|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Guild | (Intercept) | Area  (log-transformed) | PC 1 score | PC 2 score | PC 3 score | Season (time) | ICC | N | Obs. | *mR2*, c*R*2 |
| Species richness  (rarefied) | All | **23.37 [22.68, 24.07]** | -0.32  [-1.11, 0.47] | 0.06  [-0.63, 0.75] | 0  [-0.60, 0.61] | 0.05  [-0.48, 0.58] | -0.57a  [-1.19, 0.05] | 0.45 | 19 | 57 | 0.12, 0.52 |
| RF | **14.68 [14.27, 15.10]** | -0.06  [-0.53,0.41] | -0.33  [-0.74, 0.08] | 0.06  [-0.30, 0.42] | -0.03  [-0.35, 0.29] | **-0.42 b**  **[-0.79, -0.05]** | 0.45 | 19 | 57 | 0.16, 0.54 |
| OC | **2.21**  **[2.08, 2.34]** | -0.13  [-0.28, 0.02] | 0.13 a  [-0.01, 0.26] | -0.04  [-0.16, 0.09] | -0.07  [-0.17, 0.04] | -0.12 a  [-0.25, 0.01] | 0.37 | 19 | 57 | 0.32,  0.57 |
| RR | **4.22**  **[4.00, 4.44]** | 0.08  [-0.17, 0.33] | -0.06  [-0.28, 0.15] | 0.02  [-0.17, 0.21] | -0.06  [-0.23, 0.10] | **-0.27 c**  **[-0.46, -0.08]** | 0.48 | 19 | 57 | 0.20, 0.58 |
| Species richness  (Jackknife estimate) | All | **62.12 [56.45, 67.79]** | 3.44  [-2.77, 9.65] | -2.02  [-7.01, 2.96] | -2.31  [-6.36, 1.75] | -0.38  [-3.98, 3.23] | 3.73 a  [-0.31, 7.78] | 0.61 | 19 | 57 | 0.14, 0.67 |
| RF | **50.52 [46.64, 54.40]** | **5.83 b [1.41, 10.26]** | -2.47  [-6.33, 1.39] | -1.73  [-5.18, 1.72] | 0.07  [-2.96, 3.11] | 2.21  [-1.31, 5.73] | 0.44 | 19 | 57 | 0.35, 0.63 |
| OC | **10.98 c [9.00, 12.97]** | -1.58  [-3.80, 0.65] | **2.54 c [0.65, 4.43]** | -0.14  [-1.76, 1.48] | 0.29  [-1.15, 1.72] | 0.8  [-0.84, 2.44] | 0.51 | 19 | 57 | 0.35, 0.68 |
| RR | **11.58 [10.46, 12.71]** | **1.42 b [0.15, 2.70]** | -0.49  [-1.59, 0.61] | -0.85 a  [-1.81, 0.12] | -0.31  [-1.15, 0.54] | 0.84 a  [-0.14, 1.82] | 0.47 | 19 | 57 | 0.32, 0.64 |
| Density  (birds, ha) | All | **42.68 [38.51, 46.85]** | **-8.61 c**  **[-13.36, -3.87]** | -0.19  [-3.98, 3.60] | -1.11  [-4.26, 2.05] | -2.38 a  [-5.19, 0.43] | **-3.68 b**  **[-6.74, -0.63]** | 0.65 | 19 | 48 | 0.41, 0.79 |
| RF | **33.53 [29.93, 37.13]** | -2.18  [-6.54, 2.18] | -1.32  [-5.16, 2.52] | -0.5  [-4.25, 3.26] | -1.02  [-4.32, 2.27] | **-5.09 b**  **[-8.88, -1.29]** | 0.37 | 19 | 48 | 0.23, 0.52 |
| OC\* | **11.86 [10.40, 13.33]** | **-3.42 c**  **[-5.37, -1.47]** | **3.07 c [1.38, 4.76]** | 0.77  [-1.49, 3.02] | 0.1  [-1.78, 1.97] | -0.19  [-2.60, 2.21] | NA | NA | 48 | 0.53,  NA |
| RR | **11.42 [9.88, 12.96]** | 0.04  [-1.85, 1.93] | -0.84  [-2.52, 0.84] | -0.6  [-2.34, 1.13] | -0.19  [-1.71, 1.32] | -0.55  [-2.33, 1.23] | 0.29 | 19 | 48 | 0.09, 0.35 |
|  |  | (Intercept) | Area  (log-transformed) | Δ PC 1 scores | Δ PC 2 scores | Δ PC 3 scores | Δ Season (time diff) | ICC | N | Obs. | mR2, cR2 |
| Compositional dissimilarity (0 - 1) | All | **0.32**  **[0.29, 0.34]** | **-0.07c**  **[-0.10, -0.05]** | 0.01  [-0.00, 0.02] | 0.01 a  [-0.00, 0.03] | **0.02 c [0.01, 0.03]** | **0.04 c [0.03, 0.05]** | 0.8 | 14 | 126 | 0.73, 0.95 |
| RF | **0.29**  **[0.25, 0.32]** | **-0.08 c**  **[-0.11, -0.06]** | 0.00  [-0.01, 0.01] | **0.01 b [0.00, 0.03]** | **0.02 c [0.01, 0.03]** | **0.03 c [0.02, 0.03]** | 0.88 | 14 | 126 | 0.68, 0.96 |
| OC | **0.44**  **[0.33, 0.55]** | 0.03  [-0.06, 0.11] | **0.05 c [0.02, 0.09]** | **-0.07 c**  **[-0.11, -0.02]** | **0.06 c [0.02, 0.10]** | **0.13 c [0.10, 0.16]** | 0.85 | 14 | 126 | 0.26, 0.89 |
| RR | **0.23**  **[0.20, 0.27]** | **-0.06 c**  **[-0.09, -0.04]** | 0.00  [-0.01, 0.01] | **0.03 c [0.01, 0.04]** | **0.03 c [0.02, 0.04]** | **0.03 c [0.02, 0.04]** | 0.79 | 14 | 126 | 0.6, 0.93 |

\*Mixed model did not converge, and we used a simple linear model without fragment identity as a random model instead