

Supplementary Material

Dimethylsulfide (DMS) production in polar oceans may be resilient to ocean acidification.

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Supplementary material contents:

Table S1: Summary of $p\text{CO}_2$ (μatm) and pH_T (total scale) measured at timepoint 1 (T1) during experimental bioassays. See Table 1 for exact timings of time point sampling.

Table S2. Summary of $p\text{CO}_2$ (μatm) and pH_T (total scale) measured at timepoint 2 (T₂) during experimental bioassays. See Table 1 for exact timings of time point sampling.

Figure S1. Bacterial abundance (cells/mL) during experimental microcosms performed in Arctic waters (A - C) and in Southern Ocean waters (D – G). Error bars show standard error. Locations of water collection for microcosms shown in Figure 1 C – F.

Table S1. Summary of $p\text{CO}_2$ (μatm) and pH_T (total scale) measured at timepoint 1 (T_1) during experimental bioassays. See Table 1 for exact timings of time point sampling.

Cruise ID	Nominal	$p\text{CO}_2$ (μatm) at T_1					pH_T at T_1				
		ambient	550	750	1000	2000	ambient	550	750	1000	2000
D366	E01	276.1 ± 2.2	447.1 ± 13.0	620.8 ± 138.9	701.1 ± 31.1		8.2 ± 0.003	8.0 ± 0.01	7.9 ± 0.09	7.8 ± 0.02	
	E02	330.4 ± 12.7	526.2 ± 8.7	678.7 ± 14.8	852.5 ± 24.8		8.1 ± 0.02	7.9 ± 0.01	7.8 ± 0.01	7.7 ± 0.04	
	E02b	336.4 ± 6.9		682.4 ± 14.5			8.1 ± 0.01		7.8 ± 0.01		
	E03	310.5 ± 0.9	516.4 ± 10.0	697.9 ± 9.7	874.4 ± 24.0		8.1 ± 0.001	8.0 ± 0.01	7.8 ± 0.01	7.7 ± 0.01	
	E04	364.4 ± 0.8	506.2 ± 14.7	647.8 ± 17.2	858.0 ± 24.7		8.1 ± 0.001	8.0 ± 0.01	7.9 ± 0.01	7.7 ± 0.01	
	E04b	324.4 ± 7.0		696.5 ± 22.4			8.1 ± 0.01		7.8 ± 0.01		
	E05	394.3 ± 13.3	555.2 ± 30.4	784.5 ± 7.4	1003.5 ± 16.9		8.0 ± 0.01	7.9 ± 0.02	7.8 ± 0.001	7.7 ± 0.01	
	E05b	323.4 ± 13.7		676.7 ± 21.4			8.1 ± 0.02		7.8 ± 0.01		
	E06	294.0 ± 2.3		645.5 ± 27.6				7.9 ± 0.02			
JR271	NS	284.4 ± 7.2	445.5 ± 150.1	452.6 ± 22.4	688.1 ± 23.1		8.2 ± 0.01	8.0 ± 0.1	8.0 ± 0.02	7.8 ± 0.01	
	IB	270.7 ± 6.6	419.0 ± 4.9	540.2 ± 11.4	622.3 ± 19.4		8.2 ± 0.01	8.0 ± 0.001	7.9 ± 0.01	7.9 ± 0.01	
	GG	289.3 ± 9.7	493.8 ± 49.0	607.6 ± 53.9	824.1 ± 99.5		8.1 ± 0.01	8.0 ± 0.04	7.9 ± 0.04	7.7 ± 0.05	
	GI	281.1 ± 1.8	444.2 ± 9.4	576.3 ± 35.2	803.6 ± 10.5		8.2 ± 0.001	8.0 ± 0.01	7.9 ± 0.03	7.7 ± 0.01	
	BS	291.8 ± 10.6	482.8 ± 4.9	653.7 ± 3.6	763.0 ± 12.4		8.2 ± 0.01	8.0 ± 0.001	7.9 ± 0.001	7.8 ± 0.01	
JR274	DP	237.8 ± 8.3		529.6 ± 80.3			8.2 ± 0.01		7.9 ± 0.07		
	WS	554.2 ± 6.4		1280.8 ± 11.7			7.9 ± 0.01		7.5 ± 0.004		
	SG	342.4 ± 9.1		636.9 ± 13.4	809.1 ± 18.1	1384.1 ± 82.7	8.1 ± 0.01		7.8 ± 0.01	7.7 ± 0.01	7.5 ± 0.03
	SS	231.1 ± 3.3		541.2 ± 73.2	592.7 ± 62.5	1122.3 ± 15.2	8.2 ± 0.01		7.9 ± 0.06	7.9 ± 0.04	7.6 ± 0.01

