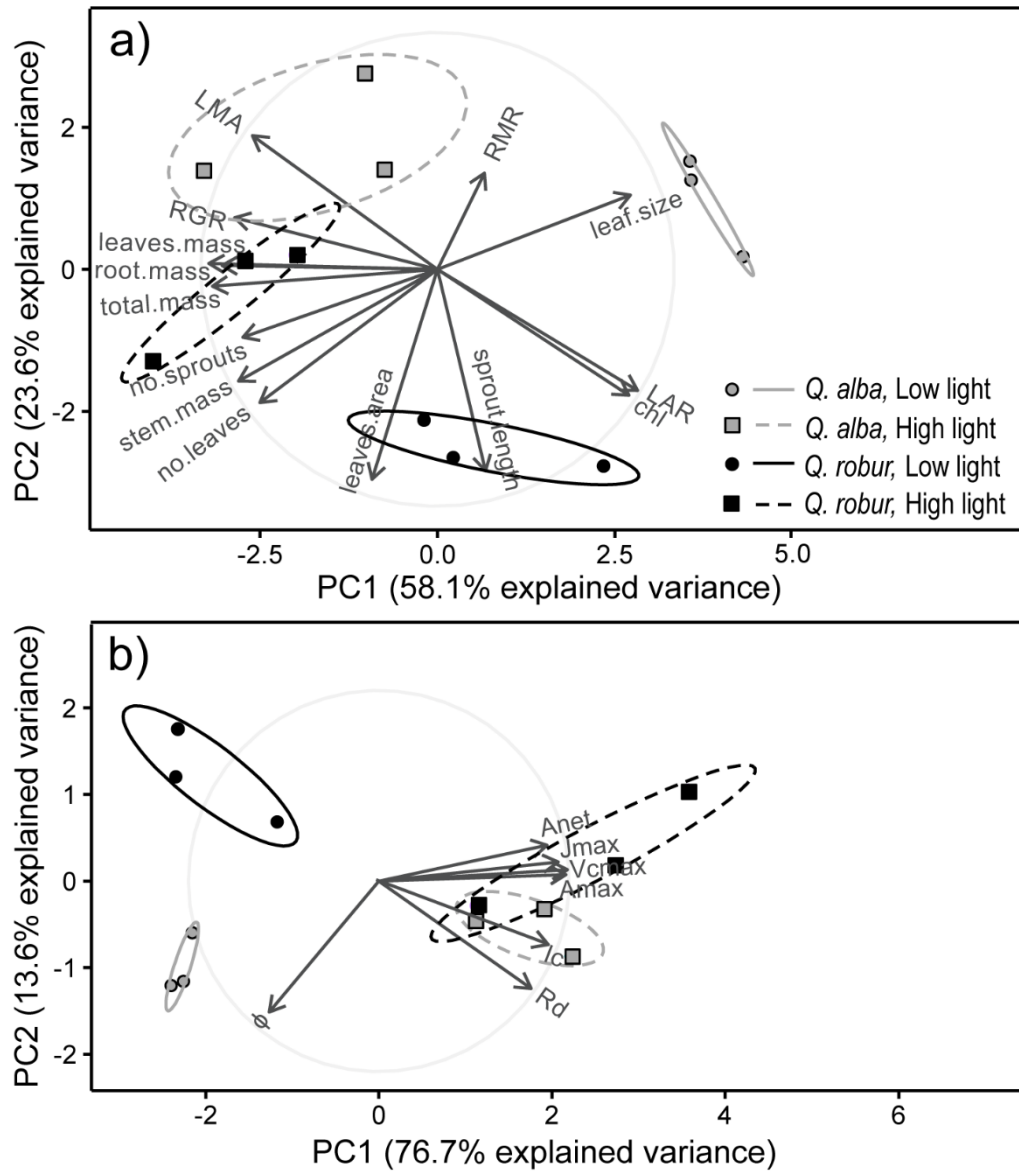


Supplemental Fig. S1 PCA on replicate averages for: a) seedling sprout morphology and leaf variables; and, b) photosynthesis variables.



