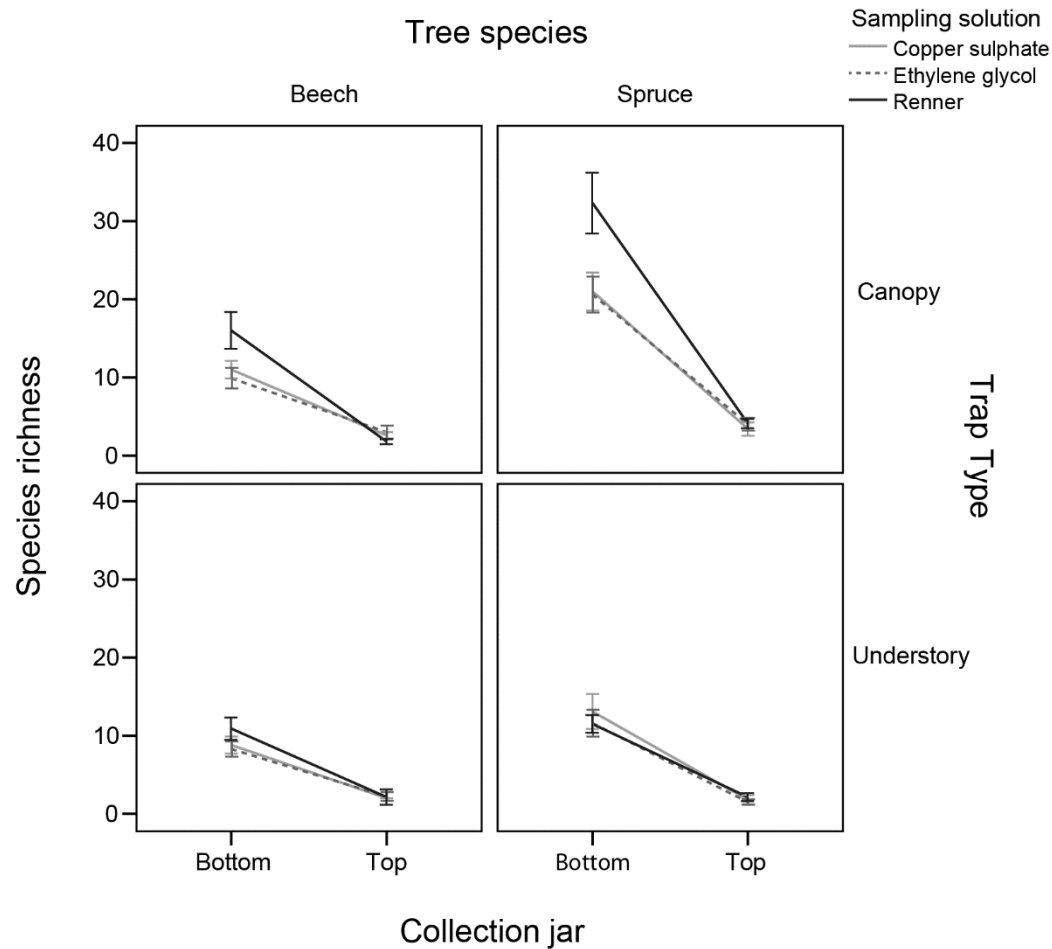


## Supplementary S6: Detailed results on insect community measures

### *Effect of sampling solution on species richness*



**Figure A:** The species richness of Coleoptera samples collected, across all treatments. A significant 3-way interaction ( $P=0.05$ ) was found between tree species, sampling solution and jar for the species richness but not the diversity of Coleoptera. Error bars represent  $\pm 1$ SE.

**Table A:** Species positions along the first and second RLQ axis (sorted by RLQ1) referring to Figs 2 and 3 of the main manuscript. Additionally mean body size as well as feeding and habitat traits of species are given.

