.11	7.01	0.40	299.33	3.27
WW-A	T7	CD	11.88	0.38	0.05	0.00	2.08	0.11	0.37	0.10	9.38	0.40	0.26	0.06	0.30	0.04	5.15		13.80		-8.65		4.44		1.01	0.06	6.95	0.70	1245.32	4.32
WW-A	T7	1:10	102.73	3.19	0.85	0.00	17.83	0.24	74.61	2.16	9.43	3.86	1.78	0.10	0.20	0.02	7.17	2.33	12.42	7.14	-5.25	4.81	4.50	0.09	0.80	0.02	9.81	1.22	1024.77	72.00
WW-A	T7	1:5	188.60	3.80	1.34	0.26	23.74	4.98	145.59	1.35	17.92	6.40	3.29	0.06	0.21	0.02	3.16		10.99		-7.83		4.44		0.79	0.05	6.94	0.76	1124.37	177.22
WW-A	T7	IN	55.32	2.42	1.72	0.02	26.59	5.87	1.45	0.67	25.55	6.38	0.30	0.07	1.32	0.07									0.48	0.17	8.48	0.55	708.68	39.74

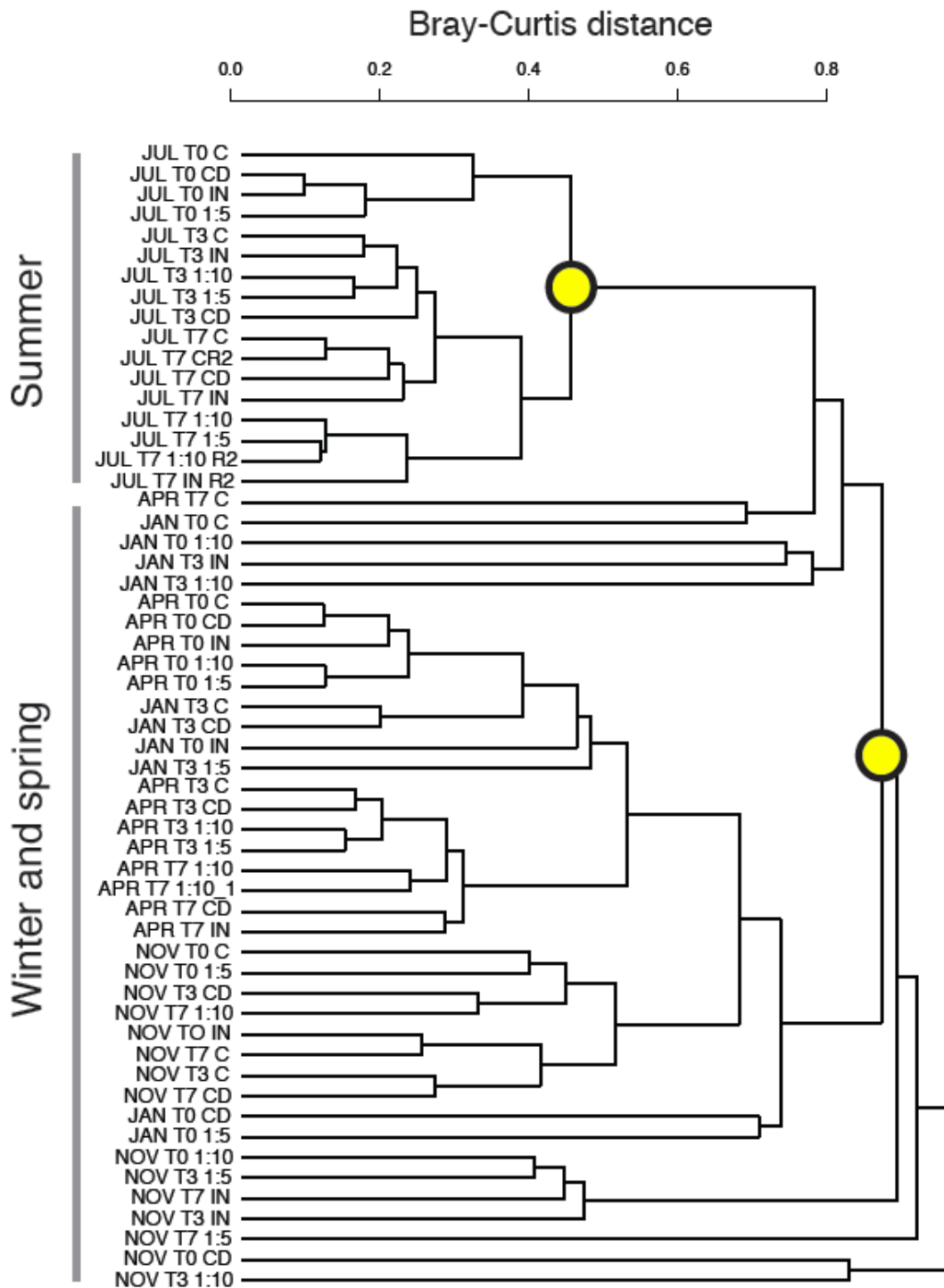


Figure S1. Dendrogram showing a comparison of beta-diversity between samples taken from the experiments performed in January, April, July, November and December. Dissimilarity corresponds to Bray-Curtis distance estimation using 97% 16S rRNA sequence similarity. Yellow circle denote a distinct visual clustering between summer experiments and winter and spring experiments.

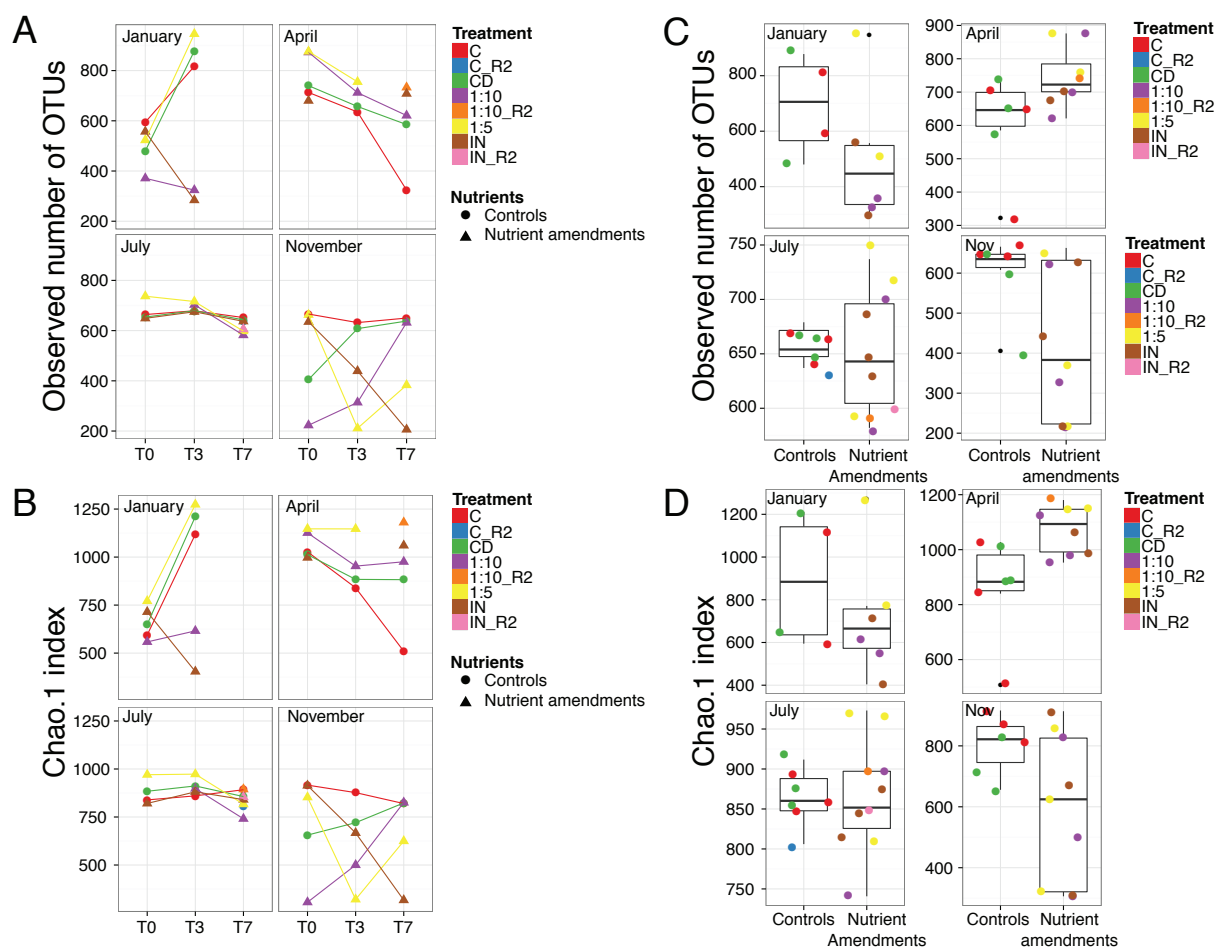


Figure S2. Variation in observed number of OTUs (A) and Chao.1 richness index (B) for the different experiments.

