Appendix 3. Summary table for GLMM results after multimodel averaging of best candidate models showing the importance of each explanatory variable on species richness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variablea | Relative importance(%) | Multimodel estimate ± 95% CI | z valueb | p value |
| **Plants** |  |  |  |  |
| Forest – Plantation | 100 | -0.605 ± 0.210 | 5.662 | <0.001\*\*\* |
| Forest – Steppe | 100 | -0.184 ± 0.160 | 2.257 | 0.024\* |
| Steppe – Plantation | 100 | -0.421 ± 0.256 | 3.230 | 0.001\*\* |
| Size | 49 | -0.135 ±.0.202 | 0.492 | 0.623 |
| Matrix quality | 39 | -0.215 ± 0.610 | 0.692 | 0.488 |
| Matrix quality: size | 21 | 0.892 ± 0.785 | 2.227 | 0.025\* |
| Size: Forest – Plantation | 20 | -0.360 ± 0.486 | 1.450 | 0.147 |
| Size: Forest – Steppe | 20 | 0.035 ± 0.142 | 0.882 | 0.377 |
| Size: Steppe – Plantation | 20 | -0.537 ± 0.499 | 2.117 | 0.034\* |
| **Specialist plants** |  |  |  |  |
| Forest – Plantation | 100 | -0.937 ± 0.247 | 7.453 | <0.001\*\*\* |
| Forest – Steppe | 100 | 0.390 ± 0.166 | 4.624 | <0.001\*\*\* |
| Steppe – Plantation | 100 | -1.327 ± 0.042 | 10.375 | <0.001\*\*\* |
| Size | 60 | -0.272 ± 0.672 | 1.443 | 0.149 |
| Matrix quality | 56 | -0.552 ± 0.750 | 0.794 | 0.427 |
| Matrix quality: size | 41 | 1.193 ± 0.936 | 2.505 | 0.012\* |
| Size: Forest – Plantation | 6 | 0.194 ± 0.750 | 0509 | 0.610 |
| Size: Forest – Steppe | 6 | 0.167 ± 0.481 | 0.682 | 0.495 |
| Size: Steppe – Plantation | 6 | -0.362 ± 0.417 | 0.990 | 0.322 |
| Matrix quality: Forest – Plantation | 2 | 0.274 ± 0.992 | 0.542 | 0.587 |
| Matrix quality: Forest – Steppe | 2 | 0.136 ± 0.638 | 0.418 | 0.675 |
| Matrix quality: Steppe – Plantation | 2 | 0.138 ± 0.967 | 0.280 | 0.779 |
| **Spiders** |  |  |  |  |
| Matrix quality | 96 | 0.398 ± 0.337 | 2.319 | 0.020\* |
| Forest – Plantation | 94 | 0.005 ± 0.186 | 0.055 | 0.956 |
| Forest – Steppe | 94 | -0.228 ± 0.234 | 1.997 | 0.045\* |
| Steppe – Plantation | 94 | 0.244 ± 0.239 | 2.167 | 0.030\* |
| Size | 28 | -0.037 ± 0.484 | 0.192 | 0.847 |
| Matrix quality: size | 6 | 0.321 ± 0.742 | 0.674 | 0.500 |
| Size: Forest – Plantation | 5 | 0.232 ± 0.503 | 0.850 | 0.395 |
| Size: Forest – Steppe | 5 | 0.492 ± 0.566 | 1.702 | 0.088 |
| Size: Steppe – Plantation | 5 | -0.194 ± 0.734 | 0.905 | 0.365 |
| Matrix quality: Forest – Plantation | 5 | -0.232 ± 0.535 | 0.850 | 0.395 |
| Matrix quality: Forest – Steppe | 5 | -0.198 ± 0.687 | 0.565 | 0.571 |
| Matrix quality: Steppe – Plantation | 5 | -0.025 ± 0.736 | 0.453 | 0.650 |
| **Specialist** **spiders** |  |  |  |  |
| Forest – Plantation | 100 | 0.065 ± 0.638 | 0.317 | 0.751 |
| Forest – Steppe | 100 | 0.911 ± 0.320 | 5.581 | <0.001\*\*\* |
| Steppe – Plantation | 100 | -0.845 ± 0.339 | 4.895 | <0.001\*\*\* |
| Matrix quality | 55 | 0.323 ± 0.651 | 0.973 | 0.330 |
| Size | 34 | 0.086 ± 0.794 | 0.286 | 0.330 |
| Matrix quality: size | 5 | 0.711 ± 1.607 | 0.867 | 0.386 |
| Size: Forest – Plantation | 7 | 0.484 ± 1.140 | 0.904 | 0.366 |
| Size: Forest – Steppe | 7 | 0.501 ± 0.920 | 1.067 | 0.286 |
| Size: Steppe – Plantation | 7 | -0.017 ± 0.882 | 0.038 | 0.970 |
| Matrix quality: Forest – Plantation | 2 | 0.759 ± 1.216 | 1.106 | 0.269 |
| Matrix quality: Forest – Steppe | 2 | 0.171 ± 1.723 | 0.284 | 0.777 |
| Matrix quality: Steppe – Plantation | 2 | 0.588 ± 1.127 | 0.987 | 0.324 |
| **Ants** |  |  |  |  |
| Size | 35 | -0.182 ± 0.383 | 0.932 | 0.351 |
| Matrix quality | 26 | 0.057 ± 0.503 | 0.224 | 0.823 |
| Forest – Plantation | 16 | 0.149 ± 0.243 | 1.190 | 0.234 |
| Forest – Steppe | 16 | 0.054 ± 0.257 | 0.429 | 0.670 |
| Steppe – Plantation | 16 | 0.094 ± 0.241 | 0.764 | 0.445 |
| Matrix quality: size | 3 | 0.407 ± 1.451 | 0.551 | 0.582 |
| **Specialist ants** |  |  |  |  |
| Forest – Plantation | 70 | 0.163 ± 0.515 | 0.622 | 0.533 |
| Forest – Steppe | 70 | -0.560 ± 0.629 | 1.743 | 0.081 |
| Steppe – Plantation | 70 | 0.723 ± 0.834 | 2.318 | 0.020\* |
| Size | 30 | -0.314 ± 0.776 | 0.792 | 0.428 |
| Matrix quality | 24 | 0.123 ± 1.012 | 0.240 | 0.815 |

a Models were fitted with Poisson distribution

b \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001