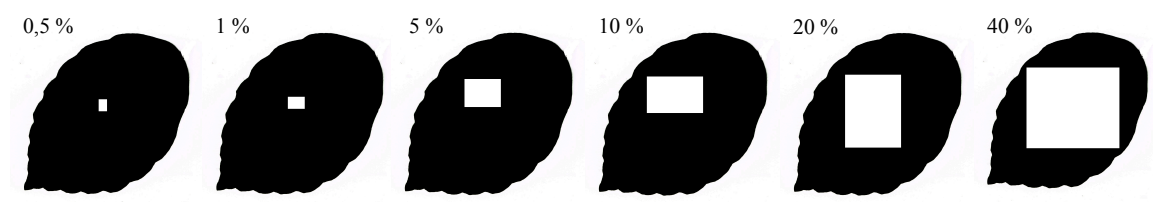


# **Supplementary Material S2.1**

## **Chapter 2: Tree species composition and harvest intensity affect herbivore density and leaf damage on beech, *Fagus sylvatica*, in different landscape contexts**

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**Fig. S2.1.1:** Calculated percentage damage of a fictive beech leaf to support the estimation of damage of sampled leaves.

**Tab. S2.1.1:** Complementary analysis (see Tab. 1.1) of significant interaction effects between region, beech dominance and harvest intensity. Generalized mixed model; for the direction of the effects, the linear regression coefficient ( $r$ ) between the residuals of the previous predictors and the respective response variable for the three study regions Schwäbische Alb (Alb), Hainich (Hai) and Schorfheide (Sch) are shown.

R. fagi = *Rhynchaenus fagi*.

Interacting factors: R = region, B = beech dominance, H = harvest intensity.

For assessment of interactions between B and H, B is subdivided into two categories  $B > 0.5$  and  $B < 0.5$ .

Significance levels: ( $p < 0.1$ ), \* ( $p < 0.5$ ), \*\* ( $p < 0.01$ ) and \*\*\* ( $p < 0.001$ ).

Response	Month	Interaction	r Alb		r Hai		r Sch		B > 0.5		B < 0.5	
Leaf damage	May	RxB   BxH	0.46	.	0.78	***	0.17	ns	-0.7	***	0.52	*
Leaf damage	Nov	RxH	-0.35	*	0.04	ns	-	-	-	-	-	-
Chewers	July	BxH	-	-	-	-	-	-	0.22	ns	0.57	**
Weevils excl. R. fagi	July	RxH	-	-	0.74	***	0.09	ns	-	-	-	-
Caterpillars	July	RxH	-0.28	ns	0.71	***	-0.03	ns	-	-	-	-
Aphids	July	RxB   BxH	-0.52	**	-0.08	ns	0.22	ns	-0.55	**	-0.18	ns
Mines	May	BxH a)	-	-	-	-	-	-	-0.39	**	0.59	***
Galls	July	RxB	-0.6	**	-0.29	ns	0.59	**	-	-	-	-

a) RxBxH: In July, effects of beech dominance and harvest intensity on mines in Schorfheide were not significantly different, whereas the effect of beech dominance was significantly negative in Hainich (Pearson  $r = -0.55$ ,  $p = 0.016$ ). The analysis in Alb showed a significant interaction effect between beech dominance and harvest intensity (interaction effect:  $p = 0.049$ ; beech dominance  $< 0.5$ :  $r = 0.92$ ,  $p < 0.001$ ; beech dominance  $> 0.5$ :  $r = -0.17$ ,  $p = 0.62$ ).