Order	Suborder	Family	SpeciesID	RLQ1	RLQ2	BodySize	Feeding	Habitat
Coleoptera	Polyphaga	Cerambycidae	<i>Oxymirus cursor</i>	-1.265	-3.093	23	dx	do
Coleoptera	Polyphaga	Elateridae	<i>Agriotes pilosellus</i>	-1.240	-0.152	14.75	h	v
Coleoptera	Polyphaga	Cantharidae	<i>Podabrus alpinus</i>	-1.113	-1.237	12.5	c	v
Coleoptera	Polyphaga	Elateridae	<i>Athous haemorrhoidalis</i>	-1.104	0.145	12.25	h	v
Coleoptera	Polyphaga	Cantharidae	<i>Cantharis pellucida</i>	-1.073	-1.149	11.75	c	v
Coleoptera	Polyphaga	Cleridae	<i>Opilo mollis</i>	-1.038	-1.217	10.75	c	do
Coleoptera	Polyphaga	Lycidae	<i>Dictyopterus aurora</i>	-1.025	-1.187	10.5	c	do
Coleoptera	Polyphaga	Elateridae	<i>Athous vittatus</i>	-0.996	0.382	10.25	h	v
Coleoptera	Polyphaga	Cantharidae	<i>Metacantharis discoidea</i>	-0.977	-0.941	10	c	v
Coleoptera	Polyphaga	Cantharidae	<i>Rhagonycha translucida</i>	-0.977	-0.941	10	c	v
Coleoptera	Polyphaga	Cantharidae	<i>Cantharis nigricans</i>	-0.950	-0.882	9.5	c	v
Coleoptera	Polyphaga	Elateridae	<i>Melanotus castanipes</i>	-0.939	-2.381	17	dx	do
Coleoptera	Polyphaga	Elateridae	<i>Athous subfuscus</i>	-0.936	0.513	9.15	h	v
Coleoptera	Polyphaga	Staphylinidae	<i>Quedius xanthopus</i>	-0.916	-0.950	8.5	c	do
Coleoptera	Polyphaga	Curculionidae	<i>Phyllobius pomaceus</i>	-0.901	0.590	8.5	h	v
Coleoptera	Polyphaga	Coccinellidae	<i>Anatis ocellata</i>	-0.896	-0.763	8.5	c	v
Coleoptera	Polyphaga	Staphylinidae	<i>Quedius mesomelinus</i>	-0.896	-1.640	9	c	e
Coleoptera	Polyphaga	Curculionidae	<i>Curculio pellitus</i>	-0.873	0.649	8	h	v
Coleoptera	Polyphaga	Curculionidae	<i>Curculio venosus</i>	-0.873	0.649	8	h	v
Coleoptera	Polyphaga	Coccinellidae	<i>Myzia oblongoguttata</i>	-0.869	-0.704	8	c	v
Coleoptera	Polyphaga	Staphylinidae	<i>Quedius maurus</i>	-0.861	-0.831	7.5	c	do
Coleoptera	Polyphaga	Staphylinidae	<i>Philonthus cognatus</i>	-0.857	-1.417	9.75	c	g
Coleoptera	Polyphaga	Curculionidae	<i>Otiorhynchus singularis</i>	-0.846	0.709	7.5	h	v
Coleoptera	Polyphaga	Staphylinidae	<i>Atrecus affinis</i>	-0.821	-0.742	6.75	c	do
Coleoptera	Polyphaga	Elateridae	<i>Agriotes acuminatus</i>	-0.819	0.768	7	h	v
Coleoptera	Polyphaga	Curculionidae	<i>Phyllobius arborator</i>	-0.819	0.768	7	h	v
Coleoptera	Polyphaga	Elateridae	<i>Ampedus sanguineus</i>	-0.817	-2.114	14.75	dx	do
Coleoptera	Polyphaga	Cantharidae	<i>Cantharis decipiens</i>	-0.814	-0.585	7	c	v
Coleoptera	Polyphaga	Coccinellidae	<i>Harmonia axyridis</i>	-0.814	-0.585	7	c	v
Coleoptera	Adephaga	Carabidae	<i>Amara ovata</i>	-0.808	0.054	8.75	h	g
Coleoptera	Adephaga	Carabidae	<i>Amara similata</i>	-0.808	0.054	8.75	h	g
Coleoptera	Polyphaga	Cryptophagidae	<i>Micrambe abietis</i>	-0.807	-1.688	2.3	mm	wf
Coleoptera	Polyphaga	Elateridae	<i>Kibunea minutus</i>	-0.805	0.797	6.75	h	v
Coleoptera	Polyphaga	Elateridae	<i>Dalopius marginatus</i>	-0.801	-0.555	6.75	c	v
Coleoptera	Polyphaga	Curculionidae	<i>Polydrusus impar</i>	-0.797	0.815	6.6	h	v
Coleoptera	Polyphaga	Cryptophagidae	<i>Atomaria procerula</i>	-0.796	-1.664	2.1	mm	wf
Coleoptera	Polyphaga	Latridiidae	<i>Corticaria abietorum</i>	-0.790	-1.652	2	mm	wf
Coleoptera	Polyphaga	Latridiidae	<i>Stephostethus rugicollis</i>	-0.779	-1.628	1.8	mm	wf

Coleoptera	Polyphaga	Tenebrionidae	<i>Stenomax aeneus</i>	-0.776	-2.025	14	dx	do
Coleoptera	Adephaga	Carabidae	<i>Dromius agilis</i>	-0.765	-0.478	6.1	c	v
Coleoptera	Polyphaga	Cantharidae	<i>Rhagonycha lignosa</i>	-0.760	-0.466	6	c	v
Coleoptera	Polyphaga	Latridiidae	<i>Corticarina lambiana</i>	-0.755	-1.575	1.35	mm	wf
Coleoptera	Polyphaga	Melyridae	<i>Dasytes caeruleus</i>	-0.753	-0.594	5.5	c	do
Coleoptera	Polyphaga	Curculionidae	<i>Curculio glandium</i>	-0.751	0.916	5.75	h	v
Coleoptera	Polyphaga	Staphylinidae	<i>Bolitochara obliqua</i>	-0.742	-1.670	3.6	c	wf
Coleoptera	Polyphaga	Omalisidae	<i>Omalisus fontisbellaquaei</i>	-0.735	-1.151	7.5	c	g
Coleoptera	Polyphaga	Cantharidae	<i>Rhagonycha testacea</i>	-0.733	-0.407	5.5	c	v
Coleoptera	Polyphaga	Staphylinidae	<i>Gabrius splendidulus</i>	-0.725	-0.535	5	c	do
Coleoptera	Polyphaga	Silvanidae	<i>Uleiota planata</i>	-0.725	-0.535	5	c	do
Coleoptera	Polyphaga	Elateridae	<i>Melanotus rufipes</i>	-0.721	-1.906	13	dx	do
Coleoptera	Polyphaga	Cantharidae	<i>Rhagonycha atra</i>	-0.719	-0.377	5.25	c	v
Coleoptera	Adephaga	Carabidae	<i>Amara plebeja</i>	-0.713	0.262	7	h	g
Coleoptera	Polyphaga	Curculionidae	<i>Otiorhynchus scaber</i>	-0.710	1.005	5	h	v
Coleoptera	Polyphaga	Curculionidae	<i>Polydrusus undatus</i>	-0.710	1.005	5	h	v
Coleoptera	Polyphaga	Cryptophagidae	<i>Cryptophagus dorsalis</i>	-0.708	-0.374	2.2	mm	do
Coleoptera	Polyphaga	Cantharidae	<i>Malthodes marginatus</i>	-0.698	-0.476	4.5	c	do
Coleoptera	Polyphaga	Cryptophagidae	<i>Atomaria ornata</i>	-0.697	-0.351	2	mm	do
Coleoptera	Polyphaga	Curculionidae	<i>Phyllobius argentatus</i>	-0.697	1.035	4.75	h	v
Coleoptera	Polyphaga	Curculionidae	<i>Strophosoma melanogrammum</i>	-0.697	1.035	4.75	h	v
Coleoptera	Polyphaga	Melyridae	<i>Aplocnemus nigricornis</i>	-0.693	-0.464	4.4	c	do
Coleoptera	Polyphaga	Cryptophagidae	<i>Cryptophagus pilosus</i>	-0.691	-1.070	2.75	mm	e
Coleoptera	Polyphaga	Cryptophagidae	<i>Atomaria turgida</i>	-0.689	-0.333	1.85	mm	do
Coleoptera	Adephaga	Carabidae	<i>Pterostichus vernalis</i>	-0.689	-1.050	6.65	c	g
Coleoptera	Polyphaga	Elateridae	<i>Agriotes pallidulus</i>	-0.688	1.053	4.6	h	v
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta myrmecobia</i>	-0.677	-1.528	2.4	c	wf
Coleoptera	Polyphaga	Latridiidae	<i>Stephostethus angusticollis</i>	-0.677	-1.040	2.5	mm	e
Coleoptera	Polyphaga	Melyridae	<i>Dasytes plumbeus</i>	-0.674	-0.422	4.05	c	do
Coleoptera	Polyphaga	Byturidae	<i>Byturus ochraceus</i>	-0.672	1.088	4.3	h	v
Coleoptera	Polyphaga	Cryptophagidae	<i>Cryptophagus dentatus</i>	-0.672	-1.028	2.4	mm	e
Coleoptera	Polyphaga	Melyridae	<i>Dasytes aeratus</i>	-0.671	-0.416	4	c	do
Coleoptera	Polyphaga	Cantharidae	<i>Malthinus frontalis</i>	-0.671	-0.416	4	c	do
Coleoptera	Polyphaga	Cryptophagidae	<i>Cryptophagus scanicus</i>	-0.666	-1.016	2.3	mm	e
Coleoptera	Polyphaga	Coccinellidae	<i>Adalia decempunctata</i>	-0.665	-0.259	4.25	c	v
Coleoptera	Polyphaga	Coccinellidae	<i>Aphidecta oblitterata</i>	-0.659	-0.247	4.15	c	v
Coleoptera	Polyphaga	Cimberidae	<i>Cimberis attelaboides</i>	-0.656	1.124	4	h	v
Coleoptera	Polyphaga	Chrysomelidae	<i>Oulema melanopus</i>	-0.656	1.124	4	h	v
Coleoptera	Polyphaga	Rhizophagidae	<i>Rhizophagus nitidulus</i>	-0.652	-0.375	3.65	c	do
Coleoptera	Polyphaga	Coccinellidae	<i>Exochomus quadripustulatus</i>	-0.651	-0.229	4	c	v
Coleoptera	Polyphaga	Latridiidae	<i>Cartodere nodifer</i>	-0.650	-0.981	2	mm	e
Coleoptera	Polyphaga	Latridiidae	<i>Enicmus transversus</i>	-0.650	-0.981	2	mm	e
Coleoptera	Polyphaga	Ptiliidae	<i>Ptenidium laevigatum</i>	-0.649	-0.244	1.1	mm	do

