**Table S3.** The results of pairwise permutational analysis of variance (PERMANOVA) on the abundance of crabs with a carapace width larger than 10 mm

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   | df | SS | F | parametric P | permutation P |
| Season | 3 | 33.71 | 6.95 | 1.62 x 10-4 | < 0.083 |
| Site | 5 | 55.4 | 6.85 | 4.95 x 10-6 | < 0.083 |
| Season x Site | 15 | 20.04 | 0.83 | 6.48 x 10-1 | 0.6508 |
| Residuals | 264 | 426.83 |  |  |  |
|  |  |  |  |  |  |
| Season | 3 | 33.71 | 6.66 | 2.35 x 10-4 | < 0.083 |
| Tidal level | 1 | 26.88 | 15.93 | 8.41 x 10-5 | < 0.083 |
| Season x Tidal level | 3 | 2.722 | 0.54 | 6.57 x 10-1 | 0.6494 |
| Residuals | 280 | 472.67 |  |  |  |
|  |  |  |  |  |  |
| Season | 3 | 33.71 | 11.07 | 6.84 x 10-7 | < 0.083 |
| Sampling time | 1 | 206.72 | 203.73 | 0 | < 0.083 |
| Season x Sampling time | 3 | 11.44 | 3.76 | 1.13 x 10-2 | 0.0124 |
| Residuals | 280 | 284.11 |  |  |  |
|  |  |  |  |  |  |
| Site | 5 | 55.403 | 6.85 | 4.83 x 10-6 | < 0.083 |
| Tidal.level | 1 | 26.889 | 16.62 | 5.97 x 10-5 | < 0.083 |
| Site x Tidal level | 5 | 7.194 | 0.89 | 4.89 x 10-1 | 0.4922 |
| Residuals | 276 | 446.5 |  |  |  |
|  |  |  |  |  |  |
| Site | 5 | 55.4 | 12.64 | 4.60 x 10-11 | < 0.083 |
| Sampling time | 1 | 206.72 | 235.77 | 0 | < 0.083 |
| Site x Sampling time | 5 | 31.86 | 7.267 | 2.06 x 10-6 | < 0.083 |
| Residuals | 276 | 242 |  |  |  |
|  |  |  |  |  |  |
| Tidal.level | 1 | 26.89 | 27.15 | 3.62 x 10-7 | < 0.083 |
| Sampling.time | 1 | 206.72 | 208.74 | 0 | < 0.083 |
| Tidal level x Sampling time | 1 | 21.13 | 21.33 | 5.86 x 10-6 | < 0.083 |
| Residuals | 284 | 281.25 |  |  |  |

Note: Adjust P values = 0.05/6 = 0.0083.