

ANOVA tables: Trait Values and Plasticity

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Table 1: SDen: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: SDen \sim light * soil * habitat + (1 plot) + (1 species)	-561.78
Model 2: SDen \sim light * soil * habitat + (1 plot) + (1+ soil * light species)	-546.13
Model 3: SDen \sim light * soil * habitat + (1 plot) + (1 + soil + light species)	-555.28
Model 4: SDen \sim light * soil * habitat + (1 plot) + (1 + soil species)	-557.33
Model 5: SDen \sim light * soil * habitat + (1 plot) + (1 + light species)	-560.28

Table 2: SDen, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.451	0.451	1	25.035	68.447	0.000
soil	0.075	0.075	1	25.434	11.418	0.002
habitat	0.001	0.001	2	13.251	0.083	0.921
light:soil	0.016	0.016	1	24.425	2.447	0.131
light:habitat	0.049	0.025	2	304.038	3.750	0.025
soil:habitat	0.004	0.002	2	305.630	0.302	0.740
light:soil:habitat	0.022	0.011	2	303.233	1.663	0.191

Table 3: SDen plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.041	0.021	2	9.707	3.175	0.087
soil	0.012	0.012	1	8.817	1.883	0.204
habitat:soil	0.035	0.018	2	8.914	2.723	0.119

Table 4: SDen plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.010	0.005	2	7.889	0.996	0.411
light	0.056	0.056	1	6.717	10.798	0.014
habitat:light	0.114	0.057	2	6.788	11.037	0.007

Table 5: RDen: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\text{RDen} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 \text{species})$	-630.99
Model 2: $\text{RDen} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} * \text{light} \text{species})$	-618.75
Model 3: $\text{RDen} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} + \text{light} \text{species})$	-626.35
Model 4: $\text{RDen} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} \text{species})$	-626.60
Model 5: $\text{RDen} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{light} \text{species})$	-631.34

Table 6: RDen, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.066	0.066	1	16.773	14.114	0.002
soil	0.083	0.083	1	23.201	17.694	0.000
habitat	0.001	0.000	2	13.128	0.059	0.943
light:soil	0.005	0.005	1	22.989	0.964	0.336
light:habitat	0.021	0.011	2	12.194	2.280	0.144
soil:habitat	0.007	0.003	2	289.634	0.709	0.493
light:soil:habitat	0.009	0.004	2	291.345	0.943	0.391

Table 7: RDen plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.016	0.008	2	10.285	0.710	0.514
soil	0.001	0.001	1	9.078	0.050	0.828
habitat:soil	0.046	0.023	2	9.153	2.078	0.180

Table 8: RDen plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.010	0.005	2	7.462	0.584	0.581
light	0.002	0.002	1	6.456	0.241	0.640
habitat:light	0.065	0.033	2	6.535	3.893	0.077

Table 9: LDen: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: LDen \sim light * soil * habitat + (1 plot) + (1 species)	-697.96
Model 2: LDen \sim light * soil * habitat + (1 plot) + (1+ soil * light species)	-698.70
Model 3: LDen \sim light * soil * habitat + (1 plot) + (1 + soil + light species)	-698.13
Model 4: LDen \sim light * soil * habitat + (1 plot) + (1 + soil species)	-703.51
Model 5: LDen \sim light * soil * habitat + (1 plot) + (1 + light species)	-694.45

Table 10: LDen, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.003	0.003	1	19.190	1.771	0.199
soil	0.012	0.012	1	19.591	6.857	0.017
habitat	0.002	0.001	2	12.884	0.487	0.625
light:soil	0.001	0.001	1	19.134	0.360	0.556
light:habitat	0.035	0.018	2	221.170	10.293	0.000
soil:habitat	0.004	0.002	2	8.645	1.297	0.322
light:soil:habitat	0.003	0.001	2	223.615	0.859	0.425

Table 11: LDen plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.027	0.014	2	6.739	0.863	0.464
soil	0.026	0.026	1	5.902	1.656	0.246
habitat:soil	0.008	0.004	2	6.015	0.268	0.773

Table 12: LDen plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.010	0.005	2	8.701	2.405	0.147
light	0.008	0.008	1	7.578	4.015	0.082
habitat:light	0.007	0.003	2	7.637	1.633	0.257