Coleoptera	Polyphaga	Cryptophagidae	<i>Cryptophagus distinguendus</i>	-0.645	-0.969	1.9	mm	e
Coleoptera	Polyphaga	Cryptophagidae	<i>Atomaria analis</i>	-0.642	-0.963	1.85	mm	e
Coleoptera	Polyphaga	Curculionidae	<i>Barypeithes pellucidus</i>	-0.642	1.153	3.75	h	v
Coleoptera	Polyphaga	Ptiliidae	<i>Baeocrara variolosa</i>	-0.640	-0.226	0.95	mm	do
Coleoptera	Polyphaga	Latridiidae	<i>Enicmus histrio</i>	-0.636	-0.951	1.75	mm	e
Coleoptera	Polyphaga	Cryptophagidae	<i>Atomaria atricapilla</i>	-0.634	-0.945	1.7	mm	e
Coleoptera	Polyphaga	Byturidae	<i>Byturus tomentosus</i>	-0.634	1.171	3.6	h	v
Coleoptera	Polyphaga	Ptiliidae	<i>Pteryx suturalis</i>	-0.632	-0.208	0.8	mm	do
Coleoptera	Polyphaga	Cryptophagidae	<i>Atomaria fuscata</i>	-0.631	-0.939	1.65	mm	e
Coleoptera	Polyphaga	Latridiidae	<i>Corticarina fuscula</i>	-0.631	-0.939	1.65	mm	e
Coleoptera	Polyphaga	Elateridae	<i>Anostirus purpureus</i>	-0.626	-1.699	11.25	dx	do
Coleoptera	Polyphaga	Latridiidae	<i>Dienerella clathrata</i>	-0.626	-0.927	1.55	mm	e
Coleoptera	Polyphaga	Curculionidae	<i>Hypera nigrirostris</i>	-0.623	1.195	3.4	h	v
Coleoptera	Polyphaga	Staphylinidae	<i>Euryusa castanoptera</i>	-0.617	-0.298	3	c	do
Coleoptera	Polyphaga	Cantharidae	<i>Malthodes spathifer</i>	-0.617	-0.298	3	c	do
Coleoptera	Polyphaga	Bothrideridae	<i>Oxylaemus variolosus</i>	-0.617	-0.298	3	c	do
Coleoptera	Polyphaga	Latridiidae	<i>Corticarina similata</i>	-0.615	-0.904	1.35	mm	e
Coleoptera	Polyphaga	Staphylinidae	<i>Eusphalerum abdominale</i>	-0.615	1.213	3.25	h	v
Coleoptera	Polyphaga	Staphylinidae	<i>Leptusa pulchella</i>	-0.614	-0.292	2.95	c	do
Coleoptera	Polyphaga	Staphylinidae	<i>Philonthus albipes</i>	-0.613	-0.884	5.25	c	g
Coleoptera	Polyphaga	Latridiidae	<i>Cortinicara gibbosa</i>	-0.612	-0.898	1.3	mm	e
Coleoptera	Polyphaga	Curculionidae	<i>Rhynchaenus quercus</i>	-0.612	1.219	3.2	h	v
Coleoptera	Polyphaga	Curculionidae	<i>Stereonychus fraxini</i>	-0.607	1.230	3.1	h	v
Coleoptera	Polyphaga	Corylophidae	<i>Orthoperus mundus</i>	-0.601	-1.362	1	c	wf
Coleoptera	Polyphaga	Staphylinidae	<i>Leptusa fumida</i>	-0.600	-0.262	2.7	c	do
Coleoptera	Polyphaga	Curculionidae	<i>Anthonomus phyllocola</i>	-0.599	1.248	2.95	h	v
Coleoptera	Polyphaga	Elateridae	<i>Denticollis linearis</i>	-0.599	-1.639	10.75	dx	do
Coleoptera	Polyphaga	Silvanidae	<i>Silvanoprus fagi</i>	-0.598	-0.256	2.65	c	do
Coleoptera	Polyphaga	Corylophidae	<i>Orthoperus atomus</i>	-0.597	-1.354	0.935	c	wf
Coleoptera	Polyphaga	Coccinellidae	<i>Rhizophagus chrysomeloides</i>	-0.597	-0.110	3	c	v
Coleoptera	Polyphaga	Latridiidae	<i>Cartodere constricta</i>	-0.590	-0.711	2.35	mm	g
Coleoptera	Polyphaga	Elateridae	<i>Ampedus pomorum</i>	-0.585	-1.610	10.5	dx	do
Coleoptera	Polyphaga	Anthribidae	<i>Brachytarsus nebulosus</i>	-0.583	-0.081	2.75	c	v
Coleoptera	Polyphaga	Nitidulidae	<i>Meligethes denticulatus</i>	-0.582	1.284	2.65	h	v
Coleoptera	Polyphaga	Curculionidae	<i>Rhynchaenus fagi</i>	-0.580	1.290	2.6	h	v
Coleoptera	Polyphaga	Coccinellidae	<i>Scymnus abietis</i>	-0.575	-0.063	2.6	c	v
Coleoptera	Polyphaga	Staphylinidae	<i>Mycetoporus lepidus</i>	-0.572	-0.795	4.5	c	g
Coleoptera	Polyphaga	Rhynchitidae	<i>Caenorhinus germanicus</i>	-0.571	1.308	2.45	h	v
Coleoptera	Polyphaga	Nitidulidae	<i>Epuraea melanocephala</i>	-0.569	-0.051	2.5	c	v
Coleoptera	Polyphaga	Cerylonidae	<i>Cerylon histeroides</i>	-0.565	-0.185	2.05	c	do
Coleoptera	Polyphaga	Staphylinidae	<i>Leptusa norvegica</i>	-0.562	-0.179	2	c	do
Coleoptera	Polyphaga	Staphylinidae	<i>Phyllodrepa ioptera</i>	-0.562	-0.179	2	c	do
Coleoptera	Polyphaga	Pselaphidae	<i>Trichonyx sulcicollis</i>	-0.562	-0.179	2	c	do

