

Table S1. Monitored trees that wild boar (*Sus scrofa*) used for rubbing with seasonal number of trapping days and number of rubbing events

Tree species	Spring – Trapping days (N of events)	Summer – Trapping days (N of events)	Autumn – Trapping days (N of events)	Winter – Trapping days (N of events)
Apple tree (<i>Malus domestica</i>)	89 (4)	74 (4)	53 (1)	53 (1)
Spruce (<i>Picea abies</i>)	46 (34)	94 (42)	20 (7)	49 (24)
Black pine (<i>Pinus nigra</i>)	92 (62)	34 (6)	83 (20)	91 (16)
Black pine (<i>Pinus nigra</i>)	89 (6)	31 (0)	90 (0)	91 (0)
Beech (<i>Fagus sylvatica</i>)	54 (0)	0 (0)	9 (0)	91 (3)
Black pine (<i>Pinus nigra</i>)	43 (19)	33 (3)	49 (20)	89 (53)
Alder (<i>Alnus glutinosa</i>)	43 (1)	33 (0)	49 (0)	0 (0)
Hornbeam (<i>Carpinus betulus</i>)	41 (7)	33 (1)	44 (38)	91 (0)

Table S2. Measurements of monitored wallows

Camera trap ID	Length (cm)	Width (cm)	Depth (cm)	Altitude	Coordinates
11	350	300	20	400	45°11'57.18"N 16°06'15.12"E
7	650	150	18	399	45°12'03.09"N 16°05'20.20"E
9	160	180	32	389	45°12'57.99"N 16°04'27.32"E
16	400	300	70	285	45°14'25.51"N 16°06'15.29"E
4	280	300	12	304	45°13'23.67"N 16°05'55.19"E
10	100	100	11	255	45°14'43.86"N 16°04'02.04"E
15	90	80	10	255	45°12'55.16"N 16°05'47.13"E
5	280	250	8	226	45°12'54.16"N 16°07'16.64"E
18	150	150	20	356	45°15'20.49"N 16°05'57.49"E
17	270	200	22	319	45°10'29.00"N 16°03'55.00"E

Table S3. Model results

Term	Estimate	Std. Error	t value	DF	P value	CI low	CI high
(Intercept)	3.32	0.23	14.31	191.62	0	2.86	3.78
Summer vs Spring	0.21	0.62	0.33	126.35	0.74	-1.03	1.44
Autumn vs Spring	0.16	0.22	0.71	129.05	0.48	-0.28	0.60
Winter vs Spring	-0.03	0.27	-0.11	126.11	0.91	-0.56	0.50
Rubbing trees vs Wallows	0.24	0.26	0.94	197.13	0.35	-0.27	0.76
Random vs Wallows	-0.04	0.26	-0.16	202.92	0.88	-0.56	0.47
summer × rubbing trees	-0.09	0.67	-0.14	126.47	0.89	-1.42	1.23
autumn × rubbing trees	0.03	0.24	0.13	128.98	0.90	-0.44	0.50
winter × rubbing trees	0.23	0.36	0.63	126.07	0.53	-0.48	0.94
summer × random	0.14	0.57	0.25	127.04	0.81	-0.99	1.27
autumn × random	-0.15	0.33	-0.44	128.47	0.66	-0.80	0.51

