

Table S1. Weight and change (Δ) in AICc from generalized-linear mixed models for richness, diversity and functional diversity of birds, small mammals and bats at the plot and grid scale. A priori models included a heterogeneity index and means (m) and variances (v) of grass biomass (grass), canopy cover (canopy) and shrub cover (shrub). Models included quadratic terms for curvilinear effects. The best models and models within 2 AICc, excluding lesser models with one variable added to better model, are bold.

Model of Richness at Plot Scale	Birds		Small mammals		Bats	
	Δ AICc	AICcWt	Δ AICc	AICcWt	Δ AICc	AICcWt
1:null	353.89	0	75.361	0	10.461	0.001
2:heterogeneity	142.64	0	30.316	0	0.000	0.119
3:shrub(v)	239.977	0	33.984	0	5.425	0.008
4:shrub(v)+canopy(v)	122.891	0	34.833	0	1.336	0.061
5:shrub(m)+ shrub(m) ²	137.831	0	12.107	0.001	0.763	0.081
6:srubb(m)	175.579	0	23.621	0	1.025	0.071
7:canopy(v)	139.01	0	57.179	0	1.196	0.065
8:canopy(m)+canopy(m) ²	45.263	0	22.72	0	0.427	0.096
9:canopy(m)	114.768	0	22.687	0	3.342	0.022
10:grass(v)	333.958	0	63.573	0	12.531	0.000
11:grass(m)+grass(m) ²	315.728	0	76.788	0	14.154	0.000
12:grass(m)	316.83	0	77.381	0	12.389	0.000
13:shrub(m)+heterogeneity+grass(m)	85.676	0	10.21	0.004	1.736	0.050
14:grass(m)+grass(m) ² +heterogeneity	112.985	0	33.068	0	3.683	0.019
15:grass(m)+heterogeneity+shrub(m)+canopy(m)	33.486	0	0	0.598	2.674	0.031
16:shrub(m)+shrub(m) ² +grass(m)+heterogeneity	83.782	0	3.986	0.082	3.241	0.024
17:shrub(m)+grass(m)	173.713	0	19.445	0	3.122	0.025
18:Shrub(m)+Shrub(m) ² +heterogeneity	91.34	0	7.57	0.014	1.130	0.068
19:canopy(m)+canopy(m) ² +grass(m)+grass(v)	0	0.823	5.418	0.04	4.162	0.015
20:canopy(m)+canopy(m) ² +grass	45.524	0	6.264	0.026	2.309	0.038
21:canopy(m)+canopy(m) ² +heterogeneity	17.175	0	7.939	0.011	0.990	0.073
22:canopy(m)+canopy(m) ² +grass(v)	3.075	0.177	7.699	0.013	2.015	0.043
23:canopy(m)+canopy(m) ² +shrub(m)	41.112	0	18.014	0	0.855	0.078
24:canopy(m)+canopy(m) ² +grass(m)+heterogeneity+shrub(m)	20.708	0	2.073	0.212	4.428	0.013

Table S.1 continued

Models Diversity at Plot Scale	Birds		Small mammals		Bats	
	Δ AICc	AICcWt	Δ AICc	AICcWt	Δ AICc	AICcWt
1:null	145.773	0	76.013	0	42.192	0
2:heterogeneity	67.036	0	37.663	0	0.669	0.186
3:shrub(v)	92.646	0	33.371	0	22.730	0
4:shrub(v)+canopy(v)	61.243	0	33.167	0	3.359	0.048
5:shrub(m)+shrub(m) ²	40.068	0	4.938	0.048	11.893	0.001
6:srub(m)	56.622	0	11.475	0.002	18.838	0
7:canopy(v)	77.273	0	55.245	0	7.575	0.006
8:canopy(m)+canopy(m) ²	28.343	0	15.151	0	5.635	0.016
9:canopy(m)	56.567	0	14.662	0	30.240	0
10:grass(v)	142.639	0	74.782	0	44.159	0
11:grass(m)+grass(m) ²	114.567	0	75.453	0	46.229	0
12:grass(m)	113.748	0	76.262	0	44.206	0
13:shrub(m)+heterogeneity+grass(m)	16.676	0	8.061	0.010	2.916	0.061
14:grass(m)+grass(m) ² +heterogeneity	35.049	0	37.556	0	4.403	0.029
15:grass(m)+heterogeneity+shrub(m)+canopy(m)	10.628	0.005	0	0.563	4.967	0.022
16:shrub(m)+shrub(m) ² +grass(m)+heterogeneity	16.160	0	4.764	0.052	3.193	0.053
17:shrub(m)+grass(m)	47.743	0	11.863	0.002	20.032	0
18:Shrub(m)+Shrub(m) ² +heterogeneity	29.520	0	4.398	0.062	1.019	0.156
19:canopy(m)+canopy(m) ² +grass(m)+grass(v)	0	0.976	9.769	0.004	6.423	0.011
20:canopy(m)+canopy(m) ² +grass	27.410	0	9.932	0.004	5.234	0.019
21:canopy(m)+canopy(m) ² +heterogeneity	17.458	0	6.728	0.020	0.000	0.260
22:canopy(m)+canopy(m) ² +grass(v)	15.111	0	9.501	0.005	4.431	0.028
23:canopy(m)+canopy(m) ² +shrub(m)	16.935	0	6.060	0.027	3.879	0.037
24:canopy(m)+canopy(m) ² +grass(m)+heterogeneity+shrub(m)	8.058	0.017	2.057	0.201	2.654	0.069

