

Supplement Table 1. Mean leaf trait values (+ s.e.; n 5 to 9) per species for juvenile and adult trees.
 Abbreviations are, leaf mass per area (LMA) and light saturated photosynthesis (A); subscripts refer to expressions per unit leaf area (LA), dry mass (DM), chlorophyll (chl) and nitrogen (N).
 A_N is equivalent to photosynthetic nitrogen use efficiency (PNUE).

	LMA g m ⁻²		thickness μm		density g cm ⁻³		punch strength _{LA} N mm ⁻²		punch strength _{DM} N mg ⁻¹		chlorophyll _{LA} μmol m ⁻²		chlorophyll _{DM} μmol g ⁻¹		chlorophyll _N mmol mol ⁻¹		chlorophyll a/b mol mol ⁻¹		N _{DM} mg g ⁻¹		N _{LA} mmol m ⁻²		A _{LA} μmol m ⁻² s ⁻¹		A _{DM} nmol g ⁻¹ s ⁻¹		A _{chl} μmol mol ⁻¹ s ⁻¹		A _N μmol mol ⁻¹ s ⁻¹			
	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.	mean	s.e.
juveniles																																
Oxandra	54.0 ± 1.8		176 ± 5		0.307 ± 0.009		0.765 ± 0.047		14.1 ± 0.6		236 ± 40		4.34 ± 0.74		2.54 ± 0.33		3.37 ± 0.11		23.1 ± 1.5		88.9 ± 6.5		33 ± 5		614 ± 91		149 ± 9		361 ± 37			
Mora	77.7 ± 3.7		198 ± 4		0.392 ± 0.013		1.188 ± 0.086		15.3 ± 0.8		367 ± 27		4.76 ± 0.32		3.23 ± 0.19		3.48 ± 0.05		20.7 ± 0.9		116.0 ± 9.3		101 ± 7		1320 ± 104		278 ± 12		899 ± 71			
Eschweilera	66.9 ± 4.8		193 ± 11		0.345 ± 0.009		1.181 ± 0.106		17.6 ± 1.0		260 ± 25		3.95 ± 0.37		2.74 ± 0.25		2.42 ± 0.12		20.3 ± 1.1		95.9 ± 5.8		57 ± 8		869 ± 122		216 ± 18		605 ± 85			
Chlorocardium	72.7 ± 3.9		208 ± 7		0.349 ± 0.011		1.139 ± 0.042		16.0 ± 1.1		268 ± 40		3.63 ± 0.39		2.18 ± 0.24		4.44 ± 0.35		23.6 ± 1.1		123.8 ± 10.8		77 ± 9		1079 ± 135		312 ± 38		659 ± 105			
Vouacapoua	60.3 ± 2.7		144 ± 8		0.421 ± 0.014		0.782 ± 0.083		12.8 ± 0.9		280 ± 14		4.73 ± 0.38		3.11 ± 0.23		3.07 ± 0.13		21.3 ± 0.7		91.4 ± 4.3		-		-		-		-			
Catostemma	87.4 ± 4.6		261 ± 9		0.336 ± 0.018		1.905 ± 0.067		22.1 ± 1.1		391 ± 24		4.50 ± 0.25		3.47 ± 0.18		3.79 ± 0.10		18.2 ± 0.4		112.8 ± 4.5		107 ± 6		1246 ± 86		285 ± 28		963 ± 66			
Licania	76.7 ± 3.1		224 ± 3		0.342 ± 0.011		0.799 ± 0.041		10.6 ± 0.7		390 ± 20		5.08 ± 0.18		3.80 ± 0.18		3.12 ± 0.03		18.9 ± 0.6		102.9 ± 3.9		83 ± 4		1093 ± 53		215 ± 7		817 ± 48			
Ormosia	76.7 ± 2.8		240 ± 11		0.320 ± 0.005		1.080 ± 0.051		14.1 ± 0.3		337 ± 18		4.41 ± 0.22		3.02 ± 0.13		3.41 ± 0.04		20.5 ± 0.6		111.7 ± 4.2		146 ± 10		1924 ± 142		437 ± 27		1311 ± 76			
