The following supplement accompanies the article

Increasing CO_2 changes community composition of pico- and nano-sized protists and prokaryotes at a coastal Antarctic site

Paul G. Thomson*, Andrew T. Davidson, Lynsey Maher

*Corresponding author: paul.thomson@uwa.edu.au

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Table S1. Table showing carbonate chemistry data from each treatment from the three experiments, including mean experimental CO_2 concentration, seawater salinity, temperature, Total Alkalinity (TA), Total CO_2 (TCO_2), pH and CO_2 fugacity. TA, pH and fCO_2 were calculated from CO_2 concentration and TCO_2 using CO2calc 1.2.0 (http://www.softpedia.com/get/Science-CAD/CO2calc.shtml).

Experiment 1								
CO_2 Treatment	**Mean CO_2 (ppm)**	**Mean Salinity**	**Mean Temp (^oC)**	**Pressure (dbars)**	**TA (µmol/kg seawater)**	**TCO_2 (µmol/kg seawater)**	**pH**	**fCO_2 (µatm)**
0.2x	**84**	33.7	1.51	1	2836.58	1894.217	8.77	84
1.7x	**643**	"	"	"	2301.93	2243.908	7.94	640
3.3x	**1281**	"	"	"	2309.49	2333.661	7.65	1276
4.8x	**1848**	"	"	"	2308.92	2382.004	7.50	1840
5.0x	**1942**	"	"	"	2312.27	2392.560	7.48	1934
6.3x	**2423**	"	"	"	2421.33	2421.332	7.38	2413
Experiment 2								
0.3x	**120**	33.0	0.25	1	2254.71	1950.230	8.57	120
1.1x	**406**	"	"	"	2267.73	2163.437	8.11	404
2.0x	**754**	"	"	"	2256.48	2228.127	7.86	751
2.9x	**1130**	"	"	"	2250.08	2268.841	7.69	1125
3.0x	**1162**	"	"	"	2287.24	2287.239	7.68	1157
4.0x	**1530**	"	"	"	2266.53	2322.778	7.57	1523
Experiment 3								
0.6x	**250**	33.4	-0.25	1	2270.90	2098.161	8.30	249
1.2x	**474**	"	"	"	2268.25	2185.609	8.05	472
2.2x	**864**	"	"	"	2281.67	2269.482	7.81	860
3.2ax	**1240**	"	"	"	2268.81	2300.060	7.65	1235
3.2bx	**1232**	"	"	"	2270.51	2300.908	7.66	1227
4.4x	**1711**	"	"	"	2280.86	2354.384	7.52	1704

Table S2. Volumes of CO_2 saturated seawater added to minicosm tanks to maintain CO_2 target concentrations in each treatment of the three experiments.

Experiment 1 (volume added in litres)												
Treat	**Mean CO_2 (ppm)**	**CO_2 adjustment days**										
		0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
0.2x	**84**	0	0	0	0	0.465	0	1.045	0.070	0.350	0.527	0.285
1.7x	**643**	2.866	0	0	0	0.695	0	1.257	0	0	0.360	0
3.3x	**1281**	3.771	0	0	0.606	0	0	0.578	0.310	0	0.501	0.190
4.8x	**1848**	4.336	0	0	0	0.324	0	0.749	0.259	0.166	0.418	0.113
5.0x	**1942**	4.440	0	0	0.168	0.313	0	0.868	0.174	0.137	0.400	0.210
6.3x	**2423**	4.731	0	0	0.622	0.110	0	0.780	0.373	0.110	0.338	0.186
Experiment 2 (volume added in litres)												
		0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
0.3x	**120**	0	0	0	0	0.289	0	0	0	0.077	0	0.100
1.1x	**406**	0	0.213	0.107	0	0	0	0	0.105	0.102	0	0.049
2.0x	**754**	0	0.301	0	0.147	0	0.114	0	0.206	0	0.171	0.077
2.9x	**1130**	0	0.170	0	0.159	0	0.088	0	0.142	0	0	0
3.0x	**1162**	0	0.254	0.228	0	0	0.144	0	0.048	0	0.071	0
4.0x	**1530**	0	0.300	0.149	0	0	0.191	0	0.180	0	0.083	0
Experiment 3 (volume added in litres)												
		0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
0.6x	**250**	0.277	0	0	0.104	0.051	0	0.437	0	0.314	0	0
1.2x	**474**	1.389	0.094	0	0.202	0.208	0.089	0	0.203	0	0.092	0
2.2x	**864**	2.259	0.107	0	0.191	0	0.208	0	0.254	0	0.07	0
3.2ax	**1240**	2.744	0.157	0.069	0	0.184	0.069	0	0.301	0	0.138	0
3.2bx	**1232**	2.755	0	0.126	0	0.220	0	0.248	0	0.16	0	0
4.4x	**1711**	3.227	0	0.077	0	0.233	0.33	0	0.204	0.16	0.09	0

