Table S1. Species of saproxylic beetles recorded through the monitoring of the branches in all sampling plots. The asterisk (*) indicates that the species is under some protection figure.

Family Bostrichidae	**Family Carabidae**
Lichenophanes númida Lesne, 1899*	*Calodromius bifasciatus* (Dejean, 1825)
Scobicia pustulata (Fabricius, 1801)*	*Dromius* sp. Bonelli, 1810
Sinoxylon sexdentatum (Olivier, 1790)	*Microlestes luctuosus* Holdhaus in Apfelbeck, 1904
Trogoxylon impressum (Comolli, 1837)	*Paradromius linearis* (Olivier, 1795)
Family Buprestridae	*Philorhizus cricifero* Lucas, 1846
Acmaeodera adspersula (Illiger, 1803)	*Trechus obtusus* Erichson, 1837
Acmaeodera degener (Scopoli, 1763)	**Family Cerambycidae**
Agrilus angustulus (Illiger, 1803)	*Chlorophorus ruficornis* (Olivier, 1790)*
Agrilus graminis Gory & Laporte, 1837	*Penichroa timida* (Menetriés, 1832)
Agrilus hastulifer Ratzeburg, 1837	*Trichoferus fasciculatus* (Faldermann, 1837)*
Agrilus laticornis (Illiger, 1803)	**Family Cleridae**
Agrilus sp. Curtis, 1825	*Denops albofasciatus* (Charpentier, 1825)
Anthaxia dimidiata (Thunberg, 1789)	*Opilo domesticus* (Sturm, 1837)
Anthaxia hungarica (Scopoli, 1772)	*Tarsostenus univittatus* (Rossi, 1792)
Anthaxia millefolii (Fabricius, 1801)	*Tillus ibericus* Bahillo de la Puebla, López-Colón & García-Paris, 2003*
Anthaxia thalassophila Abeillei de Perrin, 1900	*Trichodes leucopsideus* (Olivier, 1795)
Anthaxia umbellatarum (Fabricius, 1787)	*Trichodes octopunctatus* (Fabricius, 1787)

Table S2. Post- hoc test corresponding to the GLMM analyses performed using tree species as Categorical Factor and sampling plot as Random Factor.
CS: *C.siliqua*; OE: *O.europea*; QI: *Q. ilex*; QS: *Q. suber*; S. D.: Standard Deviation; S.E.: Standard Error; Different uppercase letters indicate significant differences among tree species according to the Post-hoc tests (p-value < 0.05).

TREE SPECIES	n	Mean	S. D.	S. E.	POST-HOC
CS	17	19,65	41,39	10,04	A
OE	29	0,17	0,47	0,09	C
QI	67	1,45	3,05	0,37	B
QS	13	1,46	2,03	0,56	B

Table S3. Simple logistic model coefficients for the Buprestidae, Bostrichidae and Cerambycidae Families: VAR: variable; A: Altitude; S: Slope; O: Orientation; SL: Shrub Layer; D: Tree Density; LV: Livestock; LU: Land Use; K: Constant; B: regression coefficient; SE: Standard Error; *P*: statistical significance; Exp (β): "*odds ratio*".

VAR	Family Buprestidae				Family Bostrichidae				Family Cerambycidae			
	B	**SE**	***P***	**Exp (β)**	**B**	**SE**	***P***	**Exp (β)**	**B**	**SE**	***P***	**Exp (β)**
A	0	0	0.21	1	-0.01	0.01	0.32	0.99	0	0	0.34	1
K	-0.13	0.41	0.75	0.88	0.46	116	0.69	158	0.15	0.93	0.87	1.16
S	-0.68	0.73	0.35	0.51	-206	200	1	0	0	136	100	100
K	-0.42	0.30	0.15	0.66	-0.51	0.52	0.32	0.60	-0.69	0.61	0.26	0.50
O	-0.68	0.73	0.35	0.51	-206	200	1	0	0	136	100	100
K	-0.43	0.30	0.15	0.66	-0.51	0.52	0.32	0.60	-0.69	0.61	0.26	0.5
SL	-0.65	0.55	0.23	0.52	160	121	0.19	500	214	164	1	201
K	-0.17	0.41	0.68	0.85	-194	106	0.07	0.14	-212	164	1	0
D	-0.01	0.01	**0.06**	0.99	-0.01	0.01	0.70	1	0.02	0.01	0.17	102
K	0.29	0.50	0.57	133	-0.55	0.89	0.54	0.58	-206	120	0.09	0.13
LV	0.68	0.73	0.35	196	-256	132	**0.05**	0.08	-22.8	232	1	0
K	-1.10	0.67	0.10	0.33	109	111	0.34	300	212	232	1	161
LU	0.88	0.58	0.13	2.40	-0.59	0.99	0.55	0.56	-2.77	136	**0.04**	0.06
K	-1.10	0.47	0.02	0.33	-0.51	0.73	0.48	0.60	0.69	0.87	0.42	200

Table S4. Simple logistic model coefficients for the Carabidae and Cleridae Families: VAR: Variable, A: Altitude; S: Slope; O: Orientation; SL: Shrub Layer; D: Tree Density; LV: Livestock; LU: Land Use; K: Constant; B: regression coefficient; SE: Standard Error; *P*: statistical significance; Exp (β): "*odds ratio*".