Table 13: SLA: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: SLA \sim light * soil * habitat + (1 plot) + (1 species)	2258.6
Model 2: SLA \sim light * soil * habitat + (1 plot) + (1+ soil * light species)	2265.3
Model 3: SLA \sim light * soil * habitat + (1 plot) + (1 + soil + light species)	2259.3
Model 4: SLA \sim light * soil * habitat + (1 plot) + (1 + soil species)	2263.0
Model 5: SLA \sim light * soil * habitat + (1 plot) + (1 + light species)	2252.4

Table 14: SLA, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	14692.493	14692.493	1	17.209	46.538	0.000
soil	3040.032	3040.032	1	17.088	9.629	0.006
habitat	1043.329	521.665	2	12.417	1.652	0.231
light:soil	489.622	489.622	1	14.960	1.551	0.232
light:habitat	3335.761	1667.881	2	11.201	5.283	0.024
soil:habitat	1013.834	506.917	2	15.144	1.606	0.233
light:soil:habitat	358.191	179.095	2	7.957	0.567	0.588

Table 15: SLA plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.049	0.025	2	17	4.893	0.021
soil	0.043	0.043	1	17	8.622	0.009
habitat:soil	0.001	0.000	2	17	0.082	0.921

Table 16: SLA plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.019	0.009	2	16	3.857	0.043
light	0.022	0.022	1	16	8.970	0.009
habitat:light	0.008	0.004	2	16	1.553	0.242

Table 17: LamThick: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: LamThick \sim light * soil * habitat + (1 plot) + (1 species)	-1147.6
Model 2: LamThick \sim light * soil * habitat + (1 plot) + (1+ soil * light species)	-1139.7
Model 3: LamThick \sim light * soil * habitat + (1 plot) + (1 + soil + light species)	-1138.2
Model 4: LamThick \sim light * soil * habitat + (1 plot) + (1 + soil species)	-1143.0
Model 5: LamThick \sim light * soil * habitat + (1 plot) + (1 + light species)	-1145.1

Table 18: LamThick, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.007	0.007	1	20.091	24.530	0.000
soil	0.000	0.000	1	20.215	1.435	0.245
habitat	0.000	0.000	2	12.786	0.662	0.533
light:soil	0.001	0.001	1	19.814	1.807	0.194
light:habitat	0.000	0.000	2	231.463	0.024	0.977
soil:habitat	0.000	0.000	2	233.348	0.421	0.657
light:soil:habitat	0.000	0.000	2	230.690	0.489	0.614

Table 19: LamThick plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.020	0.010	2	17	0.737	0.493
soil	0.028	0.028	1	17	2.147	0.161
habitat:soil	0.042	0.021	2	17	1.602	0.230

Table 20: LamThick plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.010	0.005	2	16	0.332	0.722
light	0.011	0.011	1	16	0.690	0.418
habitat:light	0.013	0.006	2	16	0.400	0.677

Table 21: LamArea: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\log(\text{LamArea}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 \mid \text{species})$	420.69
Model 2: $\log(\text{LamArea}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} * \text{light} \mid \text{species})$	436.26
Model 3: $\log(\text{LamArea}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} + \text{light} \mid \text{species})$	427.91
Model 4: $\log(\text{LamArea}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} \mid \text{species})$	423.14
Model 5: $\log(\text{LamArea}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{light} \mid \text{species})$	422.84

Error in calculation of the Satterthwaite's approximation. The output of lme4 package is returned

anova from lme4 is returned

some computational error has occurred in lmerTest

Table 22: LamArea, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Df	Sum Sq	Mean Sq	F value
light	1	4.605	4.605	26.319
soil	1	0.093	0.093	0.533
habitat	2	0.249	0.125	0.713
light:soil	1	0.277	0.277	1.582
light:habitat	2	0.121	0.060	0.346
soil:habitat	2	0.961	0.480	2.746
light:soil:habitat	2	0.079	0.039	0.225

Table 23: LamArea plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.065	0.033	2	17	0.329	0.724
soil	0.028	0.028	1	17	0.287	0.599
habitat:soil	0.044	0.022	2	17	0.220	0.805

Table 24: LamArea plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.075	0.038	2	17	1.194	0.327
light	0.024	0.024	1	17	0.749	0.399
habitat:light	0.150	0.075	2	17	2.378	0.123

