Supplementary Materials

Table S1. Report of p-values from testing for differences in sapling density and cumulative sapling biomass between gaps of different age categories (within the same light regime and gap size categories) and between gaps of different size categories (same light regime and gap age categories).

Sapling density:								
	Effect of gap age (New vs. Old)							
Gap size	< 100 m²				≥ 100 m²			
Light regime	LL	LH	HH	HL	LL	LH	HH	HL
p-value	1.000	0.909	1.000	0.989	1.000	0.979	0.452	0.735
	Effect of gap size (< 100 m² vs. ≥ 100 m²)							
Gap age	New gaps				Old gaps			
Light regime	LL	LH	HH	HL	LL	LH	HH	HL
p-value	0.191	0.828	0.318	0.999	**0.022**	0.997	0.999	1.000

Cumulative sapling biomass:								
	Effect of gap age (New vs. Old)							
Gap size	< 100 m²				≥ 100 m²			
Light regime	LL	LH	HH	HL	LL	LH	HH	HL
p-value	0.756	0.987	**0.029**	0.915	0.978	0.456	**0.037**	0.748
	Effect of gap size (< 100 m² vs. ≥ 100 m²)							
Gap age	New gaps				Old gaps			
Light regime	LL	LH	HH	HL	LL	LH	HH	HL
p-value	0.342	9.896	1.000	0.880	0.295	0.165	0.999	0.363

Table S2. Report of p-values from testing for differences in mean shoot length growth between saplings of different initial height classes (within the same diffuse light and gap size categories) and between gaps of different size categories (within the same initial height and diffuse light class).

Shoot length growth:						
	Effect of diffuse light class (Low vs. High)					
Gap size	< 100 m²			≥ 100 m²		
Light regime	< 1.5	< 3	≥ 3	< 1.5	< 3	≥ 3
p-value	0.292	0.247	0.097	1.000	1.000	**0.0002**
	Effect of gap size (< 100 m² vs. ≥ 100 m²)					
Gap age	Low dif.			High dif.		
Light regime	< 1.5	< 3	≥ 3	< 1.5	< 3	≥ 3
p-value	0.155	**0.025**	0.870	0.999	0.993	0.691

