

## 1 Supporting online material

### 2 Self-Organized Functional Redundancy in Beetles

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6 **Table S1.** Akaike Information Criterion values for models with different number of  
7 modes (1-10) for each region. The optimal numbers of clusters (with the lowest AIC  
8 value) are represented in bold. AF= Afrotropic, PL = Palearctic (incl all of China), NT =  
9 Neotropic (South and Central America); OR= Orientalis (also Indomalaya, roughly India,  
10 S.E. Asia); AU = Australasia; NA = Nearctic (US and Canada); North= NA+PL;  
11 South=AF+NT+OR+AU, and Total = all data.

N clusters	AF	PL	NT	OR	AU	NA	North	South	Total
1	2370	2011	1707	1173	750	1016	2917	5996	8384
2	2141	1943	1602	1063	711	996	2820	5660	8036
3	2062	1912	1561	1000	704	972	2766	5465	7847
4	2002	1847	1548	984	690	948	2690	5375	7760
5	<b>1995</b>	1827	1547	<b>983</b>	<b>690</b>	<b>939</b>	2673	<b>5365</b>	<b>7757</b>
6	2001	1822	<b>1546</b>	993	693	939	2674	5367	7763
7	2004	<b>1816</b>	1558	999	696	943	2661	5368	7763
8	2001	1817	*	1005	700	949	<b>2660</b>	5373	7770
9	2000	1823	*	1002	702	951	2665	5380	7776
10	2006	1826	*	1001	700	961	2671	5379	7776

12 \*= failed to converge

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14 **Table S2.** Positions of the modes for each of the clusters for the optimal model according  
 15 to the Akaike Information Criterion for each region. AF= Afrotropic, PL = Palearctic (incl  
 16 all of China), NT = Neotropic (South and Central America); OR= Orientalis (also  
 17 Indomalaya, roughly India, S.E. Asia); AU = Australasia; NA = Nearctic (US and  
 18 Canada); North= NA+PL; South=AF+NT+OR+AU, and Total = all data.

Cluster	AF	PL	NT	OR	AU	NA	North	South	Total
No.									
1	0.833	0.669	0.615	0.559	1.01	0.626	0.673	0.728	0.694
2	1.4	0.942	0.997	1.32	1.5	1.32	0.952	1.44	1.35
3	1.76	1.21	1.37	1.59	1.85	2.07	1.19	1.85	1.63
4	2.59	1.5	1.8	2.53	2.46	2.69	1.48	2.49	2.53
5	3.46	2.1	2.38	3.3	3.25	3.36	1.79	3.35	3.36
6		2.69	3.28				2.09		
7		3.33					2.69		
8							3.35		

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