**Supplementary Table 8.** PERMANOVA and ANOSIM analyses with the artificially restructured data set.

1. PERMANOVA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Reduced data set | Factors | R2(Jaccard) | P value+ | R2(Morisita-Horn) | P value+ |
| Angiosperms | Elevation | 0.1240 | 0.002\* | 0.1492 | 0.002\* |
|  | Biotic zone | 0.1170 | 0.002\* | 0.1423 | 0.002\* |
|  | **Elevation x Biotic zone** | **0.2976** | **0.002\*** | **0.3537** | **0.002\*** |
| Gymnosperms | Elevation | 0.0277 | 0.764 | 0.0242 | 0.645 |
|  | Biotic zone | 0.0489 | 0.495 | 0.0273 | 0.616 |
|  | Elevation x Biotic zone | 0.0726 | 0.631 | 0.0466 | 0.645 |
| Angiosperm families, Neotropical | Elevation | 0.0363 | 0.618 | 0.0415 | 0.560 |
|  | Family | 0.3282 | 0.002\* | 0.4748 | 0.002\* |
| 　 | **Elevation x Family** | **0.4322** | **0.002\*** | **0.5635** | **0.004\*** |

+P value is adjusted by the BH method in R, which controls the false discovery rate.

1. ANOSIM

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Reduced data set | Factors | R(Jaccard) | P value+ | R(Morisita-Horn) | P value+ |
| Angiosperms | Elevation | 0.1517 | 0.002\* | 0.15374 | 0.002\* |
|  | Biotic zone | 0.2112 | 0.002\* | 0.21302 | 0.002\* |
|  | **Elevation x Biotic zone** | **0.2468** | **0.002\*** | **0.25037** | **0.002\*** |
| Gymnosperms | Elevation | -0.1759 | 0.851 | -0.1655 | 0.432 |
|  | Biotic zone | 0.0918 | 0.227 | 0.1498 | 0.119 |
|  | Elevation x Biotic zone | 0.0311 | 0.406 | 0.0835 | 0.233 |
| Angiosperm families, Neotropical | Elevation | -0.0231 | 0.665 | -0.0071 | 0.432 |
|  | Family | 0.5078 | 0.002\* | 0.4615 | 0.002\* |
| 　 | **Elevation x Family** | **0.4019** | **0.002\*** | **0.3945** | **0.002\*** |

+P value is adjusted by the BH method in R, which controls the false discovery rate.