Table S.1 continued

Models Functional Diversity at Plot Scale	Birds		Small mammals		Bats	
	Δ AICc	AICcWt	Δ AICc	AICcWt	Δ AICc	AICcWt
1:null	8.847	0.003	49.375	0	3.893	0.036
2:heterogeneity	9.130	0.002	30.871	0	2.596	0.068
3:shrub(v)	10.341	0.001	24.210	0	1.957	0.094
4:shrub(v)+canopy(v)	12.288	0.001	24.954	0	3.628	0.041
5:shrub(m)+shrub(m) ²	11.023	0.001	0	0.534	3.574	0.042
6:shrub(m)	10.570	0.001	6.008	0.027	2.612	0.068
7:canopy(v)	10.889	0.001	37.392	0	3.853	0.037
8:canopy(m)+canopy(m) ²	12.901	0.000	13.834	0.001	3.910	0.036
9:canopy(m)	10.874	0.001	12.684	0.001	2.613	0.068
10:grass(v)	0	0.234	50.069	0	5.795	0.014
11:grass(m)+grass(m) ²	12.584	0.000	8.272	0.009	6.423	0.010
12:grass(m)	3.858	0.034	32.970	0	5.920	0.013
13:shrub(m)+heterogeneity+grass(m)	1.987	0.087	6.045	0.026	6.086	0.012
14:grass(m)+grass(m) ² +heterogeneity	12.504	0.001	2.364	0.164	5.494	0.016
15:grass(m)+heterogeneity+shrub(m)+canopy(m)	10.643	0.001	7.425	0.013	7.596	0.006
16:shrub(m)+shrub(m) ² +grass(m)+heterogeneity	14.538	0	2.057	0.191	5.614	0.015
17:shrub(m)+grass(m)	5.392	0.016	14.790	0	4.729	0.024
18:Shrub(m)+Shrub(m) ² +heterogeneity	10.341	0.001	12.756	0.001	3.607	0.041
19:canopy(m)+canopy(m) ² +grass(m)+grass(v)	12.288	0.001	12.415	0.001	8.180	0.004
20:canopy(m)+canopy(m) ² +grass	11.023	0.001	14.472	0	6.041	0.012
21:canopy(m)+canopy(m) ² +heterogeneity	10.570	0.001	6.256	0.023	0	0.251
22:canopy(m)+canopy(m) ² +grass(v)	10.889	0.001	7.876	0.010	6.060	0.012
23:canopy(m)+canopy(m) ² +shrub(m)	12.901	0.000	49.375	0	4.037	0.033
24:canopy(m)+canopy(m) ² +grass(m)+heterogeneity+shrub(m)	10.874	0.001	30.871	0	3.291	0.048