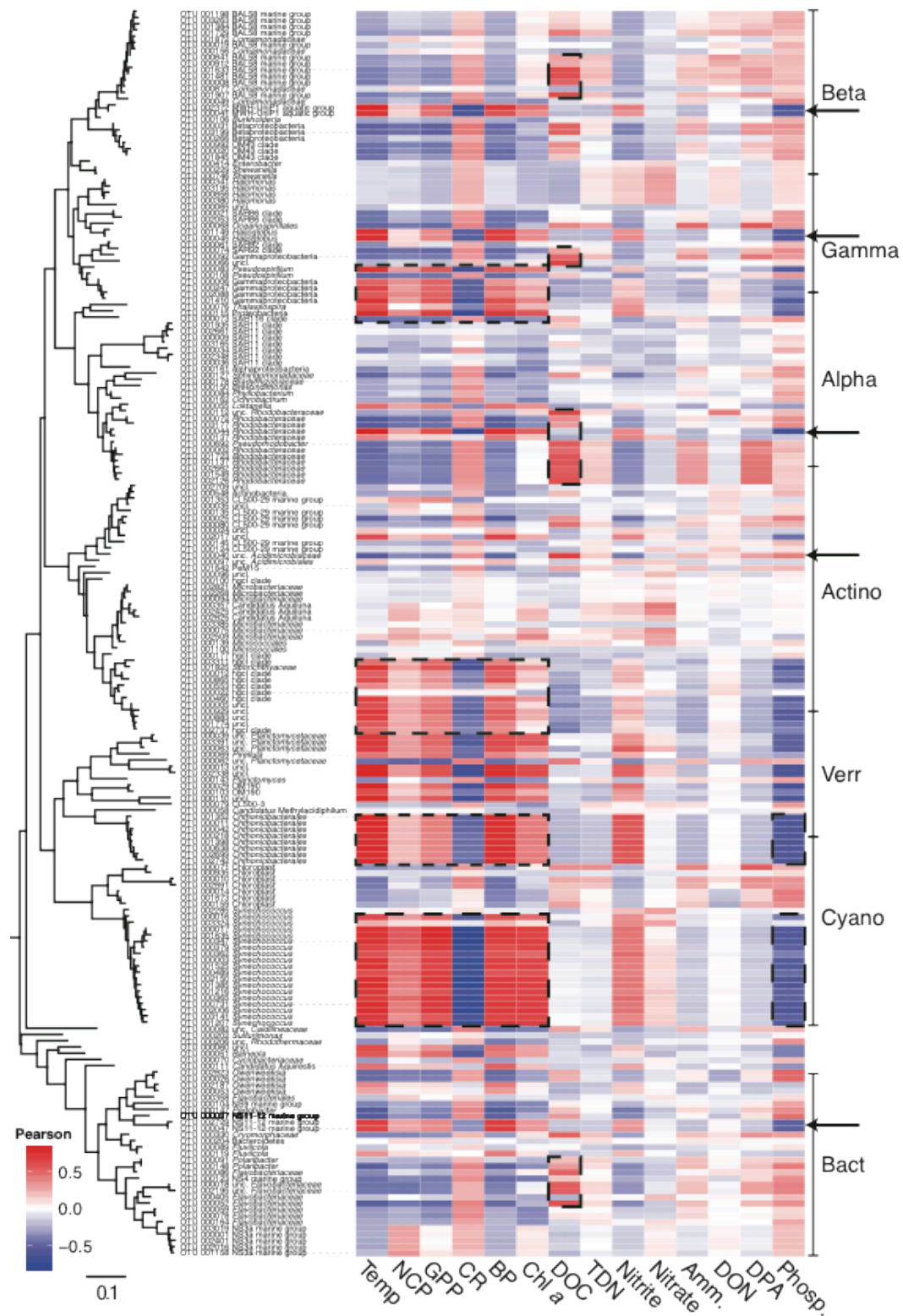


Figure S3. Correlations between shifts in relative abundances of specific individual OTUs and environmental factors and metabolic activity.