Table 25: LMR: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: LMR \sim light * soil * habitat + (1 plot) + (1 species)	-555.53
Model 2: LMR \sim light * soil * habitat + (1 plot) + (1+ soil * light species)	-538.31
Model 3: LMR \sim light * soil * habitat + (1 plot) + (1 + soil + light species)	-545.90
Model 4: LMR \sim light * soil * habitat + (1 plot) + (1 + soil species)	-552.71
Model 5: LMR \sim light * soil * habitat + (1 plot) + (1 + light species)	-551.08

Table 26: LMR, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.098	0.098	1	23.437	20.163	0.000
soil	0.081	0.081	1	23.580	16.589	0.000
habitat	0.001	0.000	2	13.222	0.066	0.936
light:soil	0.004	0.004	1	23.180	0.721	0.404
light:habitat	0.044	0.022	2	292.231	4.547	0.011
soil:habitat	0.005	0.002	2	294.404	0.478	0.620
light:soil:habitat	0.011	0.006	2	291.641	1.167	0.313

Table 27: LMR plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.088	0.044	2	18	3.317	0.059
soil	0.024	0.024	1	18	1.843	0.191
habitat:soil	0.066	0.033	2	18	2.498	0.110

Table 28: LMR plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.372	0.186	2	18	19.697	0.000
light	0.059	0.059	1	18	6.280	0.022
habitat:light	0.165	0.082	2	18	8.718	0.002

Table 29: RMR: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\text{sqrt}(\text{RMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 \text{species})$	-601.31
Model 2: $\text{sqrt}(\text{RMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} * \text{light} \text{species})$	-585.89
Model 3: $\text{sqrt}(\text{RMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} + \text{light} \text{species})$	-593.46
Model 4: $\text{sqrt}(\text{RMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} \text{species})$	-599.16
Model 5: $\text{sqrt}(\text{RMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{light} \text{species})$	-598.05

Table 30: RMR, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.018	0.018	1	20.983	3.554	0.073
soil	0.043	0.043	1	21.016	8.421	0.009
habitat	0.006	0.003	2	13.260	0.600	0.563
light:soil	0.001	0.001	1	20.824	0.105	0.749
light:habitat	0.009	0.005	2	281.431	0.930	0.396
soil:habitat	0.047	0.024	2	283.976	4.627	0.011
light:soil:habitat	0.034	0.017	2	280.480	3.354	0.036

Table 31: RMR plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.059	0.029	2	9.147	0.064	0.938
soil	0.165	0.165	1	7.959	0.361	0.565
habitat:soil	0.590	0.295	2	8.035	0.645	0.550

```
## anova from lme4 is returned
## some computational error has occurred in lmerTest
```

```
## Analysis of Variance Table
##           Df Sum Sq Mean Sq F value
## habitat    2 1.46849  0.73424  1.3788
## light      1 1.10687  1.10687  2.0786
## habitat:light 2 0.13323  0.06661  0.1251
```

Table 32: RMR plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	1.691	0.846	2	9.863	1.588	0.252
light	0.736	0.736	1	9.004	1.382	0.270
habitat:light	0.133	0.067	2	9.103	0.125	0.884

Table 33: LAR: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\text{sqrt(LAR)} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 \text{species})$	850.20
Model 2: $\text{sqrt(LAR)} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} * \text{light} \text{species})$	864.68
Model 3: $\text{sqrt(LAR)} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} + \text{light} \text{species})$	858.24
Model 4: $\text{sqrt(LAR)} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} \text{species})$	852.32
Model 5: $\text{sqrt(LAR)} \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{light} \text{species})$	854.38

Table 34: LAR, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	7472.170	7472.170	1	16.405	26.268	0.000
soil	2375.537	2375.537	1	13.578	8.351	0.012
habitat	228.922	114.461	2	11.554	0.402	0.678
light:soil	943.659	943.659	1	17.010	3.317	0.086
light:habitat	1178.557	589.278	2	19.543	2.072	0.153
soil:habitat	2428.293	1214.146	2	12.161	4.268	0.039
light:soil:habitat	1584.490	792.245	2	23.406	2.785	0.082

Table 35: LAR plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.094	0.047	2	17	1.779	0.199
soil	0.104	0.104	1	17	3.967	0.063
habitat:soil	0.206	0.103	2	17	3.913	0.040