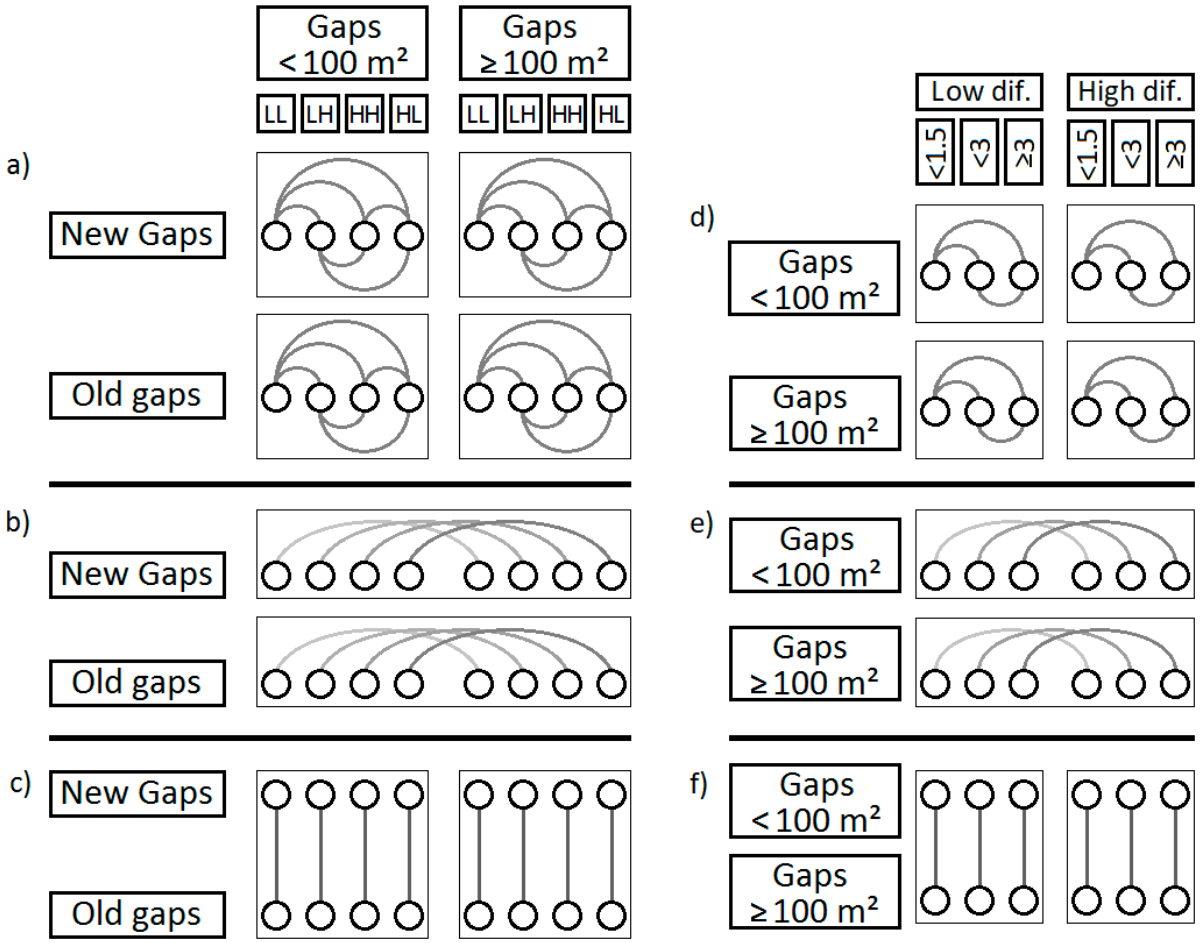

Figure S1. Scheme of the testing procedures (generalized linear hypothesis testing) for differences in sapling density and biomass (a-c) between a) the four light regime categories (LL, LH, HH, HL) in gaps of different size (< 100 m² and ≥ 100 m²) and age (new and old), b) gaps of different size categories (same light regime and gap age categories) and c) gaps of different age (within the same light regime and gap size categories). The testing groups for which the p-values were adjusted are outlined by a thin grey line. Squares without any regeneration were excluded from the analysis. The scheme on the left side explains the testing procedures (generalized linear hypothesis testing) for differences in shoot length growth (d-f). Here, it was tested for differences between d) saplings of different initial height classes (within the same diffuse light and gap size categories), e) different diffuse light categories (within the same initial height and gap size class) and f) gaps of different size categories (within the same initial height and diffuse light class).

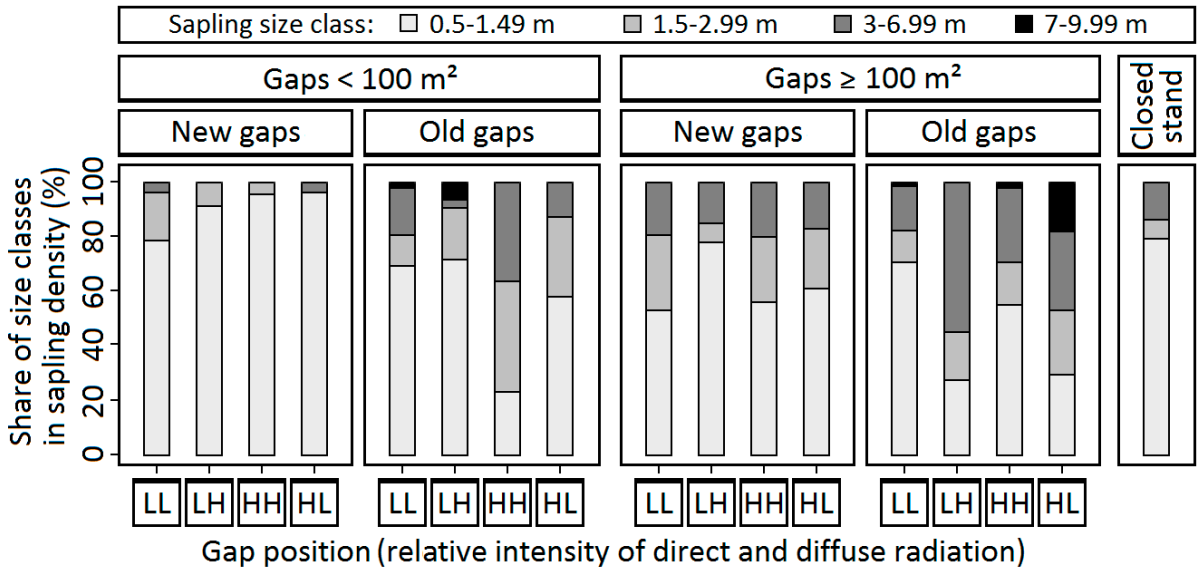

Figure. S2. Proportion of saplings of four height classes (light grey = 0.5–1.5 m, mid grey = 1.5–2.99 m, dark grey = 3 –6.99 m, black ≥ 7 m) in squares of different relative light exposure (first letter for direct and second for diffuse radiation; high = H, low = L; see Table 2 and Figure 5) differentiated by gap size and gap age (before 2003: old; between 2003 and 2013: new). The proportions on closed-canopy plots are displayed at the right for comparison (32 belt transects á 13 m² area).