

Supplementary material

Table S1. Summary of principal component analysis (PCA) on the four empirical patterns for each species group. For each PCA axis, the loadings of each empirical pattern are shown, as is the total variance explained by that axis. Species are grouped by range size: Q1 through Q4 correspond to the smallest to largest range size quartiles. For large-ranging species, the first PCA axis explained large portions of the variance in empirical patterns, while for small-ranging species, variance explained was more evenly distributed among axes.

		Diversity	Area	Shape1	Shape2	Var. Exp.
All Birds	PC1	0.531	-0.637	0.556	0.050	0.598
	PC2	0.257	0.066	-0.253	0.930	0.268
	PC3	-0.708	-0.034	0.605	0.363	0.124
	PC4	0.388	0.767	0.511	-0.023	0.010
Q4 Birds	PC1	0.557	-0.604	0.495	0.281	0.635
	PC2	0.159	0.198	-0.430	0.866	0.241
	PC3	-0.623	0.149	0.653	0.405	0.113
	PC4	0.526	0.757	0.379	-0.081	0.011
Q3 Birds	PC1	0.650	-0.492	0.514	-0.266	0.385
	PC2	-0.172	-0.379	0.299	0.859	0.264
	PC3	0.009	-0.700	-0.711	-0.060	0.206
	PC4	0.740	0.353	-0.374	0.434	0.145
Q2 Birds	PC1	0.558	-0.593	-0.008	0.580	0.391
	PC2	-0.229	-0.091	-0.962	0.115	0.256
	PC3	0.759	0.157	-0.264	-0.574	0.181
	PC4	0.244	0.785	-0.064	0.566	0.172
Q1 Birds	PC1	-0.579	0.524	-0.510	0.360	0.300
	PC2	0.514	0.387	0.310	0.700	0.269
	PC3	-0.296	0.577	0.653	-0.391	0.251
	PC4	-0.560	-0.492	0.466	0.477	0.181
All Mammals	PC1	0.463	-0.529	0.528	0.476	0.658
	PC2	-0.557	-0.469	0.469	-0.499	0.208
	PC3	-0.688	-0.018	-0.067	0.722	0.093
	PC4	-0.041	0.707	0.705	0.044	0.040
Q4 Mammals	PC1	0.458	-0.505	0.515	0.520	0.677
	PC2	-0.652	-0.478	0.470	-0.355	0.193
	PC3	-0.502	0.504	0.297	0.637	0.081
	PC4	-0.337	-0.513	-0.653	0.445	0.049
Q3 Mammals	PC1	0.531	-0.521	0.350	0.569	0.371
	PC2	-0.400	-0.462	-0.696	0.378	0.273
	PC3	0.642	0.468	-0.579	0.185	0.187
	PC4	-0.382	0.545	0.242	0.707	0.170
Q2 Mammals	PC1	0.646	-0.353	0.611	0.291	0.317
	PC2	-0.200	-0.623	0.199	-0.729	0.268
	PC3	0.122	0.697	0.507	-0.491	0.219
	PC4	0.726	0.025	-0.574	-0.377	0.197
Q1 Mammals	PC1	-0.624	0.535	0.413	-0.392	0.295
	PC2	-0.297	-0.546	-0.387	-0.681	0.267
	PC3	0.448	-0.322	0.750	-0.363	0.243
	PC4	0.567	0.559	-0.341	-0.500	0.195