Table 36: LAR plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.480	0.240	2	17	8.336	0.003
light	0.013	0.013	1	17	0.457	0.508
habitat:light	0.609	0.305	2	17	10.571	0.001

Table 37: frl: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: sqrt(fr1) ~ light * soil * habitat + (1 plot) + (1 species)	420.66
Model 2: sqrt(fr1) ~ light * soil * habitat + (1 plot) + (1+ soil * light species)	448.80
Model 3: sqrt(fr1) ~ light * soil * habitat + (1 plot) + (1 + soil + light species)	435.47
Model 4: sqrt(fr1) ~ light * soil * habitat + (1 plot) + (1 + soil species)	426.44
Model 5: sqrt(fr1) ~ light * soil * habitat + (1 plot) + (1 + light species)	426.28

Table 38: frl, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	70.589	70.589	1	4.177	11.677	0.025
soil	0.551	0.551	1	4.138	0.091	0.777
habitat	12.877	6.438	2	11.691	1.065	0.376
light:soil	0.013	0.013	1	4.306	0.002	0.966
light:habitat	1.851	0.925	2	68.761	0.153	0.858
soil:habitat	45.241	22.621	2	71.452	3.742	0.028
light:soil:habitat	6.651	3.326	2	73.534	0.550	0.579

Table 39: frl plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.058	0.029	2	8.843	1.088	0.378
soil	0.233	0.233	1	2.673	8.789	0.068
habitat:soil	0.308	0.154	2	2.713	5.816	0.104

```
## X species habitat light abs
## 1 1 ANI2GR gen G.cs 2.67477395
## 2 2 DIPTAC gen G.cs 0.09549154

## anova from lme4 is returned
## some computational error has occurred in lmerTest

## Analysis of Variance Table
##           Df Sum Sq Mean Sq F value
## habitat    2 0.00244 0.001219 0.1009
## light      1 0.00476 0.004763 0.3941
## habitat:light 2 0.42813 0.214067 17.7124
```

Table 40: frl plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Df	Sum Sq	Mean Sq	F value
habitat	2	0.002	0.001	0.101
light	1	0.005	0.005	0.394
habitat:light	2	0.428	0.214	17.712

Table 41: srl: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\log(\text{srl}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 \text{species})$	204.62
Model 2: $\log(\text{srl}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} * \text{light} \text{species})$	233.40
Model 3: $\log(\text{srl}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} + \text{light} \text{species})$	218.95
Model 4: $\log(\text{srl}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} \text{species})$	210.11
Model 5: $\log(\text{srl}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{light} \text{species})$	210.04

Table 42: srl, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	3.020	3.020	1	35.509	9.365	0.004
soil	0.772	0.772	1	74.726	2.394	0.126
habitat	0.756	0.378	2	11.242	1.172	0.345
light:soil	0.020	0.020	1	78.464	0.062	0.804
light:habitat	0.636	0.318	2	36.021	0.987	0.383
soil:habitat	1.187	0.593	2	74.948	1.841	0.166
light:soil:habitat	0.192	0.096	2	77.092	0.298	0.743

Table 43: srl plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.010	0.005	2	11	0.051	0.950
soil	0.096	0.096	1	11	0.992	0.341
habitat:soil	0.460	0.230	2	11	2.384	0.138

Warning in pf(F.stat, qr(Lc)\$rank, nu.F): NaNs produced

Table 44: srl plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.032	0.016	2	8.019	0.452	0.651
light	0.411	0.411	1	1.994	11.704	0.076
habitat:light	3.789	1.895	2	0.000	53.959	NaN

Table 45: FRMR: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\log(\text{FRMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 \mid \text{species})$	269.81
Model 2: $\log(\text{FRMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} * \text{light} \mid \text{species})$	299.14
Model 3: $\log(\text{FRMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} + \text{light} \mid \text{species})$	285.58
Model 4: $\log(\text{FRMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} \mid \text{species})$	275.89
Model 5: $\log(\text{FRMR}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{light} \mid \text{species})$	275.87

Table 46: FRMR, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.027	0.027	1	85	0.028	0.868
soil	0.076	0.076	1	85	0.078	0.781
habitat	7.055	3.527	2	85	3.589	0.032
light:soil	0.361	0.361	1	85	0.368	0.546
light:habitat	0.680	0.340	2	85	0.346	0.709
soil:habitat	6.488	3.244	2	85	3.301	0.042
light:soil:habitat	3.718	1.859	2	85	1.891	0.157

