

Table S4. Distance-based redundancy analysis (db-RDA) results for birds, bats, and small mammals and the grid and plot scale. For each combination of taxa and scale we show; overall inertia and the associated adjusted R^2 , the amount of variation described by each db-rda axis, permutation test results(anova.cca function in the *vegan* package in R) for the db-rda axes and permutation test results (anova.cca function in the *vegan* package in R) for the db-rda constraint variables.

Birds: Grid Scale				
	Inertia	Proportion	adj.r2	
Total	12.631	1.000		
Conditioned	1.584	0.125		
Constrained	3.312	0.262	0.224	
Unconstrained	7.736	0.612		
	db-RDA 1	db-RDA 2	db-RDA 3	
Eigenvalue	2.686	0.412	0.214	
Proportion Explained	0.811	0.124	0.065	
Cumulative Proportion	0.811	0.935	1.000	
Permutation test by axis				
	Df	SumOfSqs	F	Pr(>F)
db-RDA 1	1.000	2.686	11.457	0.001
db-RDA 2	1.000	0.412	1.756	0.022
db-RDA 3	1.000	0.214	0.914	0.775
Residual	33.000	7.736		
Permutation test by constraint variable				
	Df	SumOfSqs	F	Pr(>F)
canopy	1.000	2.476	10.561	0.001
shrub	1.000	0.483	2.059	0.032
heterogeneity	1.000	0.353	1.508	0.118
Residual	33.000	7.736		
Bats: Grid Scale				
	Inertia	Proportion	adj.r2	
Total	3.257	1.000		
Conditioned	0.120	0.037		
Constrained	1.256	0.386	0.285	
Unconstrained	1.881	0.578		
	db-RDA 1	db-RDA 2	db-RDA 3	
Eigenvalue	0.956	0.222	0.079	
Proportion Explained	0.761	0.177	0.063	
Cumulative Proportion	0.761	0.938	1.000	
Permutation test by axis				

	Df	SumOfSqs	F	Pr(>F)
db-RDA 1	1.000	0.956	7.624	0.001
db-RDA 2	1.000	0.222	1.768	0.038
db-RDA 3	1.000	0.079	0.626	0.864
Residual	15.000	1.881		

Permutation test by constraint variable

	Df	SumOfSqs	F	Pr(>F)
canopy	1.000	0.788	6.282	0.001
shrub	1.000	0.370	2.951	0.009
heterogeneity	1.000	0.098	0.784	0.612
Residual	15.000	1.881		

Small mammals: Grid Scale

	Inertia	Proportion	adj.R2
Total	21.721	1.000	
Conditioned	2.840	0.131	
Constrained	3.358	0.155	0.097
Unconstrained	15.523	0.715	
	db-RDA 1	db-RDA 2	db-RDA 3
Eigenvalue	2.474	0.527	0.358
Proportion Explained	0.737	0.157	0.107
Cumulative Proportion	0.737	0.893	1.000

Permutation test by axis

	Df	SumOfSqs	F	Pr(>F)
db-RDA 1	1.000	2.474	5.259	0.001
db-RDA 2	1.000	0.527	1.119	0.401
db-RDA 3	1.000	0.358	0.761	0.889
Residual	33.000	15.524		

Permutation test by constraint variable

	Df	SumOfSqs	F	Pr(>F)
canopy	1.000	2.418	5.140	0.001
shrub	1.000	0.454	0.964	0.509
heterogeneity	1.000	0.487	1.034	0.397
Residual	33.000	15.524		

Birds: Plot Scale

	Inertia	Proportion	adj.R2
Total	288.101	1.000	
Conditioned	38.595	0.134	
Constrained	2.988	0.010	0.003

Unconstrained	246.518	0.856		
	db-RDA 1	db-RDA 2	db-RDA 3	
Eigenvalue	1.186	1.044	0.757	
Proportion Explained	0.397	0.350	0.253	
Cumulative Proportion	0.397	0.747	1.000	
<i>Permutation test by axis</i>				
	Df	SumOfSqs	F	Pr(>F)
db-RDA 1	1.000	1.186	1.646	0.004
db-RDA 2	1.000	1.044	1.448	0.028
db-RDA 3	1.000	0.757	1.050	0.671
Residual	342.000	246.518		
<i>Permutation test by constraint variable</i>				
	Df	SumOfSqs	F	Pr(>F)
canopy	1.000	1.081	1.500	0.001
shrub	1.000	1.054	1.462	0.001
heterogeneity	1.000	0.853	1.184	0.039
Residual	342.000	246.518		

Bats: Plot Scale

	Inertia	Proportion	adj.R2	
Total	122.145	1.000		
Conditioned	11.569	0.095		
Constrained	2.033	0.017	-0.001	
Unconstrained	108.542	0.889		
	db-RDA 1	db-RDA 2	db-RDA 3	
Eigenvalue	0.757	0.688	0.588	
Proportion Explained	0.372	0.339	0.289	
Cumulative Proportion	0.372	0.711	1.000	
<i>Permutation test by axis</i>				
	Df	SumOfSqs	F	Pr(>F)
db-RDA 1	1.000	0.757	1.074	0.315
db-RDA 2	1.000	0.688	0.977	0.592
db-RDA 3	1.000	0.588	0.834	0.984
Residual	154.000	108.542		
<i>Permutation test by constraint variable</i>				
	Df	SumOfSqs	F	Pr(>F)
canopy	1.000	0.752	1.067	0.252
shrub	1.000	0.633	0.899	0.822
heterogeneity	1.000	0.648	0.919	0.737
Residual	154.000	108.542		

Small Mammals: Plot Scale

	Inertia	Proportion	adj.R2
Total	560.841	1.000	
Conditioned	50.013	0.089	
Constrained	6.544	0.012	0.002
Unconstrained	504.284	0.899	
	db-RDA 1	db-RDA 2	db-RDA 3
Eigenvalue	2.592	2.023	1.929
Proportion Explained	0.396	0.309	0.295
Cumulative Proportion	0.396	0.705	1.000

Permutation test by axis

	Df	SumOfSqs	F	Pr(>F)
db-RDA 1	1.000	2.590	1.388	0.023
db-RDA 2	1.000	2.020	1.083	0.310
db-RDA 3	1.000	1.930	1.033	0.439
Residual	270.000	504.280		

Permutation test by constraint variable

	Df	SumOfSqs	F	Pr(>F)
canopy	1.000	2.200	1.180	0.025
shrub	1.000	2.350	1.260	0.012
heterogeneity	1.000	1.990	1.064	0.166
Residual	270.000	504.280		