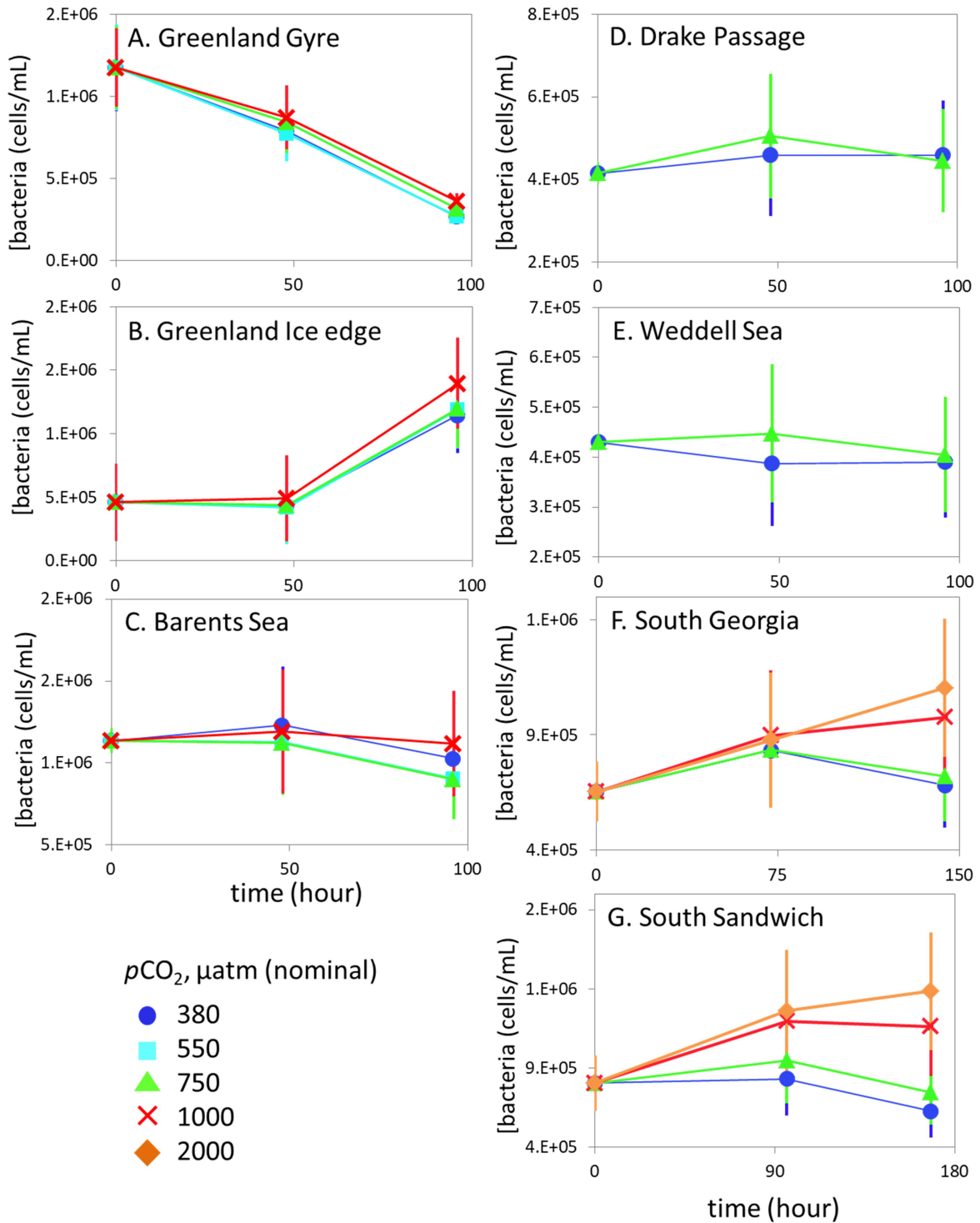


Figure S1. Bacterial abundance (cells/mL) during experimental microcosms performed in Arctic waters (A - C) and in Southern Ocean waters (D - G). Error bars show standard error. Locations of water collection for microcosms shown in Figure 1 C - F. Significant differences between CO₂ treatments were seen at South Georgia (F) at time point 2 (144 h) (ANOVA $F = 137.936$, $p < 0.001$).