**Supplemental Table 4.** Faith’s Phylogenetic Diversity (PD) comparisons among samples from distinct compartments (seawater, mucus and tissue), month (April, July, September and December) and zone (in versus out). PD comparisons for overall, tissue, and seawater compartments were made using a Kruskal-Wallis Chi2 test. Because mucus diversity had a normal distribution, an analysis of variance (ANOVA) was used. Significant results (*p*(perm) <0.05) are highlighted in bold.

**Overall**

|  |  |  |  |
| --- | --- | --- | --- |
| Source of VariationInteractions | *df* | X2 | *p(*perm) |
| Compartment | 2 | 15.000 | **< 0.001** |
| Zone | 1 | 0.922 | 0.374 |
| Month | 3 | 27.109 | **< 0.001** |
| Zone:Month | 7 | 31.658 | **< 0.001** |
| Compartment:Zone | 5 | 16.057 | **0.002** |
| Compartment:Month | 11 | 61.849 | **< 0.001** |
| Compartment:Zone:Month  | 23 | 72.317 | **< 0.001** |

**Tissue**

|  |  |  |  |
| --- | --- | --- | --- |
| Source of VariationInteractions | *df* | X2 | *p(*perm) |
| Zone | 1 | 0.164 | 0.685 |
| Month | 3 | 11.218 | **0.011** |
| Zone:Month | 7 | 16.622 | **0.020** |

**Mucus**

|  |  |  |  |
| --- | --- | --- | --- |
| Source of VariationInteractions | *df* | F value | *p(*perm) |
| Zone | 1 | 0.781 | 0.380 |
| Month | 1 | 2.350 | 0.130 |
| Zone:Month | 7 | 8.105 | **< 0.001** |

**Seawater**

|  |  |  |  |
| --- | --- | --- | --- |
| Source of VariationInteractions | *df* | X2 | *p(*perm) |
| Zone | 1 | 0.136 | 0.712 |
| Month | 3 | 10.822 | **0.012** |
| Zone:Month | 7 | 12.337 | 0.090 |