Table S.1 continued

Models of Richness at Grid Scale	Birds		Small mammals		Bats	
	Δ AICc	AICcWt	Δ AICc	AICcWt	Δ AICc	AICcWt
1:null	17.826	0.000	9.991	0.003	8.133	0.007
2:heterogeneity	0	0.593	0	0.485	4.737	0.039
3:shrub(v)	4.474	0.063	5.475	0.031	4.790	0.038
5:shrub(m)+shrub(m) ²	8.662	0.008	7.764	0.010	2.319	0.130
6:shrub(m)	6.076	0.028	5.349	0.033	2.762	0.104
7:canopy(v)	8.334	0.009	2.128	0.167	3.394	0.076
8:canopy(m)+canopy(m) ²	6.498	0.023	6.425	0.020	0	0.414
9:canopy(m)	11.415	0.002	5.904	0.025	5.469	0.027
10:grass(v)	17.508	0.000	8.899	0.006	10.355	0.002
11:grass(m)+grass(m) ²	20.903	0.000	13.491	0.001	13.410	0.001
12:grass(m)	18.433	0.000	12.240	0.001	10.736	0.002
14:grass(m)+grass(m) ² +heterogeneity	2.599	0.162	4.539	0.050	11.693	0.001
17:shrub(m)+grass(m)	8.698	0.008	4.826	0.043	6.247	0.018
20:canopy(m)+canopy(m) ² +grass	9.240	0.006	3.795	0.073	4.052	0.055
22:canopy(m)+canopy(m) ² +grass(v)	3.605	0.098	4.501	0.051	3.135	0.086

Table S.1 Continued

Models of Diversity at Grid Scale	Birds		Small mammals		Bats	
	Δ AICc	AICcWt	Δ AICc	AICcWt	Δ AICc	AICcWt
1:null	33.800	0.000	21.099	0.000	13.130	0.001
2:heterogeneity	8.299	0.011	0.818	0.171	3.882	0.087
3:shrub(v)	7.330	0.017	3.424	0.046	5.222	0.045
5:shrub(m)+ shrub(m) ²	7.491	0.016	3.089	0.055	0	0.607
6:shrub(m)	6.654	0.024	2.088	0.090	4.725	0.057
7:canopy(v)	11.596	0.002	0	0.257	4.278	0.072
8:canopy(m)+canopy(m) ²	7.020	0.020	1.901	0.099	5.324	0.042
9:canopy(m)	9.852	0.005	4.246	0.031	4.571	0.062
10:grass(v)	36.153	0.000	21.974	0.000	15.935	0.000
11:grass(m)+grass(m) ²	22.697	0.000	24.843	0.000	18.876	0.000
12:grass(m)	24.636	0.000	22.585	0.000	15.277	0.000
14:grass(m)+grass(m) ² +heterogeneity	0	0.667	4.085	0.033	9.185	0.006
17:shrub(m)+grass(m)	2.505	0.191	4.276	0.030	8.332	0.009
20:canopy(m)+canopy(m) ² +grass	5.560	0.041	2.697	0.067	9.499	0.005
22:canopy(m)+canopy(m) ² +grass(v)	9.066	0.007	1.506	0.121	9.365	0.006

Table S.1 continued

Models of Functional Diversity at Grid Scale	Birds		Small mammals		Bats	
	Δ AICc	AICcWt	Δ AICc	AICcWt	Δ AICc	AICcWt
1:null	37.209	0.000	14.034	0.001	11.895	0.001
2:heterogeneity	13.239	0.001	6.385	0.029	0	0.353
3:shrub(v)	7.168	0.018	8.984	0.008	4.311	0.041
5:shrub(m)+shrub(m) ²	5.506	0.041	8.198	0.012	1.720	0.149
6:shrub(m)	8.353	0.010	8.510	0.010	3.651	0.057
7:canopy(v)	10.831	0.003	6.042	0.035	0.997	0.214
8:canopy(m)+canopy(m) ²	4.226	0.078	4.572	0.073	4.118	0.045
9:canopy(m)	9.167	0.007	9.529	0.006	2.663	0.093
10:grass(v)	39.685	0.000	15.573	0.000	14.937	0.000
11:grass(m)+grass(m) ²	33.851	0.000	17.395	0.000	17.295	0.000
12:grass(m)	33.994	0.000	15.671	0.000	13.764	0.000
14:grass(m)+grass(m) ² +heterogeneity	0	0.645	5.770	0.040	5.584	0.022
17:shrub(m)+grass(m)	3.624	0.105	7.538	0.017	7.250	0.009
20:canopy(m)+canopy(m) ² +grass	4.343	0.074	0	0.716	8.293	0.006
22:canopy(m)+canopy(m) ² +grass(v)	7.002	0.019	5.206	0.053	7.233	0.010