

Supplementary Table 3. Trait-mediated effects on growth in model 5 with parameter estimates and credible intervals.

Model	Parameter	Estimate	Est_Error	CI_Lower	CI_Upper	Category	significance
	Hmax	0.095	0.0381	0.000	0.205	Overall	**
	Hmax:NC	-0.026	0.0114	-0.055	0.005	Overall	*
	TC	-0.035	0.0140	-0.070	0.002	Overall	*
	TD	0.060	0.0201	0.007	0.109	Overall	**
Hmax	Hmax	0.247	0.1664	-0.189	0.663	Understory	
	Hmax:NC	0.082	0.0401	-0.018	0.189	Understory	
	TC	-0.025	0.0170	-0.059	0.008	Understory	
	TD	-0.006	0.0260	-0.073	0.056	Understory	
	Hmax	0.028	0.0692	-0.151	0.215	Canopy	
	Hmax:NC	-0.014	0.0196	-0.064	0.037	Canopy	
	TC	-0.018	0.0178	-0.065	0.027	Canopy	
	TD	0.063	0.0297	-0.017	0.141	Canopy	*
	WD	-0.084	0.0497	-0.217	0.039	Overall	
	WD:NC	0.030	0.0106	0.004	0.058	Overall	**
	TC	-0.036	0.0134	-0.072	-0.002	Overall	**
	TD	0.030	0.0237	-0.030	0.090	Overall	
WD	WD	-0.138	0.0672	-0.325	0.034	Understory	*
	WD:NC	0.022	0.0177	-0.025	0.067	Understory	
	TC	0.020	0.0237	-0.044	0.083	Understory	
	TD	0.126	0.0418	0.017	0.231	Understory	**
	WD	-0.028	0.1000	-0.293	0.234	Canopy	
	WD:NC	-0.039	0.0292	-0.118	0.040	Canopy	
	TC	-0.016	0.0254	-0.081	0.049	Canopy	
	TD	-0.069	0.0491	-0.201	0.057	Canopy	
	SLA	0.021	0.0444	-0.085	0.140	Overall	
	SLA:NC	0.007	0.0110	-0.021	0.036	Overall	
	TC	0.016	0.0123	-0.017	0.049	Overall	
	TD	0.032	0.0207	-0.021	0.087	Overall	
SLA	SLA	0.050	0.0517	-0.088	0.189	Understory	
	SLA:NC	0.011	0.0169	-0.033	0.055	Understory	
	TC	0.012	0.0199	-0.041	0.062	Understory	
	TD	0.061	0.0343	-0.025	0.151	Understory	
	SLA	-0.062	0.0595	-0.210	0.105	Canopy	
	SLA:NC	0.024	0.0144	-0.013	0.061	Canopy	
	TC	0.016	0.0165	-0.027	0.060	Canopy	
	TD	0.027	0.0270	-0.042	0.097	Canopy	
	LDMC	0.027	0.0435	-0.091	0.144	Overall	
	LDMC:NC	-0.002	0.0116	-0.032	0.026	Overall	
	TC	-0.009	0.0119	-0.041	0.020	Overall	
	TD	-0.018	0.0195	-0.067	0.032	Overall	
LDMC	LDMC	-0.034	0.0436	-0.149	0.084	Understory	
	LDMC:NC	0.005	0.0163	-0.036	0.048	Understory	
	TC	0.000	0.0174	-0.045	0.046	Understory	

	TD	-0.013	0.0271	-0.080	0.057	Understory	
	LDMC	0.076	0.0673	-0.099	0.245	Canopy	
	LDMC:NC	-0.016	0.0158	-0.055	0.024	Canopy	
	TC	-0.015	0.0168	-0.060	0.027	Canopy	
	TD	-0.017	0.0265	-0.087	0.049	Canopy	
	SWC _{branch}	0.040	0.0439	-0.076	0.152	Overall	
	SWC _{branch} :NC	-0.018	0.0105	-0.045	0.008	Overall	
	TC	0.018	0.0127	-0.015	0.051	Overall	
	TD	0.024	0.0195	-0.029	0.076	Overall	
SWC _{branch}	SWC _{branch}	0.099	0.0709	-0.096	0.286	Understory	
	SWC _{branch} :NC	-0.026	0.0253	-0.095	0.036	Understory	
	TC	-0.040	0.0281	-0.111	0.030	Understory	
	TD	0.126	0.0421	0.019	0.239	Understory	**
	SWC _{branch}	-0.028	0.0743	-0.232	0.167	Canopy	
	SWC _{branch} :NC	0.022	0.0167	-0.021	0.067	Canopy	
	TC	0.008	0.0178	-0.039	0.054	Canopy	
	TD	-0.013	0.0286	-0.084	0.064	Canopy	
	Tpca1	-0.055	0.0439	-0.166	0.061	Overall	
	Tpca1:NC	0.020	0.0105	-0.006	0.047	Overall	
	TC	-0.025	0.0129	-0.059	0.007	Overall	
	TD	0.006	0.0205	-0.047	0.057	Overall	
Tpca1	Tpca1	-0.136	0.0696	-0.328	0.044	Understory	
	Tpca1:NC	0.012	0.0215	-0.042	0.067	Understory	
	TC	0.031	0.0262	-0.040	0.097	Understory	
	TD	0.108	0.0424	-0.002	0.219	Understory	*
	Tpca1	0.010	0.0749	-0.193	0.203	Canopy	
	Tpca1:NC	-0.026	0.0192	-0.076	0.022	Canopy	
	TC	-0.015	0.0175	-0.059	0.032	Canopy	
	TD	-0.043	0.0302	-0.117	0.034	Canopy	
	Tpca2	0.126	0.0425	0.018	0.235	Overall	**
	Tpca2:NC	-0.033	0.0120	-0.064	-0.003	Overall	**
	TC	-0.013	0.0151	-0.052	0.025	Overall	
	TD	0.053	0.0175	0.009	0.099	Overall	**
Tpca2	Tpca2	0.032	0.0704	-0.150	0.215	Understory	
	Tpca2:NC	0.004	0.0224	-0.053	0.063	Understory	
	TC	-0.057	0.0305	-0.137	0.023	Understory	
	TD	0.075	0.0366	-0.021	0.169	Understory	*
	Tpca2	0.108	0.0903	-0.123	0.352	Canopy	
	Tpca2:NC	-0.020	0.0260	-0.088	0.047	Canopy	
	TC	0.006	0.0238	-0.054	0.066	Canopy	
	TD	0.073	0.0320	-0.009	0.155	Canopy	*

Note: In the table, **Estimate** represents the posterior mean of the parameter estimates, **Est_Error** is the standard error of the posterior estimates, **CI_Lower** and **CI_Upper** denote the lower and upper bounds of the 99% credible interval, respectively. Parameters are considered significant if their credible intervals exclude zero, with ** indicating significance at the 99% level and * indicating significance at the 95% level. **NC** is the neighborhood crowding index; **Trait:NC** is the interaction term between a specific trait and crowding, i.e., the effect of crowding depends on focal tree trait values; **TC** represents the neighborhood trait competition; and **TD** represents the neighborhood trait dissimilarity.