

Table I: Data summary.

	1200ppm High Food	1200ppm Low Food	750ppm High Food	750ppm Low Food	380ppm High Food	380ppm Low Food
pCO₂ (μatm)	1230 ± 10	1230 ± 10	770 ± 12	770 ± 12	410 ± 20	410 ± 20
pH_T	7.59 ± 0.005	7.59 ± 0.005	7.78 ± 0.006	7.78 ± 0.006	8.02 ± 0.02	8.02 ± 0.02
Ω_{arag}	0.9 ± 0.04	0.9 ± 0.04	1.3 ± 0.1	1.3 ± 0.1	2.1 ± 0.05	2.1 ± 0.05
Feeding Frequency	1x 3 d	1x 3 weeks	1x 3 d	1x 3 weeks	1x 3 d	1x 3 weeks
# Larvae Issued	28	9	21	8	22	15
%Juvenile Survival	85.2	71.4	96.2	84.1	96.2	91.9
Juvenile Volume (mm³)	82.0 ± 8.8	9.6 ± 1.1	101.2 ± 11.1	8.7 ± 0.9	65.7 ± 9.8	10.8 ± 1.5
Juvenile Weight (mg)	41.8 ± 3.8	6.9 ± 0.6	37.0 ± 3.2	5.8 ± 0.4	53.7 ± 5.9	11.2 ± 1.1
Bulk Density (mg/mm³)	0.51 ± 3.8	0.72 ± 0.14	0.37 ± 0.07	0.67 ± 0.1	0.82 ± 0.1	1.04 ± 0.1
Crystal Length (μm)	2.6 ± 0.05	2.2 ± 0.04	NA	NA	3.0 ± 0.07	3.0 ± 0.05
Crystal Width (μm)	0.14 ± 0.006	0.13 ± 0.004	NA	NA	0.13 ± 0.006	0.14 ± 0.005
Crystal Aspect Ratio	17.83 ± 5.7	17.05 ± 5.1	NA	NA	22.4 ± 6.9	21.9 ± 4.8
Ω_{cf}	16.8 ± 2.1	16.1 ± 2.1	NA	NA	21.1 ± 2.5	20.6 ± 2.4

Table II: Raw data: aragonite crystal length of juvenile skeletal material as measured by SEM image analysis.

1200ppm_High Food		1200ppm_Low Food		380ppm_High Food		380ppm_Low Food	
Coral #	Crystal Length (µm)	Coral #	Crystal Length (µm)	Coral #	Crystal Length (µm)	Coral #	Crystal Length (µm)
1200_HF_1	2.641	1200_LF_1	2.314	380_HF_1	2.529	380_LF_1	2.521
1200_HF_1	2.874	1200_LF_1	2.081	380_HF_1	2.324	380_LF_1	3.252
1200_HF_1	1.836	1200_LF_1	2.366	380_HF_1	2.75	380_LF_1	3.144
1200_HF_1	2.624	1200_LF_1	2.568	380_HF_1	3.172	380_LF_1	3
1200_HF_1	2.647	1200_LF_1	2.481	380_HF_1	3.033	380_LF_1	2.729
1200_HF_1	2.17	1200_LF_1	1.777	380_HF_1	2.768	380_LF_1	3.071
1200_HF_1	2.535	1200_LF_1	2.435	380_HF_1	3.84	380_LF_1	2.962
1200_HF_1	2.561	1200_LF_1	1.987	380_HF_1	3.914	380_LF_2	2.545
1200_HF_1	2.833	1200_LF_2	2.437	380_HF_2	3.244	380_LF_2	3.162
1200_HF_2	3.047	1200_LF_2	1.561	380_HF_2	3.302	380_LF_2	2.973
1200_HF_2	2.71	1200_LF_2	2.346	380_HF_2	2.861	380_LF_2	3.034
1200_HF_2	3.335	1200_LF_2	2.891	380_HF_2	3.426	380_LF_2	3.09
1200_HF_2	3.243	1200_LF_2	2.471	380_HF_2	3.091	380_LF_2	2.823
1200_HF_2	2.692	1200_LF_2	2.316	380_HF_2	2.497	380_LF_2	3.119
1200_HF_2	3.035	1200_LF_2	2.417	380_HF_2	3.157	380_LF_2	2.874
1200_HF_2	2.64	1200_LF_2	2.02	380_HF_2	3.426	380_LF_2	2.589
1200_HF_2	2.918	1200_LF_2	2.153	380_HF_2	3.496	380_LF_3	3.375
1200_HF_2	2.75	1200_LF_2	2.257	380_HF_3	2.694	380_LF_3	3.064
1200_HF_3	2.595	1200_LF_2	2.209	380_HF_3	2.39	380_LF_3	3.044
1200_HF_3	2.578	1200_LF_3	2.335	380_HF_3	2.586	380_LF_3	3.468
1200_HF_3	2.574	1200_LF_3	2.171	380_HF_3	2.406	380_LF_3	3.28
1200_HF_3	2.753	1200_LF_3	1.924	380_HF_3	2.874	380_LF_3	3.569
1200_HF_3	2.881	1200_LF_3	2.107	380_HF_3	2.969	380_LF_3	3.472
1200_HF_3	2.008	1200_LF_3	2.014	380_HF_3	2.628	380_LF_4	3.031
1200_HF_3	2.069	1200_LF_3	2.189	380_HF_3	2.897	380_LF_4	2.704
1200_HF_3	1.997	1200_LF_3	2.06	380_HF_3	3.122	380_LF_4	3.516
1200_HF_3	2.468	1200_LF_3	2.425	380_HF_3	3.539	380_LF_4	2.959
1200_HF_3	2.512	1200_LF_3	2.42	380_HF_3	4.011	380_LF_4	3.083
1200_HF_3	2.62	1200_LF_3	2.324	380_HF_4	3.118	380_LF_4	2.855
1200_HF_4	2.43	1200_LF_4	2.161	380_HF_4	3.296		
1200_HF_4	2.554	1200_LF_4	2.364	380_HF_4	3.106		
1200_HF_4	2.735	1200_LF_4	2.217	380_HF_4	2.623		
1200_HF_4	2.081	1200_LF_4	2.381	380_HF_4	2.874		
1200_HF_4	2.652	1200_LF_4	2.277				
1200_HF_4	2.548	1200_LF_4	1.695				
1200_HF_4	2.101	1200_LF_4	2.228				
1200_HF_4	2.371	1200_LF_4	1.757				
1200_HF_4	2.133	1200_LF_4	2.376				
1200_HF_4	2.083	1200_LF_5	2.383				
1200_HF_5	2.279	1200_LF_5	2.269				
1200_HF_5	2.567	1200_LF_5	1.976				