Coleoptera	Polyphaga	Cryptophagidae	<i>Atomaria nigrirostris</i>	-0.560	-0.646	1.8	mm	g
Coleoptera	Polyphaga	Cerylonidae	<i>Cerylon ferrugineum</i>	-0.557	-0.167	1.9	c	do
Coleoptera	Polyphaga	Nitidulidae	<i>Epuraea unicolor</i>	-0.556	-0.898	2.75	c	e
Coleoptera	Polyphaga	Staphylinidae	<i>Gabrius coxalus</i>	-0.556	-0.759	4.2	c	g
Coleoptera	Polyphaga	Histeridae	<i>Paromalus flavicornis</i>	-0.554	-0.161	1.85	c	do
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta incognita</i>	-0.553	-0.753	4.15	c	g
Coleoptera	Polyphaga	Staphylinidae	<i>Heterothops dissimilis</i>	-0.553	-0.753	4.15	c	g
Coleoptera	Polyphaga	Nitidulidae	<i>Meligethes aeneus</i>	-0.552	1.349	2.1	h	v
Coleoptera	Polyphaga	Nitidulidae	<i>Meligethes nigrescens</i>	-0.552	1.349	2.1	h	v
Coleoptera	Polyphaga	Nitidulidae	<i>Meligethes pedicularius</i>	-0.552	1.349	2.1	h	v
Coleoptera	Polyphaga	Staphylinidae	<i>Leptusa ruficollis</i>	-0.550	-0.010	2.15	c	v
Coleoptera	Polyphaga	Staphylinidae	<i>Phloeocharis subtilissima</i>	-0.549	-0.149	1.75	c	do
Coleoptera	Polyphaga	Chrysomelidae	<i>Longitarsus kutscherae</i>	-0.547	1.361	2	h	v
Coleoptera	Polyphaga	Pselaphidae	<i>Euplectus bescidicus</i>	-0.546	-0.143	1.7	c	do
Coleoptera	Polyphaga	Staphylinidae	<i>Lesteva longoelytrata</i>	-0.545	-0.735	4	c	g
Coleoptera	Polyphaga	Staphylinidae	<i>Oxyptoda opaca</i>	-0.545	-0.735	4	c	g
Coleoptera	Polyphaga	Staphylinidae	<i>Eusphalerum sorbi</i>	-0.539	1.379	1.85	h	v
Coleoptera	Polyphaga	Pselaphidae	<i>Plectophloeus fischeri</i>	-0.538	-0.126	1.55	c	do
Coleoptera	Polyphaga	Cantharidae	<i>Malthodes pumilus</i>	-0.530	-0.108	1.4	c	do
Coleoptera	Polyphaga	Chrysomelidae	<i>Phyllotreta vittula</i>	-0.528	1.403	1.65	h	v
Coleoptera	Polyphaga	Pselaphidae	<i>Bibloporus bicolor</i>	-0.524	-0.096	1.3	c	do
Coleoptera	Polyphaga	Pselaphidae	<i>Euplectus karsteni</i>	-0.521	-0.090	1.25	c	do
Coleoptera	Polyphaga	Ptiliidae	<i>Acrotrichis intermedia</i>	-0.520	-0.557	1.05	mm	g
Coleoptera	Polyphaga	Pselaphidae	<i>Bibloporus minutus</i>	-0.520	-0.087	1.225	c	do
Coleoptera	Polyphaga	Staphylinidae	<i>Scopaeus laevigatus</i>	-0.517	-0.676	3.5	c	g
Coleoptera	Polyphaga	Pselaphidae	<i>Euplectus punctatus</i>	-0.508	-0.060	1	c	do
Coleoptera	Polyphaga	Anthribidae	<i>Anthribus albinus</i>	-0.504	-1.432	9	dx	do
Coleoptera	Polyphaga	Staphylinidae	<i>Habrocerus capillaricornis</i>	-0.504	-0.646	3.25	c	g
Coleoptera	Polyphaga	Curculionidae	<i>Rhinomias forticornis</i>	-0.481	0.766	2.75	h	g
Coleoptera	Polyphaga	Nitidulidae	<i>Cryptarcha undata</i>	-0.480	0.034	2.6	c	ds
Coleoptera	Polyphaga	Pyrochroidae	<i>Schizotus pectinicornis</i>	-0.477	-1.372	8.5	dx	do
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta fungi</i>	-0.469	-0.569	2.6	c	g
Coleoptera	Polyphaga	Staphylinidae	<i>Holobus flavicornis</i>	-0.467	-0.705	1.12	c	e
Coleoptera	Polyphaga	Staphylinidae	<i>Geostiba circellaris</i>	-0.466	-0.563	2.55	c	g
Coleoptera	Polyphaga	Staphylinidae	<i>Syntomium aeneum</i>	-0.463	-0.557	2.5	c	g
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta palustris</i>	-0.460	-0.551	2.45	c	g
Coleoptera	Polyphaga	Elateridae	<i>Sericus brunneus</i>	-0.457	-1.185	8.5	dx	v
Coleoptera	Polyphaga	Staphylinidae	<i>Amischa analis</i>	-0.441	-0.510	2.1	c	g
Coleoptera	Polyphaga	Pselaphidae	<i>Brachygluta sinuata</i>	-0.425	-0.474	1.8	c	g
Coleoptera	Polyphaga	Elateridae	<i>Ampedus nigrinus</i>	-0.422	-1.254	7.5	dx	do
Coleoptera	Polyphaga	Cerambycidae	<i>Stenurella melanura</i>	-0.422	-1.254	7.5	dx	do
Coleoptera	Polyphaga	Elateridae	<i>Calambus bipustulatus</i>	-0.417	-1.242	7.4	dx	do
Coleoptera	Polyphaga	Pselaphidae	<i>Bryaxis curtisii</i>	-0.411	-0.445	1.55	c	g

