

Table 2S. Model output of linear mixed effect models of the relationship between gas exchange parameters and Chl *a* fluorescence parameters to the ecophysiological traits. Given is the dependent variable, F statistics and significance values of each explanatory variable based on the minimum adequate models. Elevation and gradient and the interaction thereof are used as random factors throughout the analysis. Significances are lumped into following classes: $p < 0.001$: ***, $p < 0.01$: **, $p < 0.05$: *, n.s.: not significant.

	N_{AREA}	SPECIES	N_{AREA}:SPECIES	Δ¹³C	SPECIES	Δ¹³C:SPECIES
<i>P</i>_{NSAT}	F _{1,360} =64.8***	F _{3,377} =1.7.s.	F _{3,373} =11.5***	F _{1,315} =32.2***	F _{3,378} =16.5***	F _{3,378} =11.9***
<i>V</i>_{CMAX}	F _{1,378} =37.4***	F _{3,372} =3.5*	F _{3,370} =15.7***	F _{1,354} =34.2***	F _{3,374} =13.5***	F _{3,375} =8.8***
<i>F_v/F_m</i>	n.s.	F _{3,359} =128.2***	n.s.	F _{1,286} =18.2***	F _{3,365} =68.4***	n.s.
<i>PI</i>_{ABS}	F _{1,368} =40.3***	F _{3,363} =5.2**	F _{3,363} =3.7*	F _{1,341} =5.5*	F _{3,366} =186.9***	n.s.