Supplemental Table S1 Summary of MANOVA, ANCOVA, and ANOVA analyses for the main effects of light, species, and their interaction on morphology and leaf variables of oak (*Quercus alba* and *Q. robur*) seedling sprouts. The MANOVA was performed on the principal components (PC) which explained at least 90 % of the variance (degrees of freedom₁ = 3, degrees of freedom₂ = 6). The ANCOVA was performed on the replicate averages (n = 3) of individual variables (degrees of freedom = 1) and include total dry biomass at time of clipping as a covariate. RGR_{mass} and total chlorophyll concentration was analyzed using ANOVA (degrees of freedom = 1). Significant effects are in bold ($P < 0.05$).

	Light			Species			Light x Species			Covariate	
	Wilk's Λ	F	P	Wilk's Λ	F	P	Wilk's Λ	F	P	F	P
Plant morphology and leaf variables	0.05	38.83	<0.001	0.12	14.28	0.004	0.56	1.57	0.291		
Total biomass (g)		12.62	0.009		3.17	0.118		2.20	0.181	0.05	0.836
Leaf biomass (g)		20.84	0.003		2.26	0.176		2.03	0.198	0.21	0.659
Stem biomass (g)		7.77	0.027		13.61	0.008		1.50	0.260	0.22	0.655
Root biomass (g)		8.75	0.021		1.37	0.280		2.03	0.197	0.00	0.989
RGR _{mass} (g g ⁻¹)		23.41	0.001		2.69	0.140		0.05	0.826		
RMR (g g ⁻¹)		0.88	0.380		0.95	0.362		0.03	0.866	0.72	0.425
Total sprouts (number)		6.98	0.033		10.92	0.013		0.56	0.480	0.55	0.483
Average sprout length (cm)		5.46	0.052		17.21	0.004		3.60	0.099	0.37	0.561
Leaves (number)		18.30	0.004		74.32	<0.001		1.79	0.223	3.33	0.111
Leaf size (cm ²)		12.35	0.010		25.30	0.002		0.05	0.829	0.02	0.891
Plant leaf area (cm ²)		0.00	0.978		20.36	0.003		4.22	0.079	0.40	0.548
LMA (g m ⁻²)		199.81	<0.001		12.75	0.009		2.38	0.167	0.42	0.537
LAR (cm g ⁻¹)		34.08	<0.001		0.42	0.535		1.16	0.318	1.51	0.258
Chl _{total} (mg g ⁻¹)		44.21	<0.001		0.50	0.500		0.42	0.535		

Supplemental Table S2 Summary of MANOVA and ANOVA analyses for the main effects of light, species, and their interaction on photosynthesis variables of oak (*Quercus alba* and *Q. robur*) seedling sprouts. The MANOVA was performed on the principal components (PC) which explained at least 90 % of the variance (degrees of freedom₁ = 2, degrees of freedom₂ = 7). The ANOVA was performed on replicate averages (n = 3) of individual variables (degrees of freedom = 1). Significant effects are in bold ($P < 0.05$).

	Light			Species			Light x Species		
	Wilk's Λ	F	<i>P</i>	Wilk's Λ	F	<i>P</i>	Wilk's Λ	F	<i>P</i>
Photosynthesis variables	0.42	4.80	0.049	0.27	9.49	0.010	0.40	5.22	0.041
$A_{\max}$ ($\mu\text{mol CO}_2 \text{ m}^{-2} \text{ s}^{-1}$)		38.80	<0.001		0.87	0.378		0.33	0.579
R_d ($\mu\text{mol CO}_2 \text{ m}^{-2} \text{ s}^{-1}$)		57.10	<0.001		9.85	0.014		1.10	0.326
I_c ($\mu\text{mol photons m}^{-2}$)		77.26	<0.001		2.86	0.129		0.00	1.000
Φ ($\mu\text{mol CO}_2 \mu\text{mol photons}^{-1}$)		23.17	0.001		30.27	<0.001		19.30	0.002
A_{net} ($\text{mmol CO}_2 \text{ day}^{-1}$)		34.14	<0.001		7.88	0.023		3.67	0.092
$V_{c,\max}$ ($\mu\text{mol CO}_2 \text{ m}^{-2} \text{ s}^{-1}$)		53.58	<0.001		0.96	0.357		0.01	0.923
$J_{\max}$ ($\mu\text{mol electrons m}^{-2} \text{ s}^{-1}$)		18.40	0.003		0.61	0.457		0.35	0.569