Hymenaea	68.2 ± 5.0		191 ± 13		0.356 ± 0.010		1.254 ± 0.084		18.6 ± 1.2		458 ± 43		6.72 ± 0.49		4.30 ± 0.23		3.73 ± 0.11		21.7 ± 0.7		106.1 ± 8.9		-		-		-		-			
Pentaclethra	40.1 ± 2.1		138 ± 5		0.293 ± 0.023		-		-		364 ± 62		9.04 ± 1.29		4.21 ± 0.65		3.26 ± 0.12		28.4 ± 1.7		81.5 ± 6.1		112 ± 7		2858 ± 348		341 ± 54		1445 ± 161			
Carapa	76.0 ± 2.6		266 ± 6		0.286 ± 0.011		1.274 ± 0.068		16.7 ± 0.7		473 ± 37		6.21 ± 0.44		4.13 ± 0.16		3.32 ± 0.04		21.1 ± 1.3		114.5 ± 7.8		144 ± 17		1862 ± 187		299 ± 22		1234 ± 97			
Peltogyne	59.8 ± 2.0		169 ± 4		0.356 ± 0.014		0.596 ± 0.044		10.0 ± 0.6		363 ± 28		6.07 ± 0.44		3.78 ± 0.18		3.30 ± 0.06		22.3 ± 0.8		95.6 ± 5.2		98 ± 7		1640 ± 132		273 ± 16		1026 ± 69			
Sclerolobium	57.1 ± 6.4		174 ± 11		0.324 ± 0.019		0.679 ± 0.092		12.0 ± 0.9		450 ± 49		8.11 ± 0.65		4.43 ± 0.20		3.73 ± 0.13		25.6 ± 1.8		104.0 ± 13.9		-		-		-		-			
Goupia	51.5 ± 4.6		154 ± 6		0.338 ± 0.035		0.455 ± 0.026		9.3 ± 0.8		339 ± 15		6.93 ± 0.60		3.88 ± 0.25		3.68 ± 0.07		24.9 ± 1.0		89.8 ± 6.0		136 ± 7		2751 ± 235		400 ± 17		1536 ± 90			
Laetia	55.2 ± 5.0		164 ± 7		0.333 ± 0.016		0.565 ± 0.028		10.6 ± 0.7		508 ± 38		9.36 ± 0.41		4.49 ± 0.14		3.32 ± 0.09		29.2 ± 1.0		113.9 ± 9.2		183 ± 7		3460 ± 238		368 ± 17		1650 ± 86			
Jacaranda	43.0 ± 1.6		158 ± 5		0.273 ± 0.008		0.326 ± 0.012		7.6 ± 0.3		443 ± 15		10.43 ± 0.58		5.16 ± 0.18		3.67 ± 0.04		28.5 ± 1.6		86.6 ± 3.6		164 ± 8		3843 ± 233		369 ± 10		1894 ± 58			
Cecropia	72.7 ± 3.8		373 ± 22		0.196 ± 0.007		0.958 ± 0.061		13.2 ± 0.6		621 ± 25		8.74 ± 0.60		3.81 ± 0.17		3.06 ± 0.07		32.0 ± 1.6		164.3 ± 7.3		230 ± 7		3213 ± 155		373 ± 13		1409 ± 37			
adults																																
Oxandra	81.2 ± 4.6		221 ± 4		0.368 ± 0.023		0.969 ± 0.075		13.2 ± 1.7		562 ± 3		7.28 ± 0.63		4.52 ± 0.45		3.20 ± 0.25		22.5 ± 0.4		130.3 ± 7.7		4.0 ± 0.4		51 ± 5		7.5 ± 1.0		31.4 ± 2.8			
Mora	150.3 ± 7.0		339 ± 15		0.446 ± 0.019		1.638 ± 0.150		10.8 ± 0.7		547 ± 40		3.72 ± 0.32		2.87 ± 0.21		2.99 ± 0.11		18.0 ± 0.5		191.7 ± 5.4		8.3 ± 1.7		56 ± 12		16.1 ± 3.8		43.2 ± 8.7			
Eschweilera	165.6 ± 6.6		360 ± 9		0.461 ± 0.020		1.981 ± 0.145		12.2 ± 1.1		501 ± 28		3.07 ± 0.20		2.37 ± 0.12		2.67 ± 0.09		18.0 ± 0.6		213.4 ± 11.5		4.7 ± 1.2		29 ± 8		9.4 ± 2.5		22.3 ± 6.0			
