

Table S1: Statistical results of multilevel linear mixed-effects models with Hedges' d as response variable, taxonomic group and years after disturbance as predictors and study site as a random effect (i.e. Hedges' d ~ taxonomic group + time since disturbance + (1|study site) - 1). Significant p-values are given in bold and indicate differences in numbers of species. Results correspond to Fig. 2a in the main manuscript.

Variable	Estimate	Std. error	z-value	p-pvalue
Years after disturbance	<b>-5.34 e<sup>-3</sup></b>	<b>1.05 e<sup>-3</sup></b>	<b>-5.08</b>	<b>&lt;0.001</b>
Amphibians	3.44 e <sup>-1</sup>	5.37 e <sup>-1</sup>	6.41 e <sup>-1</sup>	0.522
Ants	-1.06 e <sup>-1</sup>	1.46 e <sup>-1</sup>	-7.25 e <sup>-1</sup>	0.468
Bats	-2.96 e <sup>-1</sup>	1.87 e <sup>-1</sup>	-1.58	0.113
Bees and Wasps	-5.21 e <sup>-2</sup>	5.01 e <sup>-1</sup>	-1.04 e <sup>-1</sup>	0.917
Birds	<b>-1.99 e<sup>-1</sup></b>	<b>6.55 e<sup>-2</sup></b>	<b>-3.04</b>	<b>0.002</b>
Carabids	<b>1.99 e<sup>-1</sup></b>	<b>5.85 e<sup>-2</sup></b>	<b>3.40</b>	<b>0.001</b>
Epigeal lichens	<b>-5.56 e<sup>-1</sup></b>	<b>1.11 e<sup>-1</sup></b>	<b>-5.00</b>	<b>&lt;0.001</b>
Epigeal mosses	<b>-1.46 e<sup>-1</sup></b>	<b>6.09 e<sup>-2</sup></b>	<b>-2.40</b>	<b>0.016</b>
Epigeal spiders	<b>1.97 e<sup>-1</sup></b>	<b>6.28 e<sup>-2</sup></b>	<b>3.14</b>	<b>0.002</b>
Epixylic lichens	<b>-6.47 e<sup>-1</sup></b>	<b>7.18 e<sup>-2</sup></b>	<b>-9.01</b>	<b>&lt;0.001</b>
Epixylic mosses	<b>-3.43 e<sup>-1</sup></b>	<b>6.65 e<sup>-2</sup></b>	<b>-5.16</b>	<b>&lt;0.001</b>
Harvestman	-3.77 e <sup>-1</sup>	3.39 e <sup>-1</sup>	-1.11	0.266
Hoverflies	7.47 e <sup>-2</sup>	6.61 e <sup>-2</sup>	1.13	0.259
Land snails	4.44 e <sup>-1</sup>	1.76 e <sup>-1</sup>	2.52	0.012
Nocturnal moths	-3.16 e <sup>-1</sup>	2.34 e <sup>-1</sup>	-1.35	0.176
Non-saproxyllic beetles	1.26 e <sup>-1</sup>	1.27 e <sup>-1</sup>	9.92 e <sup>-1</sup>	0.321
Reptiles	-3.86 e <sup>-1</sup>	5.17 e <sup>-1</sup>	-7.47 e <sup>-1</sup>	0.455
Rodents	-6.34 e <sup>-2</sup>	9.65 e <sup>-2</sup>	-6.57 e <sup>-1</sup>	0.511
Saproxyllic beetles	<b>-2.96 e<sup>-1</sup></b>	<b>6.57 e<sup>-2</sup></b>	<b>-4.51</b>	<b>&lt;0.001</b>
Scuttle flies	-5.69 e <sup>-2</sup>	1.75 e <sup>-1</sup>	-3.26 e <sup>-1</sup>	0.745
Springtails	<b>-3.40 e<sup>-1</sup></b>	<b>1.72 e<sup>-1</sup></b>	<b>-1.97</b>	<b>0.049</b>
True bugs	4.69 e <sup>-2</sup>	6.42 e <sup>-2</sup>	7.31 e <sup>-1</sup>	0.465
Vascular plants	-5.70 e <sup>-2</sup>	5.64 e <sup>-2</sup>	-1.01	0.312
Wood-inhabiting fungi	<b>-5.39 e<sup>-2</sup></b>	<b>7.92 e<sup>-2</sup></b>	<b>-6.81</b>	<b>&lt;0.001</b>