Supplementary material

Transforming even-aged coniferous stands to multi-aged stands: an opportunity to increase tree species diversity?

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Supplementary figures and tables
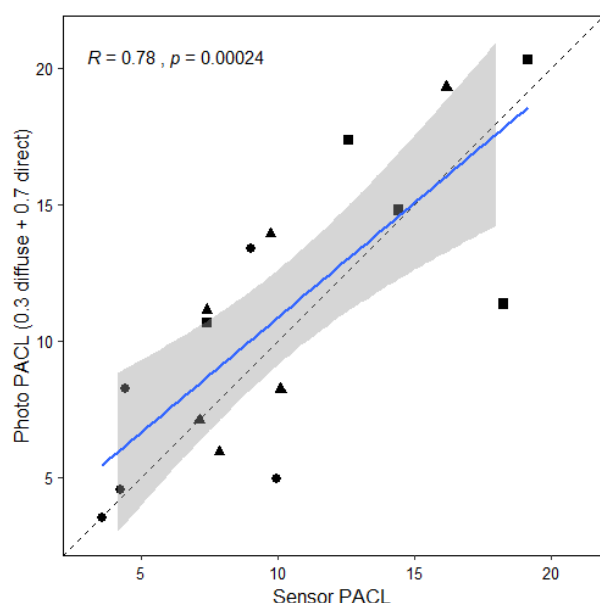
Suppl. Fig 1: Relationship between PACL measures from light sensors and estimates from hemispherical photos. PACL was measured in three sites (denoted with different symbol shapes) on the 22nd of August 2018. Hemispherical photographs were processed to estimate PACL for the same day. Based on our expertise and on the climate conditions of this particular day (clear sky in the morning and partially clouded in the afternoon), we fixed the beam-to-global ratio to 0.7. The relationship between the estimates and the measures was highly significant (R = 0.78, P < 0.001, n = 36) with a slope not significantly different from 1.
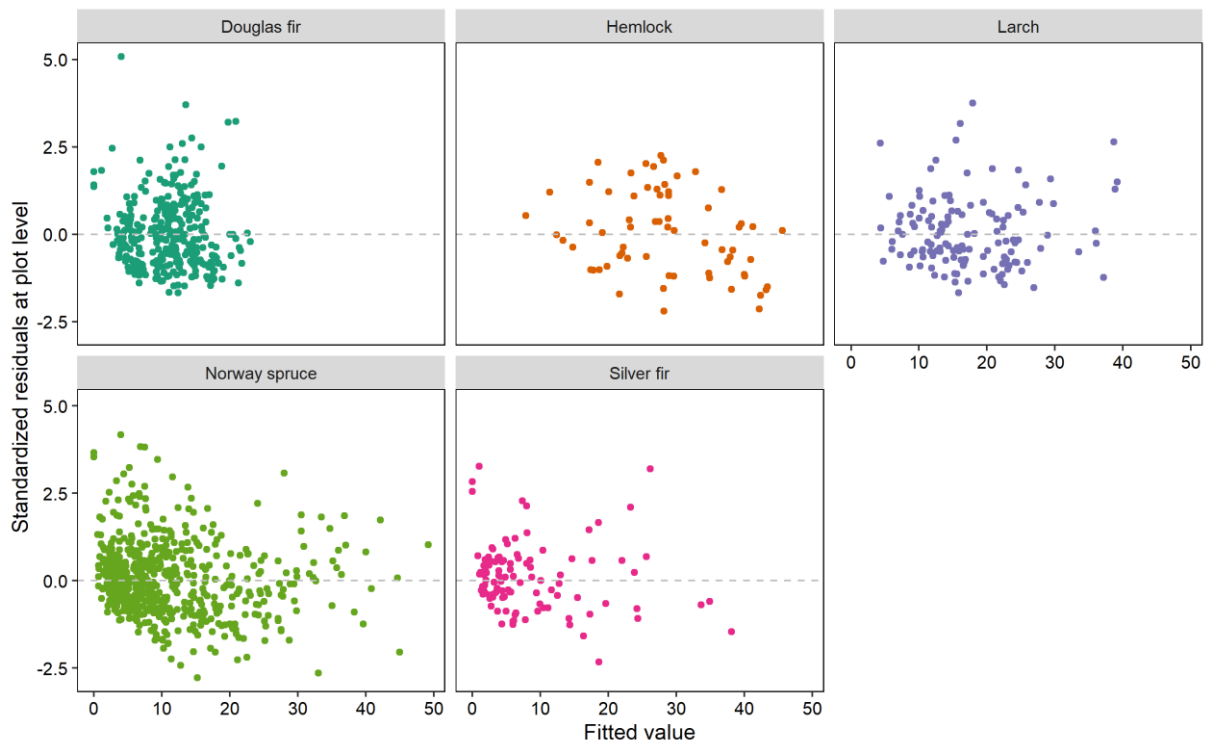
Suppl. Fig 2: Scatterplots of the standardized residuals and fitted values of sapling height increment models (eq. 2). The plots show that the standardized residuals have homogenous variance indicating that the model took correctly into account the heteroscedastic variance. Residuals are also well distributed around zero indicating no evidence of bias along the range of fitted values.
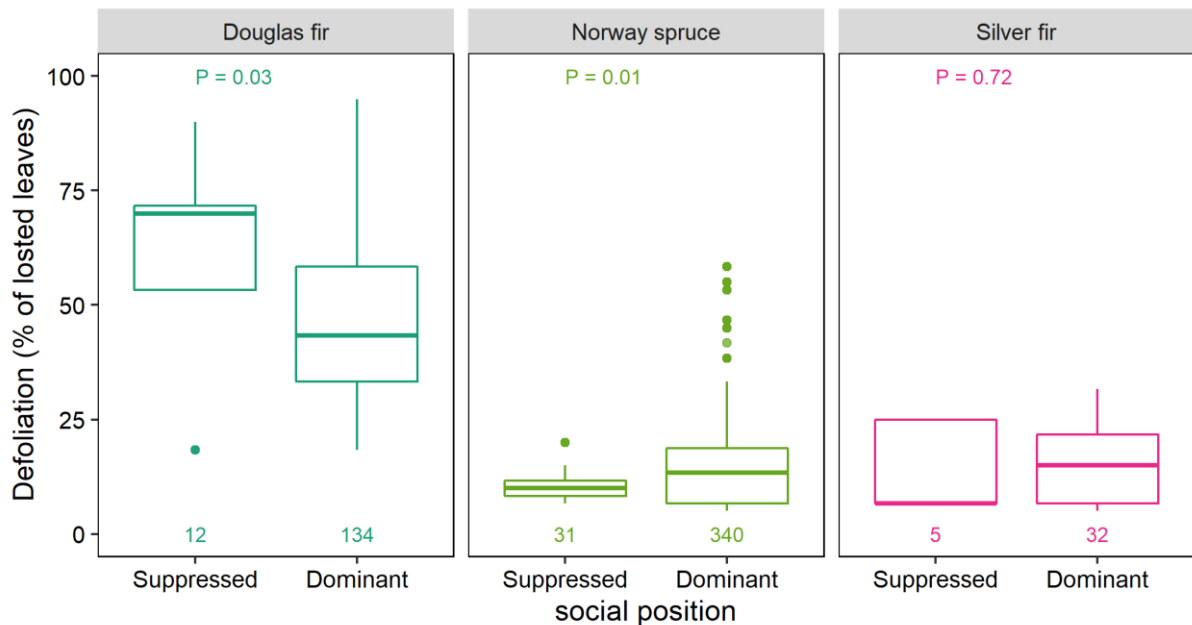
Suppl. Figure 3: Variation in the defoliation rate for dominated and suppressed saplings.