Chlorocardium	156.0 ± 4.4		346 ± 15		0.453 ± 0.024		1.469 ± 0.081		9.5 ± 0.5		475 ± 37		3.01 ± 0.26		1.88 ± 0.16		3.71 ± 0.16		22.4 ± 0.7		254.4 ± 7.6		4.9 ± 0.9		32 ± 7		10.3 ± 2.6		17.4 ± 3.4			
Vouacapoua	91.8 ± 5.0		198 ± 12		0.469 ± 0.021		0.965 ± 0.106		10.4 ± 1.0		366 ± 36		4.09 ± 0.45		2.67 ± 0.22		2.69 ± 0.09		21.1 ± 0.7		137.2 ± 6.2		-		-		-		-			
Catostemma	129.4 ± 4.2		306 ± 24		0.440 ± 0.036		2.073 ± 0.196		16.1 ± 1.5		538 ± 39		4.22 ± 0.35		3.86 ± 0.25		3.25 ± 0.13		15.1 ± 0.5		139.1 ± 3.8		11.6 ± 2.6		93 ± 22		23.1 ± 5.7		83.5 ± 18.5			
Licania	101.1 ± 6.9		268 ± 13		0.377 ± 0.015		1.052 ± 0.088		10.7 ± 1.1		460 ± 29		4.68 ± 0.38		3.78 ± 0.28		3.23 ± 0.09		17.2 ± 0.4		124.2 ± 8.9		8.2 ± 1.3		80 ± 10		18.4 ± 3.3		65.5 ± 8.4			
Ormosia	151.8 ± 3.9		471 ± 16		0.324 ± 0.013		1.430 ± 0.084		9.4 ± 0.5		547 ± 66		3.54 ± 0.36		2.36 ± 0.24		3.20 ± 0.32		21.0 ± 0.4		227.9 ± 8.8		8.4 ± 1.0		55 ± 6		17.5 ± 2.5		36.1 ± 3.2			
Hymenaea	142.5 ± 3.7		344 ± 16		0.418 ± 0.013		2.466 ± 0.245		17.1 ± 1.7		444 ± 43		3.16 ± 0.35		2.43 ± 0.21		3.59 ± 0.09		18.0 ± 0.6		183.3 ± 7.8		-		-		-		-			
Pentaclethra	105.3 ± 4.6		183 ± 5		0.579 ± 0.027		-		-		550 ± 55		5.37 ± 0.47		2.73 ± 0.17		3.41 ± 0.06		26.6 ± 1.0		200.5 ± 13.6		11.0 ± 1.2		103 ± 8		20.8 ± 2.1		54.6 ± 3.7			
Carapa	155.7 ± 10.6		378 ± 7		0.412 ± 0.025		1.815 ± 0.090		12.0 ± 0.9		499 ± 31		3.29 ± 0.26		3.44 ± 0.26		3.10 ± 0.11		13.4 ± 0.6		149.7 ± 12.9		12.2 ± 2.1		79 ± 14		23.8 ± 2.8		79.8 ± 9.8			
Peltogyne	134.2 ± 10.0		269 ± 16		0.506 ± 0.038		1.296 ± 0.189		10.1 ± 1.7		637 ± 33		4.93 ± 0.42		3.40 ± 0.27		2.85 ± 0.10		20.2 ± 0.5		191.6 ± 11.7		19.2 ± 0.9		148 ± 11		31.1 ± 2.8		102.5 ± 6.8			
Sclerolobium	153.4 ± 8.4		316 ± 15		0.489 ± 0.025		1.369 ± 0.107		9.0 ± 0.6		648 ± 36		4.28 ± 0.23		3.04 ± 0.12		3.49 ± 0.14		19.7 ± 0.9		213.5 ± 8.2		-		-		-		-			
Goupia	124.8 ± 6.4		271 ± 15		0.400 ± 0.061		0.960 ± 0.134		8.0 ± 1.1		592 ± 18		4.80 ± 0.38		3.17 ± 0.23		3.39 ± 0.08		21.1 ± 0.4		187.7 ± 9.9		23.8 ± 2.5		193 ± 17		40.6 ± 4.7		129.4 ± 12.8			
Laetia	95.0 ± 3.0		246 ± 7		0.396 ± 0.010		0.944 ± 0.073		10.3 ± 1.2		645 ± 30		6.82 ± 0.35		3.86 ± 0.19		2.68 ± 0.09		24.4 ± 0.7		167.7 ± 6.4		19.7 ± 2.3		189 ± 28		30.5 ± 3.5		108.9 ± 18.3			
Jacaranda	102.4 ± 6.8		286 ± 24		0.349 ± 0.013		0.576 ± 0.045		5.8 ± 0.3		516 ± 30		5.29 ± 0.43		3.16 ± 0.23		3.87 ± 0.23		23.4 ± 1.2		168.9 ± 6.7		20.1 ± 2.4		201 ± 23		40.1 ± 5.6		119.4 ± 12.8			