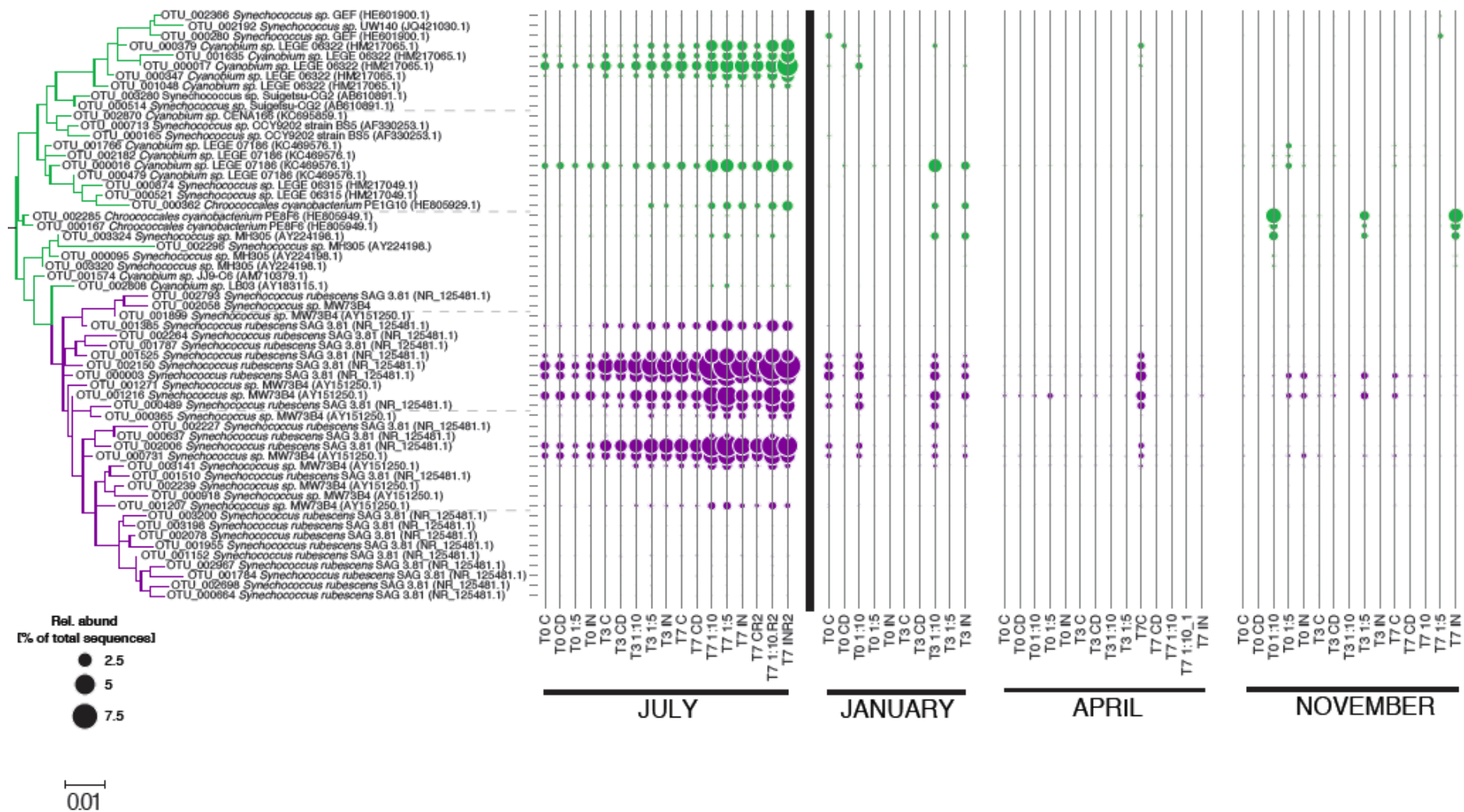


Figure S4. Maximum-likelihood tree of 16S rRNA sequences affiliated with *Synechococcus* obtained from Illumina Miseq-sequencing. Bubble diagram indicate relative abundances (percent of total sequences) in the different treatments and experiments for the 60 most abundant *Synechococcus* OTUs.