Table 47: FRMR plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.144	0.072	2	8.020	1.249	0.337
soil	0.189	0.189	1	2.913	3.275	0.171
habitat:soil	0.084	0.042	2	2.987	0.726	0.553

Table 48: FRMR plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.419	0.210	2	10	0.167	0.849
light	0.056	0.056	1	10	0.045	0.837
habitat:light	0.333	0.167	2	10	0.133	0.877

Table 49: perCarbon: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: (perCarbon) ~ light * soil * habitat + (1 plot) + (1 species)	1303.3
Model 2: (perCarbon) ~ light * soil * habitat + (1 plot) + (1+ soil * light species)	1319.2
Model 3: (perCarbon) ~ light * soil * habitat + (1 plot) + (1 + soil + light species)	1312.7
Model 4: (perCarbon) ~ light * soil * habitat + (1 plot) + (1 + soil species)	1305.9
Model 5: (perCarbon) ~ light * soil * habitat + (1 plot) + (1 + light species)	1307.9

Table 50: perCarbon, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.689	0.689	1	31.339	0.206	0.653
soil	0.012	0.012	1	31.340	0.004	0.952
habitat	3.249	1.624	2	11.678	0.485	0.628
light:soil	2.796	2.796	1	31.446	0.834	0.368
light:habitat	3.099	1.550	2	307.244	0.462	0.630
soil:habitat	14.921	7.460	2	309.244	2.226	0.110
light:soil:habitat	10.933	5.467	2	302.584	1.631	0.197

Table 51: perCarbon plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.190	0.095	2	18	0.163	0.851
soil	0.829	0.829	1	18	1.420	0.249
habitat:soil	1.245	0.622	2	18	1.066	0.365

Table 52: perCarbon plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.004	0.002	2	7.284	0.360	0.709
light	0.008	0.008	1	7.066	1.305	0.291
habitat:light	0.010	0.005	2	7.185	0.818	0.479

Table 53: perNitrogen: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: (perNitrogen) ~ light * soil * habitat + (1 plot) + (1 species)	100.62
Model 2: (perNitrogen) ~ light * soil * habitat + (1 plot) + (1+ soil * light species)	118.69
Model 3: (perNitrogen) ~ light * soil * habitat + (1 plot) + (1 + soil + light species)	110.92
Model 4: (perNitrogen) ~ light * soil * habitat + (1 plot) + (1 + soil species)	104.21
Model 5: (perNitrogen) ~ light * soil * habitat + (1 plot) + (1 + light species)	105.06

Table 54: perNitrogen, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.013	0.013	1	20.633	0.212	0.650
soil	0.087	0.087	1	20.634	1.453	0.242
habitat	0.115	0.058	2	11.625	0.959	0.412
light:soil	0.014	0.014	1	20.628	0.237	0.632
light:habitat	0.335	0.168	2	301.344	2.787	0.063
soil:habitat	0.063	0.032	2	303.378	0.525	0.592
light:soil:habitat	0.265	0.133	2	297.377	2.207	0.112

Table 55: perNitrogen plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.027	0.013	2	18	0.859	0.440
soil	0.061	0.061	1	18	3.911	0.063
habitat:soil	0.022	0.011	2	18	0.703	0.508

Table 56: perNitrogen plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.008	0.004	2	8.840	0.571	0.584
light	0.000	0.000	1	7.517	0.037	0.852
habitat:light	0.026	0.013	2	7.582	1.950	0.207

Table 57: RDepth: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: RDepth \sim light * soil * habitat + (1 plot) + (1 species)	-630.99
Model 2: RDepth \sim light * soil * habitat + (1 plot) + (1+ soil * light species)	-618.75
Model 3: RDepth \sim light * soil * habitat + (1 plot) + (1 + soil + light species)	-626.35
Model 4: RDepth \sim light * soil * habitat + (1 plot) + (1 + soil species)	-626.60
Model 5: RDepth \sim light * soil * habitat + (1 plot) + (1 + light species)	-631.34

Table 58: RDepth, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.066	0.066	1	16.773	14.114	0.002
soil	0.083	0.083	1	23.201	17.694	0.000
habitat	0.001	0.000	2	13.128	0.059	0.943
light:soil	0.005	0.005	1	22.989	0.964	0.336
light:habitat	0.021	0.011	2	12.194	2.280	0.144
soil:habitat	0.007	0.003	2	289.634	0.709	0.493
light:soil:habitat	0.009	0.004	2	291.345	0.943	0.391