1200_HF_5	2.293	1200_LF_5	2.18
1200_HF_5	2.672		
1200_HF_5	2.624		

Table III: Raw data: aragonite crystal width of juvenile skeletal material as measured by SEM image analysis.

1200ppm_High Food		1200ppm_Low Food		380ppm_High Food		380ppm_Low Food	
Coral #	Crystal Width (μm)	Coral #	Crystal Width (μm)	Coral #	Crystal Width (μm)	Coral #	Crystal Width (μm)
1200_HF_1	0.184	1200_LF_1	0.121	380_HF_1	0.176	380_LF_1	0.211
1200_HF_1	0.165	1200_LF_1	0.11	380_HF_1	0.086	380_LF_1	0.149
1200_HF_1	0.116	1200_LF_1	0.126	380_HF_1	0.087	380_LF_1	0.124
1200_HF_1	0.107	1200_LF_1	0.121	380_HF_1	0.159	380_LF_1	0.185
1200_HF_1	0.107	1200_LF_1	0.133	380_HF_1	0.111	380_LF_1	0.134
1200_HF_2	0.187	1200_LF_2	0.104	380_HF_2	0.124	380_LF_1	0.173
1200_HF_2	0.122	1200_LF_2	0.145	380_HF_2	0.108	380_LF_2	0.133
1200_HF_2	0.089	1200_LF_2	0.136	380_HF_2	0.144	380_LF_2	0.148
1200_HF_2	0.113	1200_LF_2	0.132	380_HF_2	0.148	380_LF_2	0.169
1200_HF_2	0.113	1200_LF_3	0.123	380_HF_2	0.148	380_LF_2	0.132
1200_HF_3	0.119	1200_LF_3	0.14	380_HF_3	0.113	380_LF_2	0.127
1200_HF_3	0.165	1200_LF_3	0.141	380_HF_3	0.101	380_LF_2	0.134
1200_HF_3	0.163	1200_LF_3	0.117	380_HF_3	0.116	380_LF_2	0.136
1200_HF_3	0.193	1200_LF_3	0.134	380_HF_3	0.121	380_LF_3	0.118
1200_HF_3	0.154	1200_LF_3	0.15	380_HF_3	0.13	380_LF_3	0.134
1200_HF_3	0.14	1200_LF_4	0.105	380_HF_4	0.179	380_LF_3	0.132
1200_HF_3	0.188	1200_LF_4	0.19	380_HF_4	0.119	380_LF_3	0.179
1200_HF_3	0.126	1200_LF_4	0.067	380_HF_4	0.165	380_LF_3	0.104
1200_HF_4	0.134	1200_LF_4	0.167	380_HF_4	0.134	380_LF_3	0.119
1200_HF_4	0.14	1200_LF_4	0.197	380_HF_4	0.201	380_LF_3	0.14
1200_HF_4	0.127	1200_LF_4	0.131	380_HF_5	0.091	380_LF_4	0.116
1200_HF_4	0.134	1200_LF_5	0.133	380_HF_5	0.146	380_LF_4	0.106
1200_HF_4	0.137	1200_LF_5	0.126	380_HF_5	0.133	380_LF_4	0.116
1200_HF_5	0.166	1200_LF_5	0.115	380_HF_5	0.168	380_LF_4	0.119
1200_HF_5	0.139	1200_LF_5	0.118			380_LF_4	0.139
1200_HF_5	0.139	1200_LF_5	0.104			380_LF_4	0.127
1200_HF_5	0.196	1200_LF_5	0.139			380_LF_5	0.125
			0.146			380_LF_5	0.117
			0.139			380_LF_5	0.124
			0.111			380_LF_5	0.148
			0.11			380_LF_5	0.132
			0.135			380_LF_5	0.189