Table S3. Abundances of phycoerythrin-containing cryptophytes of Region 4 (Figure 2) in experiments 2 and 3.

Experiment 2 Cryptophytes (cells ml^{-1})						
Day	**0.3x**	**1.1x**	**2.0x**	**2.9x**	**3.0bx**	**4.0x**
0	124	218	142	166	184	160
2	140	204	261	293	277	201
4	226	190	208	160	159	169
6	159	249	205	180	245	227
8	300	313	320	279	314	295
10	302	309	319	347	335	368
Experiment 3 Cryptophytes (cells ml^{-1})						
Day	**0.6x**	**1.2x**	**2.2x**	**3.2ax**	**3.2bx**	**4.4x**
0	505	509	515	510	513	559
2	524	525	544	442	443	544
4	675	589	631	676	588	589
6	641	791	744	938	862	938
8	1016	716	829	1003	884	1278

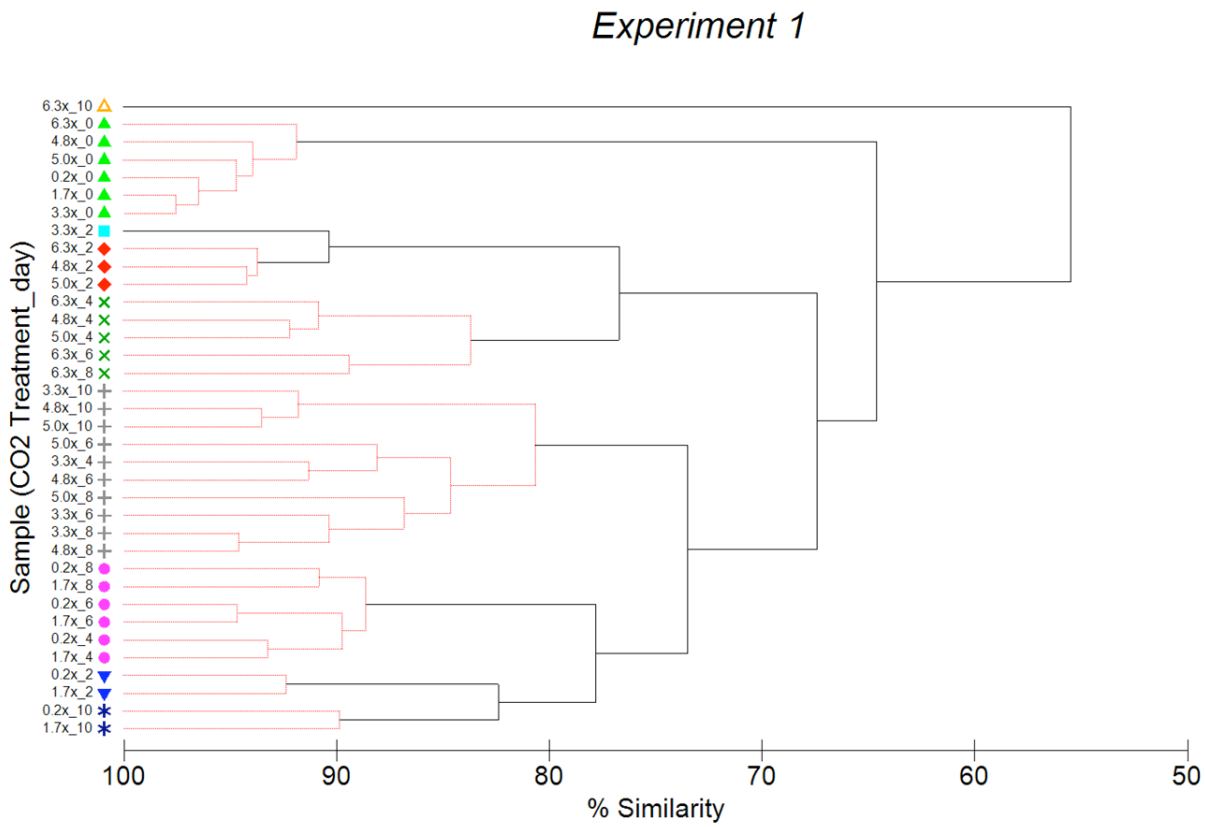

Figure S1. Cluster dendrogram showing % similarity among samples in Experiment 1 based on the microbial community in each CO_2 treatment on each sampling day. SIMPROF (Clarke 2008) discriminated 7 groups of samples that differed significantly ($p<0.05$) in community composition. Red lines and symbols identify samples within each cluster group.