VAR	Family Carabidae				Family Cleridae			
	B	**SE**	***P***	**Exp (β)**	**B**	**SE**	***P***	**Exp (β)**
A	0	0	0.21	100	0	0	0.34	1
K	-162	0.67	0.02	0.20	0.15	0.93	0.87	116
S	-205	164	1	0	0	136	100	100
K	-0.69	0.43	0.11	0.50	-0.69	0.61	0.26	0.50
O	-205	164	1	0	0	136	100	100
K	-0.69	0.43	0.11	0.50	-0.69	0.61	0.26	0.50
SL	-127	0.86	0.14	0.28	214	164	1	201
K	-0.34	0.59	0.57	0.71	-212	164	1	0
D	-0.02	0.01	0.20	0.99	0.02	0.01	0.17	102
K	-0.12	0.76	0.88	0.89	-206	120	0.09	0.13
LV	-0.41	0.99	0.68	0.67	-228	232	1	0
K	-0.69	0.87	0.42	0.50	212	232	1	161
LU	0.92	0.92	0.32	250	-277	136	0.06	0.06
K	-160	0.78	0.04	0.20	0.69	0.87	0.42	200

Table S5. Multivariant logistic model coefficients for the Buprestidae, Bostrichidae, Cerambycidae, Carabidae and Cleridae Families. VAR: Variable; A: Altitude; S: Slope; O: Orientation; SL: Shrub Layer; D: Tree Density; LV: Livestock; LU: Land Use; B: regression coefficient; SE: Standard Error; *P*: statistical significance; Exp (β): "*odds ratio*"

VAR	Family Buprestidae				Family Bostrichidae				Family Cerambycidae			
	B	**SE**	***P***	**Exp (β)**	**B**	**SE**	***P***	**Exp (β)**	**B**	**SE**	***P***	**Exp (β)**
A	-	-	-	-	0.03	21.36	0.99	1.03	-	-	-	-
S	-4.33	2.72	0.11	0.01	18.61	0	-	1.21E9	0	1.73	1	1
O	0	-	-	-	0	-	-	-	0	-	-	-
SL	-0.44	0.81	0.59	0.65	-2.25	811.70	0.99	0.11	-17.67	3964	0.99	2.1E-8
D	-0.05	0.03	**0.05**	1.06	-	-	-	-	0	0	-	1
LV	1.69	1.52	0.27	5.39	2.46	961.22	0.99	11.75	19.15	5882	0.99	2.08E9
LU	0	-	-	-	0	-	-	-	0	-	-	-

VAR	Family Carabidae				Family Cleridae			
	B	**SE**	***P***	**Exp (β)**	**B**	**SE**	***P***	**Exp (β)**
A	-	-	**-**	-	-	-	-	-
S	20.88	0	**-**	1.17E9	0	1.73	1	1
O	0	-	-	-	0	-	-	-
SL	1.48	1.29	0.25	4.41	-17.6	3964.25	0.99	2.1E-8
D	-0.02	0.04	0.56	0.98	0	0	-	1
LV	-0.03	2.14	0.99	0.97	19.15	5882.72	0.99	2.07E9
LU	0	-	-	-	0	-	-	-

Table S6. Temporal distribution (from January to July) of saproxylic species emerged in Trial 1

TRIAL 1	*15J*	*30J*	*15F*	*28F*	*15M*	*30M*	*15A*	*30A*	*15My*	*30My*	*15Jl*	*30Jl*		
A. milefolii	0	0	0	0	0	0	2	3	1	1	0	0	0	0
T. impressum	0	0	0	0	0	0	0	8	9	12	5	0	0	0
S. sexdentatum	0	0	0	0	5	6	0	0	0	0	0	0	0	0
T. fasciculatus	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P. timida	0	0	0	0	0	0	0	0	0	0	0	0	1	0
T. univittatus	0	0	0	0	0	0	0	0	1	0	0	0	0	0
T. octopunctatus	0	0	0	0	0	0	0	0	1	0	0	0	0	0
M. luctuosus	0	1	0	0	0	0	1	0	0	0	0	0	0	0
T. obtusus	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Dromius sp.	0	1	0	0	1	0	0	0	0	0	0	0	1	0