Table IV: Raw data: juvenile skeletal weight (g). All measurements are accurate to ± 0.01 mg.

1200ppm_High Food	1200ppm_Low Food	750ppm_High Food	750ppm_Low Food	380ppm_High Food	380ppm_Low Food
0.0303	0.0044	0.0211	0.0067	0.0497	0.0071
0.0538	0.0118	0.0273	0.0057	0.0556	0.0045
0.0159	0.0038	0.0300	0.0046	0.0339	0.0045
0.0732	0.0054	0.0162	0.00265	0.0347	0.0065
0.0282	0.0126	0.0637	0.00265	0.0347	0.0061
0.0879	0.0070	0.0338	0.0056	0.0548	0.0067
0.0203	0.0101	0.0296	0.0066	0.098	0.0067
0.0266	0.0095	0.0296	0.00443	0.0384	0.0121
0.0279	0.0057	0.0337	0.00444	0.0921	0.0066
0.0279	0.0060	0.0520	0.00445	0.0218	0.0138
0.0279	0.0043	0.0458	0.00860	0.0438	0.0046
0.0215	0.0042	0.0478	0.00458	0.0384	0.012
0.03893	0.00407	0.0612	0.00458	0.0542	0.012
0.03893	0.00407	0.0315	0.00457	0.0542	0.01244
0.03893	0.00406	0.0746	0.00459	0.0542	0.01242
0.0585	0.0050	0.0284	0.00720	0.1142	0.01243
0.0504	0.0070	0.0279	0.00610	0.0473	0.0145
0.0504	0.0071	0.0355	0.0130	0.0473	0.0172
0.0504	0.0071	0.0355	0.0080		0.01625
0.0504	0.0153	0.0504	0.0060		0.01625
0.0504	0.0075	0.0253	0.0051		0.0207
0.0504	0.00647	0.0253	0.0094		0.0207
	0.00647	0.0253	0.0050		
	0.00646		0.0055		
			0.0050		
			0.00525		
			0.00525		
			0.0066		

Table V: Raw data: juvenile skeletal volume (mm³). Measurements were made with vernier calipers (0.1mm accuracy).

1200ppm_High Food	1200ppm_Low Food	750ppm_High Food	750ppm_Low Food	380ppm_High Food	380ppm_Low Food
169.8	8.6	34.2	4.2	114.3	19.2
132.5	6.1	36.1	4.8	35.5	9.9
39.7	6.9	46.4	2.0	27.9	10.3
76.0	4.2	105.3	6.3	138.3	27.2
34.0	6.8	104.1	8.9	89.3	29.8
100.4	17.4	98.0	11.8	41.9	42.6
136.1	29.5	101.4	9.5	97.0	8.6
112.4	3.5	137.9	8.9	137.6	7.4
74.3	6.0	103.7	18.1	28.2	6.6
86.2	9.6	94.3	7.4	74.6	6.1
57.2	9.2	156.5	4.0	35.2	8.3
123.5	9.4	188.2	7.7	19.2	8.0
106.2	12.6	189.3	32.5	10.3	6.6
98.2	11.7	130.2	13.2	63.3	19.2
114.7	6.3	222.1	6.9	71.8	15.3
54.3	12.1	58.1	11.7	153.8	8.6
104.2	21.3	51.6	7.5	49.3	5.7
49.0	17.2	71.3	8.9	44.8	19.2
15.8	15.3	147.8	11.3	169.6	9.1
22.1	6.1	26.7	8.2	14.3	9.0
37.7	4.8	67.2	8.2	26.6	13.9
59.1	7.1	132.4	20.4	33.8	2.5
	5.6	23.8	10.2	35.1	8.5
	7.8		6.8		9.1
	8.5		11.0		13.4
	7.6		11.2		12.8
	4.4		9.2		5.0
	6.6		4.3		6.5
	4.8		6.4		2.2
			4.5		1.2
			1.8		3.4
			6.6		2.3
			2.4		5.7
			6.6		4.7
			4.1		
			5.5		
			8.5		
			7.7		