Coleoptera	Polyphaga	Scydmaenidae	<i>Neuraphes elongatulus</i>	-0.406	-0.433	1.45	c	g
Coleoptera	Polyphaga	Pselaphidae	<i>Bryaxis nodicornis</i>	-0.405	-0.430	1.425	c	g
Coleoptera	Polyphaga	Pselaphidae	<i>Bryaxis puncticollis</i>	-0.398	-0.415	1.3	c	g
Coleoptera	Polyphaga	Pselaphidae	<i>Bythinus macropalpus</i>	-0.395	-0.409	1.25	c	g
Coleoptera	Polyphaga	Mordellidae	<i>Tomoxia bucephala</i>	-0.395	-1.194	7	dx	do
Coleoptera	Polyphaga	Pselaphidae	<i>Trimum brevicorne</i>	-0.395	-0.409	1.25	c	g
Coleoptera	Polyphaga	Pselaphidae	<i>Bythinus burrelli</i>	-0.392	-0.403	1.2	c	g
Coleoptera	Polyphaga	Elateridae	<i>Ampedus erythrogonus</i>	-0.368	-1.135	6.5	dx	do
Coleoptera	Polyphaga	Anobiidae	<i>Anobium pertinax</i>	-0.300	-0.987	5.25	dx	do
Coleoptera	Polyphaga	Mordellidae	<i>Mordellochroa abdominalis</i>	-0.300	-0.987	5.25	dx	do
Coleoptera	Polyphaga	Curculionidae	<i>Cossonus cylindricus</i>	-0.286	-0.957	5	dx	do
Coleoptera	Polyphaga	Eucnemidae	<i>Eucnemis capucina</i>	-0.286	-0.957	5	dx	do
Coleoptera	Polyphaga	Alleculidae	<i>Mycetochara humeralis</i>	-0.259	-0.898	4.5	dx	do
Coleoptera	Polyphaga	Anobiidae	<i>Ptilinus pectinicornis</i>	-0.259	-0.898	4.5	dx	do
Coleoptera	Polyphaga	Scirtidae	<i>Cyphon coarctatus</i>	-0.251	1.192	3.75	d	v
Coleoptera	Polyphaga	Anobiidae	<i>Xestobium plumbeum</i>	-0.251	-0.880	4.35	dx	do
Coleoptera	Polyphaga	Scarabaeidae	<i>Aphodius constans</i>	-0.240	0.478	5.5	d	g
Coleoptera	Polyphaga	Anobiidae	<i>Hedobia imperialis</i>	-0.240	-0.856	4.15	dx	do
Coleoptera	Polyphaga	Anobiidae	<i>Anobium emarginatum</i>	-0.232	-0.839	4	dx	do
Coleoptera	Polyphaga	Dermestidae	<i>Megatoma undata</i>	-0.225	1.141	5	d	ds
Coleoptera	Polyphaga	Curculionidae	<i>Rhyncolus ater</i>	-0.218	-0.809	3.75	dx	do
Coleoptera	Polyphaga	Staphylinidae	<i>Tachinus elongatus</i>	-0.209	-0.825	8	c	rnf
Coleoptera	Polyphaga	Scraptiidae	<i>Anaspis frontalis</i>	-0.199	-0.767	3.4	dx	do
Coleoptera	Polyphaga	Anobiidae	<i>Ernobius abietis</i>	-0.180	-0.726	3.05	dx	do
Coleoptera	Polyphaga	Scraptiidae	<i>Anaspis rufilabris</i>	-0.177	-0.720	3	dx	do
Coleoptera	Polyphaga	Anobiidae	<i>Anobium rufipenne</i>	-0.177	-0.720	3	dx	do
Coleoptera	Polyphaga	Anobiidae	<i>Episernus granulatus</i>	-0.177	-0.720	3	dx	do
Coleoptera	Polyphaga	Scraptiidae	<i>Anaspis ruficollis</i>	-0.164	-0.690	2.75	dx	do
Coleoptera	Polyphaga	Scraptiidae	<i>Anaspis thoracica</i>	-0.164	-0.690	2.75	dx	do
Coleoptera	Polyphaga	Anobiidae	<i>Ernobius abietinus</i>	-0.150	-0.661	2.5	dx	do
Coleoptera	Polyphaga	Silphidae	<i>Oiceoptoma thoracica</i>	-0.122	-0.087	13.5	d	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Philonthus concinnus</i>	-0.114	-0.618	6.25	c	rnf
Coleoptera	Polyphaga	Nitidulidae	<i>Glischrochilus quadrisignatus</i>	-0.100	-0.588	6	c	rnf
Coleoptera	Polyphaga	Histeridae	<i>Margarinotus striola</i>	-0.100	-0.588	6	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Rugilus rufipes</i>	-0.086	-0.558	5.75	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Tachinus signatus</i>	-0.086	-0.558	5.75	c	rnf
Coleoptera	Polyphaga	Ptinidae	<i>Ptinus subpilosus</i>	-0.072	0.846	2.4	d	g
Coleoptera	Polyphaga	Dermestidae	<i>Globicornis nigripes</i>	-0.062	1.497	2	d	ds
Coleoptera	Polyphaga	Cryptophagidae	<i>Cryptophagus pubescens</i>	-0.034	-0.321	2.3	mm	rnf
Coleoptera	Polyphaga	Cryptophagidae	<i>Cryptophagus thomsoni</i>	-0.029	-0.309	2.2	mm	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Enalodroma hepatica</i>	-0.018	-0.410	4.5	c	rnf
Coleoptera	Polyphaga	Latridiidae	<i>Latridius anthracinus</i>	0.004	-0.238	1.6	mm	rnf
Coleoptera	Polyphaga	Rhizophagidae	<i>Monotoma longicollis</i>	0.007	-0.232	1.55	mm	rnf

