

Symbiont community stability through severe coral bleaching in a thermally extreme lagoon

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Supplementary Material

	Average	Maximum	Minimum	Range
UAQ1 vs Saadiyat	$t = -0.902$ $df = 87$ $p = 0.37$	$t = 11.034$ $df = 89$ $p < 0.01$	$t = -8.408$ $df = 78$ $p < 0.01$	$t = 23.461$ $df = 63$ $p < 0.01$

Supplementary Table 1. Statistical parameters for pairwise t-tests comparing the thermal environment in the Umm al Quwain lagoon to the open water Saadiyat reef.

	UAQ1	UAQ2
Platygyra	68	361
Porites	18	121
Cyphastrea		76
Dipsastraea		13

Supplementary Table 2. Total CPCe counts for each coral genera, at each site, that were used for calculation of bleaching frequency.

	Proportion of C3 Gulf June vs December
Acropora	$Z=-1.173$ $p = 0.24$
Cyphastrea	$Z=0.174$ $p = 0.86$
Porites	$Z=-0.285$ $p = 0.78$
Platygyra	$Z=-1.072$ $p = 0.28$

Supplementary Table 3. Statistical parameters for two sample Mann Whitney U tests comparing the relative proportion of C3-Gulf sequences within taxa between time points.



Supplementary Figure 1. Example of a *Stylophora* colony that had suffered complete mortality during summer 2014.

OTU_A1	GTGAACCAATGGCCTCTTGAACGTGCATTGCGCTCTTGGGATATGCCTGAGAGCATGTCT
OTU_A_PSEUDO1	GTGGCCCAATGGCCTCTTGAACGTGCATTGCGCTTTTGGGATATGCCAGAGAGCATGTCT
OTU_A_PSEUDO2	GTGAACCAATGGCCTCTTGAACGTGCATTGCGCTCTTGGGATATGCCTGAGAGCATGTCT
OTU_A1	GCTTCAGTGCTTCTACTTTTCATTTT---CTGCTGCTCTTGTTATCAGGAGCAGTGTTGCT
OTU_A_PSEUDO1	GCTGCAGTTTTTTCTACTTTTCATTTT---CTGCTGCTCTTGTTATCAGAAGCAATGTTGCT
OTU_A_PSEUDO2	GCTTCAGTGCTTCTAGTCTCAATTTGTCCTGCTGCTCCTTCCAGTAGGGGTAGTGCTGCT
OTU_A1	GCATGCTTCTGC-AAGTGGCACTGGCATGCTAAATATCAAGTTTTGCTTGCTGTTGTGAC
OTU_A_PSEUDO1	GCATGCTTCTGC-AAGTGGCACTGGCATGCTAAA-----
OTU_A_PSEUDO2	GCATGCTACTACTTCAAAGCACTGGCATGCTGAGTATTAAGTTTCGCCCCACTGGTTTGAC
OTU_A1	TGATCAACATCTCATGTCGTTTTAGTTGGCGAAACAAAAGCTCATGTGTGTTCTTAACAC
OTU_A_PSEUDO1	-----TCGTTTGAGTTGGCGAAACAAAAGCTCAGGTGTGTTCTTAACAC
OTU_A_PSEUDO2	TGATCAACATCAAATGTCTTGTCGGCTGGGCGAATGA---CCCAAAAGTGTGTTGAACAC
OTU_A1	TTCCTA
OTU_A_PSEUDO1	TTCCTA
OTU_A_PSEUDO2	TTCCTA

Supplementary Data 1. Clade A OTU alignment. Alignment of clade A OTUs at 97% similarity, including putative pseudogenes.

OTU_C3	CTCTTGGGATTTCTCTGAGAGTATGTCTGCTTCAGTGCTTAACTTGCCCCAACTTTGCAAG
OTU_C_PSEUDO	CTCTTGGGATTTCTCTGAGAGTATGTCTGCTTCAGTGCTTAACTTGCCCCAACTTTGCAAG
OTU_C3	CAGGATGTGTTTCTGCCTTGCGTTCTTATGAGCTATTGCCCTCTGAGCCAATGGCTTGTT
OTU_C_PSEUDO	CAGGATGTGTTTCTGCCTTGCGTTCTTATGAGCTATTGCCCTCTGAGCCAATGGCTTGTT
OTU_C3	AATTGCTTGTTTCTTGCAAAATGCTTTGCGCGCTGTTATTCAAGTTTCTACCTTCGTGGT
OTU_C_PSEUDO	AATTGCTTGTTTCTTGCAAAA-----
OTU_C3	TTTACTTGAGTGACGCTGC-----TCATGCTTGCAACCGCTGGGATGCAGGTGCATG
OTU_C_PSEUDO	-----GTGACGCTGCGACGCTGCTCATGCTTGCAACCGCTGGGATGCAGGTGCATG
OTU_C3	CCTCTA
OTU_C_PSEUDO	CCTCTA

Supplementary Data 2. Clade C OTU alignment. Alignment of clade C OTUs at 97% similarity, including putative pseudogene.

OTU100_D1	TGGGACTTCCTGAGAGTATGTTTGCTTCAGTGCTTATTTTACCTCCTTGCAAGGTTCTGT
OTU100_D18	TGGGACTTCCTGAGAGTATGTTTGCTTCAGTGCTTATTTTACCTCCTTGCAAGGTTCTGT
OTU100_D6	TGGGACTTCCTGAGAGTATGTTTGCTTCAGTGCTTATTTTACCTCCTTGCAAGGTTCTGT
OTU100_D4	TGGGACTTCCTGAGAGTATGTTTGCTTCAGTGCTTATTTTACCTCCTTGCAAGGTTCTGT
OTU100_D1	CGCAACCTTGTGCCCTGGCCAGCCATGGGTAACTTGCCCATGGCTTGCTGAGTAGTGAT
OTU100_D18	CGCAACCTTGTGCCCTGGCCAGCCATGGGTAACTTGCCCATGGCTTGCTGAGTAGTGAT
OTU100_D6	CGCAACCTTGTGCCCTGGCCAGCCACGCGTTAACTTGCCCATGGCTTGCTGAGTAGTGAT
OTU100_D4	CGCAACCTTGTGCCCTGGCCAGCCACGGGTAACTTGCCCATGGCTTGCTGAGTAGTGAT
OTU100_D1	CTTTTAGAGCAAGCTCTGGCACGCTGTTGTTTGAGGCAGCCTATATTGAGGCTATTTCAA
OTU100_D18	CTTTTAGAGCAAGCTCTGGCACGCTGTTGTTTGAGGCAGCCTATATTGAGGCTATTTCAA
OTU100_D6	CTTTTAGAGCAAGCTCTGGCACGCTGTTGTTTGAGGCAGCCTATATTGAGGCTATTTCAA
OTU100_D4	CTTTTAGAGCAAGCTCTGGCACGCTGTTGTTTGAGGCAGCCTATATTGAGGCTATTTCAA
OTU100_D1	ATGACGTTGCTACAAGCTTGATGTGTCCTTCTGCGCCGTTGCGCATCCCATA
OTU100_D18	ATGACGTTGCTACAAGCTTGATGTGTCCTTCTGCGCCGTCGCGCATCCATA
OTU100_D6	ATGACGTTGCTACAAGCTTGATGTGTCCTTCTGCGCCGTTGCGCATCCCATA
OTU100_D4	ATGACGTTGCTACAAGCTTGATGTGTCCTTCTGCGCCGTTGCGCATCCCATA

Supplementary Data 3. Clade D alignment. Alignment of clade D OTUs at 100% similarity level that are present in greater than 10% abundance within an individual.