

Supplemental Information

Behavioural and population responses of ground-dwelling rodents to forest edges

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Supplemental material S1: Vegetation study

In each study area a vegetation study was carried out along each transect in April. On the second and third transect the survey was performed 10 m before the first and 10 m after the last trap (110 m long) and 1 m on each side of the transect (2 m wide) for a total of 220 m² surveyed along each transect. For the first transect the 2 m were surveyed from the edge to the inside of the forest since the other side was vegetated by grass and other non-woody plants. Five major characteristics of the vegetation were recorded: (1) percent cover of herbs; (2) cover of shrubs at 0–0.5 m, 0.5–1 m and 1–3 m from the ground; (3) cover of logs on the ground; (4) diameter at breast height (DBH) of trees and snags. Moreover along each transect 3 random measures of litter depth were recorded (5). The cover of shrubs and logs were then transformed in percent cover and the tree DBH was used to estimate the basal area per tree species.

Area Transect	shrub (% cover)								tree (basal area, m ²)							
	A				B				A				B			
	1	2	3	tot	1	2	3	tot	1	2	3	tot	1	2	3	tot
herbaceous layer	90	–	–	30	90	–	–	30								
<i>Carpinus betulus</i>					96	–	8	35								
<i>Castanea sativa</i>	18	27	14	20	–	–	25	8	–		0.3	0.47	–	0.24	0.14	0.38
<i>Corylus avellana</i>	20	15	4	13	–	35	32	22								
<i>Pinus sylvestris</i>					0.4	–	–	0.1	–	1.25	0.71	1.96	–	0.27	0.77	1.04
<i>Prunus avium</i>					4	–	–	1					–	0.01	–	0.01
<i>Quercus robur</i>									–	0.15	0.09	0.24	–	0.36	–	0.36
<i>Robinia pseudoacacia</i>	0.5	–	–	0.2									–	1.06	0.5	1.56
<i>Rubus ulmifolius</i>	90	3	7	34												
<i>Sambucus nigra</i>	8	–	–	3												
snags and logs	–	3	9	4	10	0.04	0.04	3	–	0.13	0.21	0.34	–	–	0.08	0.08
other	–	0.2	0.02	0.1	–	3	–	1								
litter depth (cm)*	11	5	6	–	9	5	7	–								

* average of the 3 measures for each transect

Table S2: Generalized Linear Mixed Model (GLMM) testing for the effects of transect and season on wood mice abundance: N ~ transect + season + (1|area) + (1|session:season)

	Estimate	SE	z	p-value
(Intercept)	0.302	0.455	0.664	0.507
transect 2	0.377	0.262	1.437	0.151
transect 3	0.348	0.264	1.319	0.187
spring	–0.168	0.575	–0.293	0.769
summer	0.803	0.549	1.462	0.144

Table S3: Post-hoc test using Differences in Last Square Means (Tukey p-value adjustment) on the GLMM: N wood mouse ~ transect + season + (1|area) + (1|session:season)

contrast	Estimate	SE	z	p-value
autumn–spring	0.168	0.575	0.293	0.954
autumn–summer	–0.803	0.549	–1.462	0.309
spring–summer	–0.971	0.543	–1.787	0.174

Table S4: Post-hoc test using Differences in Last Square Means (Tukey p-value adjustment) on the GLMM: GUD ~ transect + season + (1|area)

contrast	Estimate	SE	z	p-value
fall–spring	–1.8	1.3	–1.36	0.2
fall–summer	7.2	1.3	5.54	<2 × 10 ^{–16}
fall–winter	–1.5	1.16	–1.3	0.2
spring–summer	9	1.42	6.32	<2 × 10 ^{–16}
spring–winter	0.3	1.29	0.2	0.8
summer–winter	–8.7	1.29	–6.72	<2 × 10 ^{–16}