Coleoptera	Polyphaga	Clambidae	<i>Clambus armadillo</i>	0.029	-0.184	1.15	mm	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Oxyroda alternans</i>	0.036	-0.291	3.5	c	rnf
Coleoptera	Polyphaga	Ptiliidae	<i>Acrotrichis grandicollis</i>	0.039	-0.160	0.95	mm	rnf
Coleoptera	Polyphaga	Ptiliidae	<i>Acrotrichis insularis</i>	0.042	-0.155	0.9	mm	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Aleochara bipustulata</i>	0.050	-0.262	3.25	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta crassicornis</i>	0.058	-0.244	3.1	c	rnf
Coleoptera	Adephaga	Dytiscidae	<i>Hydroporus palustris</i>	0.058	-0.244	3.1	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Haploglossa villosula</i>	0.063	-0.232	3	c	rnf
Coleoptera	Polyphaga	Histeridae	<i>Gnathoncus buyssoni</i>	0.074	-0.208	2.8	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta sodalis</i>	0.077	-0.202	2.75	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta nigricornis</i>	0.082	-0.191	2.65	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta subtilis</i>	0.107	-0.137	2.2	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta cauta</i>	0.112	-0.125	2.1	c	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Atheta aegra</i>	0.131	-0.084	1.75	c	rnf
Coleoptera	Polyphaga	Corylophidae	<i>Sericoderus lateralis</i>	0.161	-0.019	1.2	c	rnf
Coleoptera	Polyphaga	Tenebrionidae	<i>Bolitophagus reticulatus</i>	0.182	-1.129	6.5	m	wf
Coleoptera	Polyphaga	Geotrupidae	<i>Anoplotrupes stercorosus</i>	0.204	0.625	7.5	d	rnf
Coleoptera	Polyphaga	Nitidulidae	<i>Cychramus variegatus</i>	0.209	-1.069	6	m	wf
Coleoptera	Polyphaga	Mycetophagidae	<i>Mycetophagus quadripustulatus</i>	0.236	-1.010	5.5	m	wf
Coleoptera	Polyphaga	Trogidae	<i>Trox scaber</i>	0.259	0.744	6.5	d	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Coprophilus striatulus</i>	0.286	0.803	6	d	rnf
Coleoptera	Polyphaga	Cholevidae	<i>Catops picipes</i>	0.300	0.833	5.75	d	rnf
Coleoptera	Polyphaga	Nitidulidae	<i>Cychramus luteus</i>	0.302	-0.868	4.3	m	wf
Coleoptera	Polyphaga	Mycetophagidae	<i>Mycetophagus atomarius</i>	0.304	-0.862	4.25	m	wf
Coleoptera	Polyphaga	Mycetophagidae	<i>Mycetophagus piceus</i>	0.318	-0.832	4	m	wf
Coleoptera	Polyphaga	Mycetophagidae	<i>Mycetophagus quadriguttatus</i>	0.332	-0.802	3.75	m	wf
Coleoptera	Polyphaga	Erotylidae	<i>Tritoma bipustulata</i>	0.332	-0.802	3.75	m	wf
Coleoptera	Polyphaga	Cisidae	<i>Cis boleti</i>	0.372	-0.713	3	m	wf
Coleoptera	Polyphaga	Cleridae	<i>Thanasimus formicarius</i>	0.380	-1.357	8.5	c	df
Coleoptera	Polyphaga	Mycetophagidae	<i>Litargus connexus</i>	0.394	-0.666	2.6	m	wf
Coleoptera	Polyphaga	Leiodidae	<i>Anisotoma orbicularis</i>	0.400	-0.654	2.5	m	wf
Coleoptera	Polyphaga	Cisidae	<i>Cis punctulatus</i>	0.400	-0.654	2.5	m	wf
Coleoptera	Polyphaga	Latridiidae	<i>Stephostethus alternans</i>	0.400	-0.654	2.5	m	wf
Coleoptera	Polyphaga	Cisidae	<i>Orthocis alni</i>	0.408	-0.636	2.35	m	wf
Coleoptera	Polyphaga	Cisidae	<i>Cis dentatus</i>	0.411	-0.630	2.3	m	wf
Coleoptera	Polyphaga	Cisidae	<i>Cis hispidus</i>	0.416	-0.619	2.2	m	wf
Coleoptera	Polyphaga	Cisidae	<i>Orthocis festivus</i>	0.416	-0.619	2.2	m	wf
Coleoptera	Polyphaga	Staphylinidae	<i>Scaphisoma agaricinum</i>	0.416	-0.619	2.2	m	wf
Coleoptera	Polyphaga	Cisidae	<i>Cis castaneus</i>	0.432	-0.583	1.9	m	wf
Coleoptera	Polyphaga	Latridiidae	<i>Latridius hirtus</i>	0.432	-0.583	1.9	m	wf
Coleoptera	Polyphaga	Cisidae	<i>Orthocis vestitus</i>	0.435	-0.577	1.85	m	wf
Coleoptera	Polyphaga	Cerambycidae	<i>Rhagium inquisitor</i>	0.439	-2.610	15.5	dx	df
Coleoptera	Polyphaga	Cisidae	<i>Ennearthron cornutum</i>	0.443	-0.559	1.7	m	wf