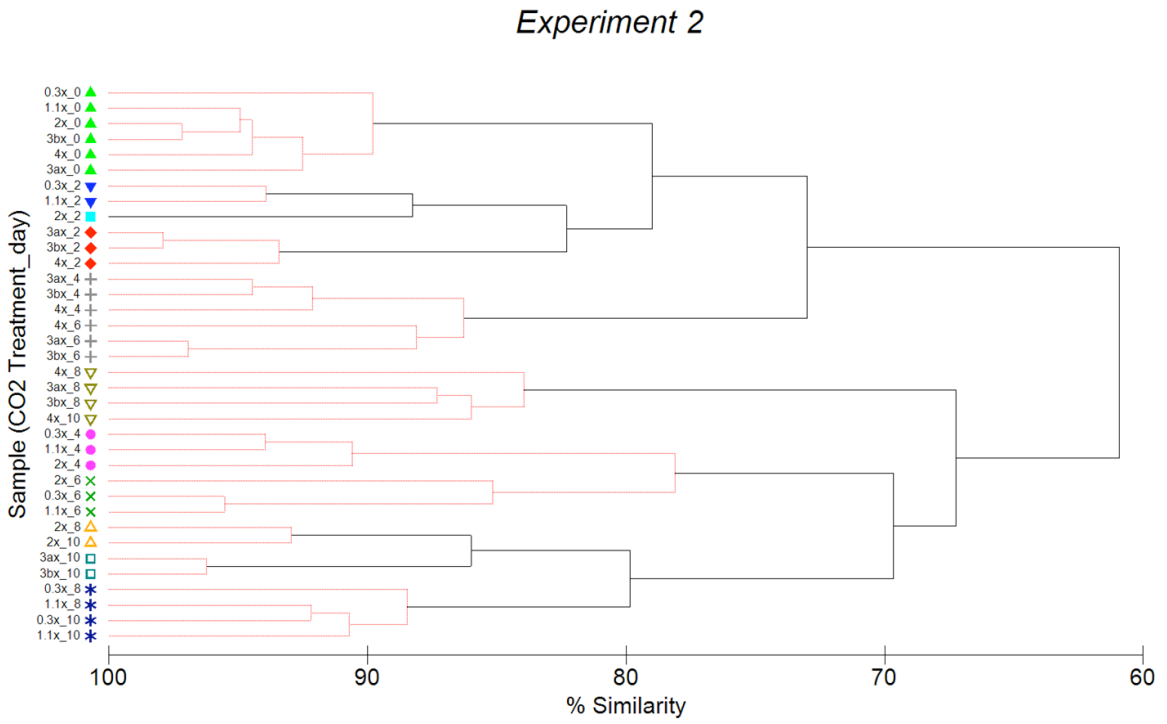

Figure S2. Cluster dendrogram showing % similarity among samples in Experiment 2 based on the microbial community in each CO_2 treatment on each sampling day. SIMPROF (Clarke 2008) discriminated 11 groups of samples that differed significantly in community composition. Red lines and symbols identify samples within each cluster group.