Table 59: RDepth plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.639	0.320	2	17	0.923	0.416
soil	0.136	0.136	1	17	0.392	0.540
habitat:soil	0.298	0.149	2	17	0.431	0.657

Table 60: RDepth plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.006	0.003	2	9.324	0.153	0.860
light	0.143	0.143	1	7.022	7.427	0.029
habitat:light	0.041	0.021	2	7.073	1.077	0.391

Table 61: PerAbov: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: PerAbov \sim light * soil * habitat + (1 plot) + (1 species)	-620.67
Model 2: PerAbov \sim light * soil * habitat + (1 plot) + (1+ soil * light species)	-605.04
Model 3: PerAbov \sim light * soil * habitat + (1 plot) + (1 + soil + light species)	-612.93
Model 4: PerAbov \sim light * soil * habitat + (1 plot) + (1 + soil species)	-619.56
Model 5: PerAbov \sim light * soil * habitat + (1 plot) + (1 + light species)	-616.47

Table 62: PerAbov, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.020	0.020	1	20.642	4.227	0.053
soil	0.043	0.043	1	20.678	8.920	0.007
habitat	0.007	0.003	2	13.280	0.685	0.521
light:soil	0.001	0.001	1	20.487	0.138	0.715
light:habitat	0.010	0.005	2	281.887	1.018	0.363
soil:habitat	0.041	0.021	2	284.644	4.309	0.014
light:soil:habitat	0.033	0.016	2	280.778	3.415	0.034

Table 63: PerAbov plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.160	0.080	2	8.643	0.197	0.825
soil	0.004	0.004	1	7.617	0.010	0.923
habitat:soil	0.801	0.401	2	7.703	0.982	0.417

Table 64: PerAbov plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	1.624	0.812	2	9.909	1.842	0.209
light	1.552	1.552	1	8.900	3.521	0.094
habitat:light	0.069	0.035	2	8.989	0.079	0.925

Table 65: PerStem: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: PerStem \sim light * soil * habitat + (1 plot) + (1 species)	-616.21
Model 2: PerStem \sim light * soil * habitat + (1 plot) + (1+ soil * light species)	-596.20
Model 3: PerStem \sim light * soil * habitat + (1 plot) + (1 + soil + light species)	-605.27
Model 4: PerStem \sim light * soil * habitat + (1 plot) + (1 + soil species)	-611.86
Model 5: PerStem \sim light * soil * habitat + (1 plot) + (1 + light species)	-611.98

Table 66: PerStem, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.000	0.000	1	19.883	0.001	0.974
soil	0.000	0.000	1	20.052	0.002	0.967
habitat	0.001	0.001	2	13.131	0.111	0.895
light:soil	0.006	0.006	1	19.596	1.285	0.271
light:habitat	0.003	0.002	2	284.338	0.309	0.735
soil:habitat	0.064	0.032	2	286.825	6.478	0.002
light:soil:habitat	0.016	0.008	2	283.234	1.658	0.192

Table 67: PerStem plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.000	0.000	2	9.250	0.265	0.773
soil	0.000	0.000	1	7.472	0.002	0.963
habitat:soil	0.005	0.002	2	7.496	6.530	0.023

Table 68: PerStem plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.002	0.001	2	9.113	0.158	0.856
light	0.001	0.001	1	7.764	0.213	0.657
habitat:light	0.037	0.018	2	7.827	3.397	0.087

Table 69: LamArea_agr: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\log(\text{LamArea_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 \mid \text{species})$	683.02
Model 2: $\log(\text{LamArea_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} * \text{light} \mid \text{species})$	694.56
Model 3: $\log(\text{LamArea_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} + \text{light} \mid \text{species})$	688.79
Model 4: $\log(\text{LamArea_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} \mid \text{species})$	686.14
Model 5: $\log(\text{LamArea_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{light} \mid \text{species})$	683.60