Table S7. Temporal distribution (from January to July) of saproxylic species emerged in Trial 2

TRIAL 2	*15J*	*30J*	*15F*	*28F*	*15M*	*30M*	*15A*	*30A*	*15My*	*30My*	*15J*	*30J*	*15Jl*	*30Jl*
A. adspersula	0	0	0	0	0	0	1	0	2	0	0	0	0	0
A. angustulus	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A. laticornis	0	0	0	0	1	0	1	0	0	0	0	0	0	0
A. dimidiata	0	0	0	0	0	1	0	0	0	0	0	0	0	0
A.hungarica	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A. millefolii	0	0	7	5	2	2	0	0	3	0	0	0	0	0
A.umbellatarum	0	0	0	0	0	0	0	0	1	0	0	0	0	1
L. numida	0	0	0	1	0	1	0	0	0	0	0	0	0	0
S. sexdentatum	0	0	0	8	19	12	1	0	0	0	0	0	0	0
T. impressum	0	0	0	2	0	0	5	0	0	0	0	0	0	0
P. timida	0	0	0	0	0	0	0	1	0	0	0	0	0	0
T. fasciculatus	0	0	0	0	0	0	0	0	0	0	2	0	0	0
D. albofasciatus	0	0	0	0	1	0	0	0	0	0	0	0	0	0
O. domesticus	0	0	0	0	0	0	0	0	0	0	0	2	0	0
T. ibericus	0	0	1	0	0	0	1	0	1	0	0	0	0	0
M. luctuosus	0	0	0	0	0	0	0	1	1	0	0	0	0	0

Table S8. Temporal distribution (from January to July) of saproxylic species emerged in Trial 3

TRIAL 3	*15J*	*30J*	*15F*	*28F*	*15M*	*30M*	*15A*	*30A*	*15My*	*30My*	*15J*	*30J*	*15Jl*	*30Jl*
A.adspersula	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A.degener	0	0	0	1	0	1	0	0	0	0	0	0	0	0
A.hustulifer	0	0	0	0	0	0	1	0	0	0	0	0	0	0
A.laticornis	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Agrilus sp.	0	0	1	0	0	0	0	0	0	0	0	0	0	0
A.dimidiata	0	0	1	0	0	0	0	0	0	0	0	0	0	0
A.milefolii	0	0	2	5	6	4	0	0	0	0	0	0	0	0
A.umbellatarum	0	0	0	0	0	0	1	0	0	0	0	0	0	0
T.impressum	0	0	0	0	0	0	0	0	0	25	84	22	37	12
S.sexdentatum	0	0	0	5	17	3	0	0	0	0	0	0	0	0
C. ruficornis	0	0	0	0	0	0	0	0	1	0	0	0	0	0
O.domesticus	0	0	1	0	0	0	0	0	0	0	0	0	0	0
T. fasciculatus	0	0	0	0	0	0	0	0	0	0	1	0	0	00
T. univittatus	0	0	0	0	0	0	1	2	0	3	0	0	0	0
T. obtusus	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Table S9. Temporal distribution (from January to July) of saproxylic species emerged in Trial 4

TRIAL 4	*15J*	*30J*	*15F*	*28F*	*15M*	*30M*	*15A*	*30A*	*15My*	*30My*	*15J*	*30J*	*15Jl*	*30Jl*
A. adspersula	0	0	0	0	0	0	0	0	0	0	4	9	2	0
A.graminis	0	0	0	0	0	0	0	0	0	0	4	1	0	0
A.hungarica	0	0	0	0	0	0	1	0	1	0	0	0	0	0
A.millefolii	0	0	0	0	0	0	0	0	0	0	1	1	0	0
A.thalassophila	0	0	0	0	0	0	0	0	1	0	0	0	0	0
S.pustulata	0	0	0	0	0	0	0	0	1	2	0	0	0	0
S.sexdentatum	0	0	0	0	0	10	3	0	0	1	2	0	0	0
T.impressum	0	0	0	0	0	0	4	0	0	0	7	2	0	0
T.ibericus	0	0	0	0	0	0	0	0	0	1	0	0	0	0
T.leucopsideus	0	0	0	0	0	0	0	0	1	0	0	0	0	0
M.luctuosus	0	1	0	0	4	1	0	0	0	0	0	0	0	0
P.linearis	0	1	0	0	0	0	0	0	0	0	0	0	0	0
P.obtusus	0	1	0	0	0	0	0	0	0	0	0	0	0	0
P_crucifer	0	1	0	0	0	0	0	0	0	0	0	0	0	0