Suppl. Table 1: Parameter estimates of the model of sapling height increment in response to sapling size and the percentage of transmitted diffuse light. For each fixed parameters (*a*, *b*, *c*) are shown the estimates, the standard error and significance level (*** = $p < 0.001$; ** = $p < 0.01$; * = $p < 0.05$ and n.s. = $p \geq 0.05$). Also shown is the standard deviation of the plot random effect (σ_α, σ_β), the parameters of the residual variance function (ϕ, σ_ε) and the root mean square error (RMSE). ΔAIC indicates the difference between the AIC of the model using only the percentage of diffuse light and the model using the percentage of diffuse and direct light (as in the main document).

Species	a	σ_a		a_s	σ_{as}		b	σ_b		c	σ_c		σ_α	σ_β	ϕ	σ_ε	RMSE	ΔAIC
Spruce	0.166	0.030	***	-0.041	0.012	***	0.632	0.029	***	0.575	0.065	***	2.64E-04	3.37E-02	0.448	0.799	5.150	-10.112
Douglas-fir	1.328	0.414	**	-0.374	0.178	**	0.577	0.051	***	-0.101	0.106	n.s.	4.02E-01	2.48E-05	0.230	2.316	6.254	-35.146
Larch	0.519	0.282	n.s.				0.410	0.061	***	0.607	0.172	***	8.81E-08	8.67E-12	0.452	1.590	11.378	2.837
Silver fir	0.195	0.077	*	-0.039	0.029	*	0.533	0.049	***	0.703	0.158	***	4.15E-02	8.98E-03	0.207	1.431	3.107	-2.500
Hemlock	2.690	1.085	*				0.398	0.075	***	0.359	0.14	*	4.38E-05	4.82E-01	0.005	8.373	8.293	1.451