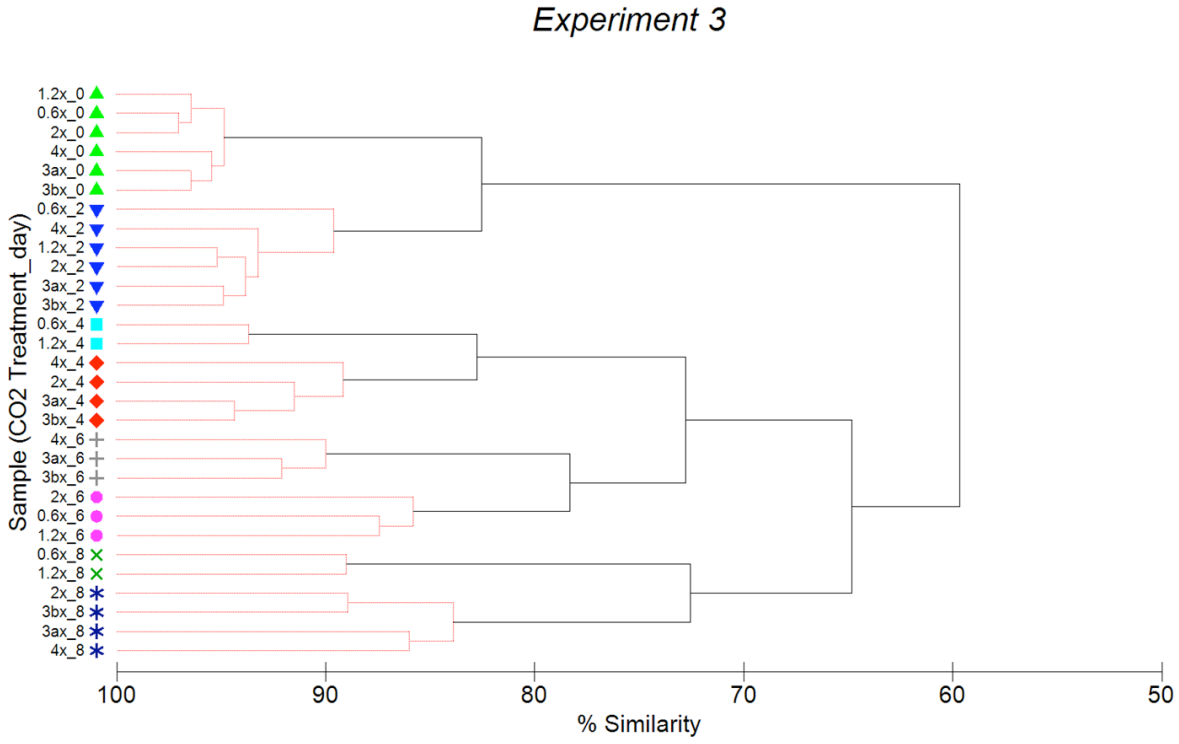

Figure S3. Cluster dendrogram showing % similarity among samples in Experiment 3 based on the microbial community in each CO_2 treatment on each sampling day. SIMPROF (Clarke 2008) discriminated 8 groups of samples that differed significantly in community composition. Red lines and symbols identify samples within each cluster group.