Table 70: LamArea_agr, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	178639.483	178639.483	1	24.157	6.532	0.017
soil	16864.961	16864.961	1	24.370	0.617	0.440
habitat	42481.028	21240.514	2	13.438	0.777	0.480
light:soil	2184.637	2184.637	1	23.829	0.080	0.780
light:habitat	53760.839	26880.419	2	232.482	0.983	0.376
soil:habitat	270074.536	135037.268	2	236.535	4.938	0.008
light:soil:habitat	81722.177	40861.089	2	229.626	1.494	0.227

Table 71: LamArea_agr plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.233	0.116	2	16	0.297	0.747
soil	0.002	0.002	1	16	0.005	0.943
habitat:soil	1.147	0.573	2	16	1.464	0.261

Table 72: LamArea_agr plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.888	0.444	2	16	4.386	0.030
light	0.529	0.529	1	16	5.224	0.036
habitat:light	0.192	0.096	2	16	0.946	0.409

Table 73: NLeaf_agr: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\log(\text{NLeaf_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 \mid \text{species})$	542.06
Model 2: $\log(\text{NLeaf_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} * \text{light} \mid \text{species})$	559.45
Model 3: $\log(\text{NLeaf_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} + \text{light} \mid \text{species})$	551.43
Model 4: $\log(\text{NLeaf_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{soil} \mid \text{species})$	546.55
Model 5: $\log(\text{NLeaf_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \mid \text{plot}) + (1 + \text{light} \mid \text{species})$	544.57

Table 74: NLeaf_agr, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	82.086	82.086	1	25.196	9.352	0.005
soil	9.662	9.662	1	25.901	1.101	0.304
habitat	2.835	1.418	2	13.310	0.162	0.853
light:soil	4.776	4.776	1	24.464	0.544	0.468
light:habitat	11.848	5.924	2	272.198	0.675	0.510
soil:habitat	56.509	28.255	2	275.053	3.219	0.042
light:soil:habitat	13.439	6.719	2	269.658	0.766	0.466

Table 75: NLeaf_agr plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.035	0.018	2	7.586	0.335	0.726
soil	0.001	0.001	1	7.505	0.015	0.905
habitat:soil	0.000	0.000	2	6.999	0.001	0.999

Table 76: NLeaf_agr plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.358	0.179	2	17	2.081	0.155
light	0.024	0.024	1	17	0.279	0.604
habitat:light	0.023	0.011	2	17	0.132	0.877

Table 77: TotalBm_agr: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: $\log(\text{TotalBm_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 \text{species})$	719.45
Model 2: $\log(\text{TotalBm_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} * \text{light} \text{species})$	725.24
Model 3: $\log(\text{TotalBm_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} + \text{light} \text{species})$	719.79
Model 4: $\log(\text{TotalBm_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{soil} \text{species})$	723.09
Model 5: $\log(\text{TotalBm_agr}) \sim \text{light} * \text{soil} * \text{habitat} + (1 \text{plot}) + (1 + \text{light} \text{species})$	714.84

Table 78: TotalBm_agr, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	13.832	13.832	1	26.103	29.566	0.000
soil	0.005	0.005	1	24.697	0.012	0.915
habitat	0.440	0.220	2	13.036	0.470	0.635
light:soil	0.395	0.395	1	22.436	0.844	0.368
light:habitat	0.018	0.009	2	17.672	0.019	0.981
soil:habitat	4.403	2.201	2	261.286	4.705	0.010
light:soil:habitat	0.186	0.093	2	258.291	0.198	0.820

Table 79: TotalBm_agr plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.067	0.033	2	17	0.127	0.881
soil	0.131	0.131	1	17	0.500	0.489
habitat:soil	0.158	0.079	2	17	0.301	0.744

Table 80: TotalBm_agr plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.022	0.011	2	10.391	0.144	0.868
light	0.003	0.003	1	10.759	0.040	0.845
habitat:light	0.104	0.052	2	10.244	0.688	0.524

Table 81: Height_rgr: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: Height_rgr ~ light * soil * habitat + (1 plot) + (1 species)	-194.03
Model 2: Height_rgr ~ light * soil * habitat + (1 plot) + (1+ soil * light species)	-181.18
Model 3: Height_rgr ~ light * soil * habitat + (1 plot) + (1 + soil + light species)	-189.73
Model 4: Height_rgr ~ light * soil * habitat + (1 plot) + (1 + soil species)	-191.83
Model 5: Height_rgr ~ light * soil * habitat + (1 plot) + (1 + light species)	-193.47

