|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table S1.** Statistical analysis of environmental history and bleaching event effects on *Montipora capitata* physiology. | | | | | | | | | |
| *Dependent variable* | *Effect* | | *SS* | | *df* | | *F* | | *P* |
| symbiontscm-2 | Period | 1.108 × 1013 | | 3 | | 9.470 | | **<0.001** | |
|  | Site | 3.068 × 1010 | | 1 | | 0.079 | | 0.797 | |
|  | Symbiont | 5.640 × 1013 | | 1 | | 144.647 | | **<0.001** | |
|  | Period × Site | 4.604 × 1012 | | 3 | | 3.936 | | **0.009** | |
|  | Period × Symbiont | 3.461 × 1012 | | 3 | | 2.959 | | **0.033** | |
|  | Site × Symbiont | 8.347 × 1011 | | 1 | | 2.141 | | 0.144 | |
|  | Period × Site × Symbiont | 4.342 × 1012 | | 3 | | 3.712 | | **0.012** | |
|  | Residual | 1.174 × 1014 | | 301 | |  | |  | |
|  |  |  | |  | |  | |  | |
| chlorophyll *a* cm-2 | Period | 85.343 | | 3 | | 11.986 | | **<0.001** | |
|  | Site | 23.851 | | 1 | | 10.049 | | **0.002** | |
|  | Symbiont | 3.414 | | 1 | | 1.438 | | 0.231 | |
|  | Period × Site | 7.037 | | 3 | | 0.988 | | 0.399 | |
|  | Period × Symbiont | 66.062 | | 3 | | 9.378 | | **<0.001** | |
|  | Site × Symbiont | 0.069 | | 1 | | 0.029 | | 0.865 | |
|  | Period × Site × Symbiont | 12.746 | | 3 | | 1.790 | | 0.149 | |
|  | Residual | 714.410 | | 301 | |  | |  | |
|  |  |  | |  | |  | |  | |
| chlorophyll *a* cell-1 | Period | 19.268 | | 3 | | 6.870 | | **<0.001** | |
|  | Site | 5.957 | | 1 | | 6.382 | | **0.012** | |
|  | Symbiont | 181.229 | | 1 | | 193.843 | | **<0.001** | |
|  | Period × Site | 4.064 | | 3 | | 1.449 | | 0.229 | |
|  | Period × Symbiont | 14.105 | | 3 | | 5.029 | | **0.002** | |
|  | Site × Symbiont | 3.234 | | 1 | | 3.459 | | 0.064 | |
|  | Period × Site × Symbiont | 6.149 | | 3 | | 2.192 | | 0.089 | |
|  | Residual | 278.608 | | 298 | |  | |  | |
|  |  |  | |  | |  | |  | |
| protein cm-2 | Period | 0.058 | | 3 | | 0.722 | | 0.540 | |
|  | Site | 0.053 | | 1 | | 1.980 | | 0.160 | |
|  | Symbiont | 0.126 | | 1 | | 4.706 | | **0.031** | |
|  | Period × Site | 0.412 | | 3 | | 5.135 | | **0.002** | |
|  | Period × Symbiont | 0.035 | | 3 | | 0.440 | | 0.725 | |
|  | Site × Symbiont | 0.011 | | 1 | | 0.394 | | 0.530 | |
|  | Period × Site × Symbiont | 0.048 | | 3 | | 0.596 | | 0.618 | |
|  | Residual | 8.020 | | 300 | |  | |  | |
|  |  |  | |  | |  | |  | |
| total biomass cm-2 | Period | 7.363 | | 3 | | 78.602 | | **<0.001** | |
|  | Site | 0.603 | | 1 | | 19.312 | | **<0.001** | |
|  | Symbiont | 0.355 | | 1 | | 11.359 | | **<0.001** | |
|  | Period × Site | 1.213 | | 3 | | 12.954 | | **<0.001** | |
|  | Period × Symbiont | 0.346 | | 3 | | 3.696 | | **0.012** | |
|  | Site × Symbiont | 0.085 | | 1 | | 2.738 | | 0.099 | |
|  | Period × Site × Symbiont | 0.065 | | 3 | | 0.698 | | 0.554 | |
|  | Residual | 9.398 | | 301 | |  | |  | |
| *Period* = Four events (first bleaching [October 2014], first recovery [February 2015], second bleaching [October 2015], second recovery [February 2016]); *Site* = two reef locations (Lilipuna and Reef 14); *Symbiont* = symbiont community dominated by *Cladocopium* sp. or *Durusdinium* sp. symbionts (C- or D-dominated). *SS* = sum of squares and *df* = degrees of freedom. | | | | | | | | | |