|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 1.** Results of permutational multivariate analysis of variance (PERMANOVA) model testing habitat type effects on arbuscular mycorrhizal (AM) fungal community beta diversity. | | | | | | | | | |
|  | *df* | *SS* | | *MS* | | *F-Model* | | *R2* | *Pr(>F)* | |
| Habitat Type | 1 | | 3.695 | | 3.696 | | 9.934 | 0.021 | **<0.001** | |
| Residual | 474 | | 176.338 | | 0.372 | |  | 0.979 |  | |
| Total | 475 | | 180.034 | |  | |  | 1.000 |  | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 2.** Linear model results for relationship between the soil chemistry environmental parameters compressed to a single principal component (PC1) and arbuscular mycorrhizal (AM) fungi virtual taxa analyzed in a non-metric multidimensional scaling (NMDS1)\*. | | | | | | | | |
|  | *df* | *SS* | *MS* | *F value* | | | *Pr(>F)* | |
| *Full model* |  |  |  | | |  | |  |
| PC1 | 1 | 0.417 | 0.417 | | 54.967 | | **<0.001** | | |
| Habitat Type | 1 | 0.102 | 0.102 | | 13.503 | | **<0.001** | | |
| PC1 × Habitat Type | 1 | 0.103 | 0.103 | | 13.548 | | **<0.001** | | |
| Residual | 291 | 2.208 | 0.008 | |  | |  | | |
| *Remnant Forest* |  |  |  | |  | |  | | |
| PC1 | 1 | 0.247 | 0.247 | | 27.322 | | **<0.001** | | |
| Residual | 123 | 1.111 | 0.009 | |  | |  | | |
| *Restored Forest* |  |  |  | |  | |  | | |
| PC1 | 1 | 0.001 | 0.001 | | 0.217 | | 0.642 | | |
| Residual | 168 | 1.098 | 0.007 | |  | |  | | |
| \**full model* intercept and slopes applied in *Figure 1*. Individual models show relationship of PC1 and NMDS1 in each forest, significant effects are in bold (*p*<0.05). | | | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table 3.** Network characteristics\* for soil arbuscular mycorrhizal (AM) fungi in remnant and restored habitats in Hakalau Forest National Wildlife Refuge. Statistical tests of among habitat type effects were evaluated by Welch t-tests. | | | | | | |
|  | *Remnant Forest* | | *Restored Forest* | *t* | *df* | *p* |
| *Observed intact network* | | |  |  |  |  |
| Betweeness centrality | | 0.050 ± 0.003 | 0.037 ± 0.007 | 1.654 | 7.2 | 0.141 |
| Connectedness | | 0.034 ± 0.001 | 0.027 ± 0.001 | 3.593 | 10.0 | **0.005** |
| Path length | | 4.880 ± 0.185 | 5.410 ± 0.440 | -1.117 | 6.7 | 0.303 |
| \*network characteristic are displayed as values are mean ± SE (*n*=6), significant effects are in bold (*p*<0.05). | | | | | | |