Table 82: Height_rgr, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.708	0.708	1	19.998	46.773	0.000
soil	0.001	0.001	1	20.516	0.037	0.850
habitat	0.015	0.008	2	11.491	0.501	0.618
light:soil	0.001	0.001	1	20.074	0.063	0.804
light:habitat	0.015	0.007	2	212.193	0.488	0.615
soil:habitat	0.079	0.039	2	217.951	2.606	0.076
light:soil:habitat	0.051	0.026	2	213.316	1.687	0.187

Table 83: Height_rgr plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.546	0.273	2	18	0.749	0.487
soil	0.054	0.054	1	18	0.147	0.706
habitat:soil	0.408	0.204	2	18	0.560	0.581

Table 84: Height_rgr plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	2.016	1.008	2	18	0.566	0.578
light	0.291	0.291	1	18	0.163	0.691
habitat:light	2.495	1.248	2	18	0.700	0.509

Table 85: Diam_rgr: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: Diam_rgr ~ light * soil * habitat + (1 plot) + (1 species)	-384.86
Model 2: Diam_rgr ~ light * soil * habitat + (1 plot) + (1+ soil * light species)	-380.91
Model 3: Diam_rgr ~ light * soil * habitat + (1 plot) + (1 + soil + light species)	-382.89
Model 4: Diam_rgr ~ light * soil * habitat + (1 plot) + (1 + soil species)	-382.92
Model 5: Diam_rgr ~ light * soil * habitat + (1 plot) + (1 + light species)	-387.35

Table 86: Diam_rgr, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.197	0.197	1	21.818	33.564	0.000
soil	0.003	0.003	1	19.583	0.463	0.504
habitat	0.005	0.003	2	12.400	0.438	0.655
light:soil	0.028	0.028	1	19.248	4.752	0.042
light:habitat	0.004	0.002	2	17.701	0.299	0.745
soil:habitat	0.008	0.004	2	211.871	0.643	0.527
light:soil:habitat	0.008	0.004	2	210.373	0.689	0.503

Table 87: Diam_rgr plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.114	0.057	2	18	0.152	0.860
soil	6.628	6.628	1	18	17.654	0.001
habitat:soil	1.440	0.720	2	18	1.918	0.176

Table 88: Diam_rgr plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.722	0.361	2	18	0.453	0.643
light	2.831	2.831	1	18	3.549	0.076
habitat:light	2.852	1.426	2	18	1.787	0.196

Table 89: NLeaf_rgr: Testing the global model with variations in slope randomization for the random effects

Model	AICc
Model 1: NLeaf_rgr ~ light * soil * habitat + (1 plot) + (1 species)	37.375
Model 2: NLeaf_rgr ~ light * soil * habitat + (1 plot) + (1+ soil * light species)	52.235
Model 3: NLeaf_rgr ~ light * soil * habitat + (1 plot) + (1 + soil + light species)	42.649
Model 4: NLeaf_rgr ~ light * soil * habitat + (1 plot) + (1 + soil species)	41.759
Model 5: NLeaf_rgr ~ light * soil * habitat + (1 plot) + (1 + light species)	35.635

Table 90: NLeaf_rgr, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
light	0.457	0.457	1	22.084	10.949	0.003
soil	0.079	0.079	1	21.194	1.885	0.184
habitat	0.036	0.018	2	12.664	0.430	0.660
light:soil	0.001	0.001	1	21.070	0.016	0.901
light:habitat	0.068	0.034	2	19.261	0.808	0.460
soil:habitat	0.453	0.226	2	229.153	5.421	0.005
light:soil:habitat	0.092	0.046	2	228.208	1.101	0.334

Table 91: NLeaf_rgr plasticity due to light, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	0.299	0.150	2	9.524	1.243	0.331
soil	1.828	1.828	1	8.228	15.180	0.004
habitat:soil	0.140	0.070	2	8.297	0.579	0.581

Table 92: NLeaf_rgr plasticity due to soil, analysis of Variance Table of type III with Satterthwaite approximation for degrees of freedom. Habitat refers to the soil specialization of the plant.

	Sum Sq	Mean Sq	NumDF	DenDF	F.value	Pr(>F)
habitat	1.095	0.547	2	9.974	0.856	0.454
light	0.371	0.371	1	9.218	0.581	0.465
habitat:light	0.204	0.102	2	9.322	0.159	0.855