Cecropia	117.7 ± 6.0		325 ± 11		0.363 ± 0.016		0.948 ± 0.058		8.1 ± 0.4		639 ± 40		5.55 ± 0.45		2.89 ± 0.19		3.44 ± 0.12		26.7 ± 0.7		223.0 ± 9.1		39.8 ± 2.8		339 ± 21		63.9 ± 6.1		178.4 ± 10.8			

Supplement Table 2. The species specific relative changes in trait values associated with ontogeny calculated as (adult - juvenile) / juvenile.

	LMA	thickness	density	punch strength _{LA}	punch strength _{DM}	chlorophyll _{LA}	chlorophyll _{DM}	chlorophyll _N	chlorophyll a/b	N _{DM}	N _{LA}
Oxandra	0.503	0.255	0.200	0.265	-0.065	1.384	0.677	0.778	-0.052	-0.026	0.466
Mora	0.935	0.715	0.138	0.379	-0.290	0.488	-0.219	-0.112	-0.142	-0.132	0.652
Eschweilera	1.474	0.862	0.338	0.677	-0.309	0.925	-0.223	-0.135	0.100	-0.113	1.225
Chlorocardium	1.146	0.666	0.295	0.289	-0.406	0.771	-0.172	-0.139	-0.166	-0.052	1.054
Vouacapoua	0.524	0.369	0.116	0.234	-0.190	0.307	-0.136	-0.141	-0.125	-0.010	0.501
Catostemma	0.480	0.172	0.309	0.088	-0.273	0.376	-0.062	0.112	-0.142	-0.167	0.233
Licania	0.319	0.196	0.103	0.316	0.011	0.181	-0.079	-0.004	0.035	-0.087	0.208
Ormosia	0.980	0.964	0.012	0.323	-0.330	0.622	-0.198	-0.219	-0.064	0.026	1.041
Hymenaea	1.090	0.796	0.173	0.966	-0.081	-0.029	-0.529	-0.435	-0.039	-0.172	0.728
Pentaclethra	1.626	0.322	0.973	-	-	0.510	-0.406	-0.352	0.046	-0.064	1.461
Carapa	1.047	0.418	0.438	0.426	-0.285	0.055	-0.470	-0.168	-0.064	-0.362	0.308
Peltogyne	1.244	0.593	0.421	1.173	0.016	0.756	-0.189	-0.100	-0.138	-0.098	1.005
Sclerolobium	1.686	0.820	0.507	1.016	-0.254	0.440	-0.472	-0.315	-0.064	-0.230	1.053
Goupia	1.423	0.764	0.183	1.112	-0.131	0.745	-0.307	-0.182	-0.079	-0.151	1.091
Laetia	0.722	0.504	0.191	0.670	-0.027	0.271	-0.271	-0.141	-0.194	-0.164	0.472
Jacaranda	1.382	0.814	0.276	0.766	-0.236	0.164	-0.493	-0.387	0.055	-0.177	0.951
Cecropia	0.619	-0.128	0.847	-0.010	-0.389	0.029	-0.365	-0.242	0.125	-0.166	0.357

Significant Pearson correlation coefficients are shown in bold (* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$). Abbreviations are, leaf mass per area (LMA), punch strength (strength), chlorophyll (chl) and photosynthetic capacity (A); subscripts refer to expressions per unit leaf area (LA), dry mass (DM), chlorophyll (chl) and nitrogen (N).

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