Coleoptera	Polyphaga	Staphylinidae	<i>Omalius caesum</i>	0.449	1.159	3	d	rnf
Coleoptera	Polyphaga	Staphylinidae	<i>Omalius rivulare</i>	0.449	1.159	3	d	rnf
Coleoptera	Polyphaga	Cholevidae	<i>Sciodrepoides watsoni</i>	0.449	1.159	3	d	rnf
Coleoptera	Polyphaga	Colydiidae	<i>Synchita humeralis</i>	0.465	0.588	3	m	do
Coleoptera	Polyphaga	Malachidae	<i>Anthocomus fasciatus</i>	0.472	0.746	3.25	m	v
Coleoptera	Polyphaga	Cleridae	<i>Thanasimus pectoralis</i>	0.475	-1.150	6.75	c	df
Coleoptera	Polyphaga	Cisidae	<i>Orthocis pygmaeus</i>	0.481	-0.476	1	m	wf
Coleoptera	Polyphaga	Staphylinidae	<i>Anotylus tetracarinated</i>	0.506	1.284	1.95	d	rnf
Coleoptera	Polyphaga	Hydrophilidae	<i>Megasternum obscurum</i>	0.506	1.284	1.95	d	rnf
Coleoptera	Polyphaga	Throscidae	<i>Trixagus dermestoides</i>	0.510	-0.048	3.05	m	e
Coleoptera	Polyphaga	Cerambycidae	<i>Tetropium castaneum</i>	0.547	-2.373	13.5	dx	df
Coleoptera	Polyphaga	Throscidae	<i>Trixagus leseigneuri</i>	0.567	0.076	2.0	m	NA
Coleoptera	Polyphaga	Throscidae	<i>Trixagus meyhohmi</i>	0.567	0.076	2.0	m	NA
Coleoptera	Polyphaga	Trogositidae	<i>Nemosoma elongatum</i>	0.571	-0.942	5	c	df
Coleoptera	Polyphaga	Nitidulidae	<i>Pityophagus ferrugineus</i>	0.571	-0.942	5	c	df
Coleoptera	Polyphaga	Nitidulidae	<i>Glischrochilus quadripunctatus</i>	0.584	-0.913	4.75	c	df
Coleoptera	Polyphaga	Throscidae	<i>Aulonothroscus brevicollis</i>	0.605	0.299	2.75	m	g
Coleoptera	Polyphaga	Cerambycidae	<i>Callidium aeneum</i>	0.629	-2.195	12	dx	df
Coleoptera	Polyphaga	Lymexylonidae	<i>Hylecoetus dermestoides</i>	0.629	-2.195	12	dx	df
Coleoptera	Polyphaga	Salpingidae	<i>Salpingus ruficollis</i>	0.630	-0.812	3.9	c	df
Coleoptera	Polyphaga	Endomychidae	<i>Symbiotes latus</i>	0.634	0.991	2	m	ds
Coleoptera	Polyphaga	Rhizophagidae	<i>Rhizophagus ferrugineus</i>	0.639	-0.794	3.75	c	df
Coleoptera	Polyphaga	Rhizophagidae	<i>Rhizophagus dispar</i>	0.652	-0.764	3.5	c	df
Coleoptera	Polyphaga	Rhizophagidae	<i>Rhizophagus depressus</i>	0.658	-0.752	3.4	c	df
Coleoptera	Polyphaga	Salpingidae	<i>Salpingus planirostris</i>	0.666	-0.735	3.25	c	df
Coleoptera	Polyphaga	Nitidulidae	<i>Epuraea marseuli</i>	0.679	-0.705	3	c	df
Coleoptera	Polyphaga	Laemophloeidae	<i>Leptophloeus alternans</i>	0.679	-0.705	3	c	df
Coleoptera	Polyphaga	Rhizophagidae	<i>Rhizophagus perforatus</i>	0.679	-0.705	3	c	df
Coleoptera	Polyphaga	Salpingidae	<i>Vincenzellus ruficollis</i>	0.679	-0.705	3	c	df
Coleoptera	Polyphaga	Cerambycidae	<i>Clytus lama</i>	0.683	-2.076	11	dx	df
Coleoptera	Polyphaga	Cerambycidae	<i>Molorchus minor</i>	0.683	-2.076	11	dx	df
Coleoptera	Polyphaga	Rhizophagidae	<i>Rhizophagus bipustulatus</i>	0.685	-0.693	2.9	c	df
Coleoptera	Polyphaga	Endomychidae	<i>Symbiotes gibberosus</i>	0.688	1.110	1	m	ds
Coleoptera	Polyphaga	Staphylinidae	<i>Phloeopora testacea</i>	0.693	-0.675	2.75	c	df
Coleoptera	Polyphaga	Staphylinidae	<i>Phloeopora corticalis</i>	0.704	-0.652	2.55	c	df
Coleoptera	Polyphaga	Staphylinidae	<i>Ischnoglossa spec.</i>	0.707	-0.646	2.5	c	df
Coleoptera	Polyphaga	Cerambycidae	<i>Clytus arietis</i>	0.711	-2.017	10.5	dx	df
Coleoptera	Polyphaga	Nitidulidae	<i>Epuraea pygmaea</i>	0.720	-0.616	2.25	c	df
Coleoptera	Polyphaga	Curculionidae	<i>Hylobius abietis</i>	0.724	-1.987	10.25	dx	df
Coleoptera	Polyphaga	Staphylinidae	<i>Placusa tachyporoides</i>	0.734	-0.586	2	c	df
Coleoptera	Polyphaga	Cerambycidae	<i>Anaglyptus mysticus</i>	0.765	-1.898	9.5	dx	df
Coleoptera	Polyphaga	Curculionidae	<i>Pissodes pini</i>	0.882	-1.643	7.35	dx	df
Coleoptera	Polyphaga	Cerambycidae	<i>Obrium brunneum</i>	0.983	-1.424	5.5	dx	df