Table S4. Model results- pairwise contrasts

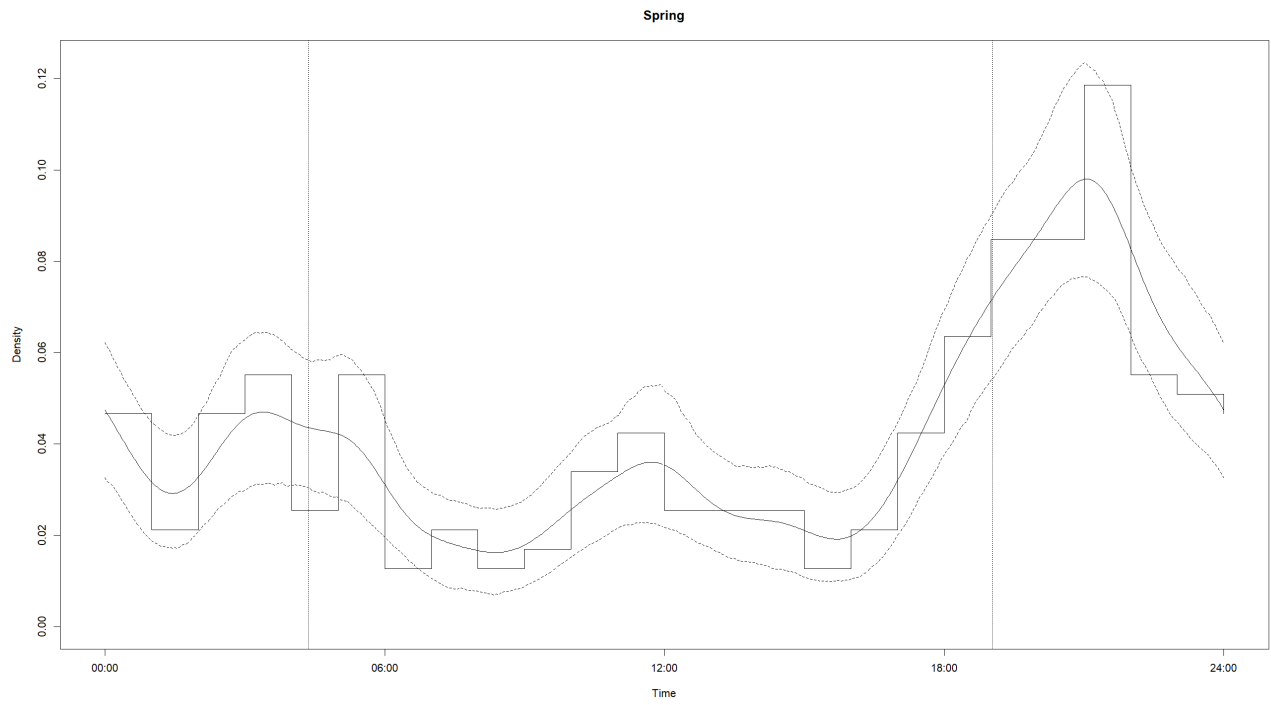
Contrast	Estimate	Std. Error	DF	t ratio	P value
spring Wallow - summer Wallow	-0.07	0.40	135.23	-0.19	1.00
spring Wallow - autumn Wallow	-0.08	0.40	135.23	-0.21	1.00
spring Wallow - winter Wallow	0.61	0.41	136.95	1.49	0.92
spring Wallow - spring RubbingTree	0.05	0.48	201.96	0.11	1.00
spring Wallow - summer RubbingTree	0.39	0.50	200.55	0.78	1.00
spring Wallow - autumn RubbingTree	0.43	0.48	201.96	0.89	1.00
spring Wallow - winter RubbingTree	0.73	0.50	200.55	1.46	0.93
spring Wallow - summer Random	0.29	0.34	192.26	0.84	1.00
spring Wallow - autumn Random	0.82	0.36	199.73	2.25	0.47
spring Wallow - winter Random	0.74	0.37	199.62	2.01	0.64
summer Wallow - autumn Wallow	-0.01	0.39	133.75	-0.02	1.00
summer Wallow - winter Wallow	0.69	0.40	135.23	1.72	0.82
summer Wallow - spring RubbingTree	0.13	0.47	202.80	0.27	1.00
summer Wallow - summer RubbingTree	0.46	0.49	201.45	0.95	1.00
summer Wallow - autumn RubbingTree	0.50	0.47	202.80	1.07	0.99
summer Wallow - winter RubbingTree	0.80	0.49	201.45	1.64	0.86
summer Wallow - summer Random	0.36	0.33	194.58	1.10	0.99
summer Wallow - autumn Random	0.89	0.35	201.55	2.55	0.28
summer Wallow - winter Random	0.81	0.35	201.43	2.30	0.44

autumn Wallow - winter Wallow	0.70	0.40	135.23	1.74	0.81
autumn Wallow - spring RubbingTree	0.14	0.47	202.80	0.29	1.00
autumn Wallow - summer RubbingTree	0.47	0.49	201.45	0.97	1.00
autumn Wallow - autumn RubbingTree	0.51	0.47	202.80	1.08	0.99
autumn Wallow - winter RubbingTree	0.81	0.49	201.45	1.66	0.86
autumn Wallow - summer Random	0.37	0.33	194.58	1.13	0.99
autumn Wallow - autumn Random	0.90	0.35	201.55	2.58	0.27
autumn Wallow - winter Random	0.82	0.35	201.43	2.33	0.42
winter Wallow - spring RubbingTree	-0.56	0.48	201.96	-1.16	0.99
winter Wallow - summer RubbingTree	-0.22	0.50	200.55	-0.45	1.00
winter Wallow - autumn RubbingTree	-0.18	0.48	201.96	-0.38	1.00
winter Wallow - winter RubbingTree	0.11	0.50	200.55	0.23	1.00
winter Wallow - summer Random	-0.33	0.34	192.26	-0.96	1.00
winter Wallow - autumn Random	0.21	0.36	199.73	0.57	1.00
winter Wallow - winter Random	0.12	0.37	199.62	0.34	1.00
spring RubbingTree - summer RubbingTree	0.34	0.45	135.63	0.75	1.00
spring RubbingTree - autumn RubbingTree	0.38	0.43	133.75	0.87	1.00
spring RubbingTree - winter RubbingTree	0.67	0.45	135.63	1.50	0.92
spring RubbingTree - summer Random	0.23	0.36	196.58	0.64	1.00
spring RubbingTree - autumn Random	0.77	0.39	203.30	1.98	0.66

spring RubbingTree - winter Random	0.68	0.39	203.25	1.76	0.80
RubbingTree	0.04	0.45	135.63	0.09	1.00
summer RubbingTree - winter RubbingTree	0.34	0.47	137.90	0.72	1.00
summer RubbingTree - summer Random	-0.10	0.38	193.63	-0.27	1.00
summer RubbingTree - autumn Random	0.43	0.41	201.38	1.06	0.99
summer RubbingTree - winter Random	0.35	0.41	201.34	0.85	1.00
autumn RubbingTree - winter RubbingTree	0.30	0.45	135.63	0.66	1.00
autumn RubbingTree - summer Random	-0.14	0.36	196.58	-0.39	1.00
autumn RubbingTree - autumn Random	0.39	0.39	203.30	1.01	1.00
autumn RubbingTree - winter Random	0.31	0.39	203.25	0.79	1.00
winter RubbingTree - summer Random	-0.44	0.38	193.63	-1.15	0.99
winter RubbingTree - autumn Random	0.09	0.41	201.38	0.23	1.00
winter RubbingTree - winter Random	0.01	0.41	201.34	0.02	1.00
summer Random - autumn Random	0.53	0.18	172.06	2.92	0.12
summer Random - winter Random	0.45	0.19	173.11	2.42	0.36
autumn Random - winter Random	-0.08	0.20	138.09	-0.42	1.00

FIGURES S5-S10

S5



S6



S7



S8



S9



S10