Coleoptera	Polyphaga	Cerambycidae	<i>Pogonocherus decoratus</i>	1.010	-1.364	5	dx	df
Coleoptera	Polyphaga	Curculionidae	<i>Magdalis phlegmatica</i>	1.015	-1.353	4.9	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Ips typographus</i>	1.018	-1.347	4.85	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Dryocoetes autographus</i>	1.072	-1.228	3.85	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Hylastes cunicularius</i>	1.072	-1.228	3.85	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Dryocoetes villosus</i>	1.119	-1.127	3	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Leperisinus fraxini</i>	1.119	-1.127	3	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Scolytus intricatus</i>	1.119	-1.127	3	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Hylurgops palliatus</i>	1.127	-1.109	2.85	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Polygraphus poligraphus</i>	1.140	-1.080	2.6	dx	df
Coleoptera	Polyphaga	Leiodidae	<i>Agathidium varians</i>	1.159	0.683	2.75	m	rnf
Coleoptera	Polyphaga	Scolytidae	<i>Pityogenes chalcographus</i>	1.165	-1.026	2.15	dx	df
Coleoptera	Polyphaga	Anobiidae	<i>Dryophilus pusillus</i>	1.168	-1.020	2.1	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Taphrorychus bicolor</i>	1.170	-1.015	2.05	dx	df
Coleoptera	Polyphaga	Leiodidae	<i>Agathidium seminulum</i>	1.186	0.743	2.25	m	rnf
Coleoptera	Polyphaga	Scolytidae	<i>Ernoporicus fagi</i>	1.187	-0.979	1.75	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Cryphalus piceae</i>	1.203	-0.943	1.45	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Pityophthorus pityographus</i>	1.208	-0.931	1.35	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Crypturgus cinereus</i>	1.211	-0.926	1.3	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Pityophthorus exsculptus</i>	1.211	-0.926	1.3	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Crypturgus hispidulus</i>	1.214	-0.920	1.25	dx	df
Coleoptera	Polyphaga	Scolytidae	<i>Xyloterus domesticus</i>	1.737	0.127	3.45	m	df
Coleoptera	Polyphaga	Scolytidae	<i>Xyloterus lineatus</i>	1.750	0.157	3.2	m	df
Coleoptera	Polyphaga	Scolytidae	<i>Gnathotrichus materiarius</i>	1.761	0.181	3	m	df
Coleoptera	Polyphaga	Scolytidae	<i>Xyleborus monographus</i>	1.815	0.299	2	m	df
Coleoptera	Polyphaga	Scolytidae	<i>Xyleborus peregrinus</i>	1.815	0.299	2	m	df
Coleoptera	Polyphaga	Scolytidae	<i>Xyleborus dispar</i>	1.818	0.305	1.95	m	df
Coleoptera	Polyphaga	Scolytidae	<i>Xyleborus saxeseni</i>	1.826	0.323	1.8	m	df
Coleoptera	Polyphaga	Scolytidae	<i>Xyleborus germanus</i>	1.848	0.371	1.4	m	df

Feeding guilds: c = carnivore, d = decomposer (excl. wood), dx = decomposer-wood, h = herbivore (excl. xylophage), m = mycetophagous-fungi, mm = mycetophagous-mold

Habitat guilds: df = fresh dead wood, do = old dead wood, ds = specific dead wood structures at living trees, e = eurytop, g = ground dweller, rnf = rotten substrate/nests/fungi (excl. wood), v = vegetation, wf = wood fungi.

**Table A:** Multivariate fourth corner analyses [1] on the effects of Sampling solution, stratum, and forest type on species traits. We used the sequential test [2] as recommended in Dray et al. [3], using Holm correction of p-values (999 permutations). Significant value is marked in bold.

	Statistic	Sampling Solution	Stratum	Forest type
<b>Mean body size</b>	F	30.316	45.452	144.514
<b>Feeding guild</b>	Chi <sup>2</sup>	646.494	216.936	233.906
<b>Habitat preference</b>	Chi <sup>2</sup>	<b>1151.755**</b>	267.656	116.681

## References

1. Dray S, Legendre P (2008) Testing the species traits-environment relationships: the fourth-corner problem revisited. *Ecology* 89: 3400-3412.
2. ter Braak CJF, Cormont A, Dray S (2012) Improved testing of species traits–environment relationships in the fourth-corner problem. *Ecology* 93: 1525-1526.
3. Dray S, Choler P, Dolédec S, Peres-Neto PR, Thuiller W, Pavoine S, et al. (2013) Combining the fourth-corner and the RLQ methods for assessing trait responses to environmental variation. *Ecology* 95: 14-21.