

Supplementary materials

Table S1. Mean values for each of the studied anatomical or physical wood variables studied and scientific names and codes of the corresponding species (as listed in Table 1). For code characters and abbreviations, see Table 2.

Code	V1	V4	V5	V6	V7	R1	R3	R5	R7	R8	F1	F2	F4	F5	F6	F7	FIS1
I1	7	4.65	5.9	152	127	8		184	3	35	3.9	941	15	2.4	62		0.93
I2	2	9.60	7.1	166	136	14		112	2	15	4	841	18	2	47		0.72
I3	3	6.25	7.6	179	167	5		134	2	16	3	926	22	3.5	41		0.85
I4	3	6.95	7.1	185	176	5		366	3	33	3.9						0.62
I5	1	10.50	7.1	388	264	4			4		5.2	2416	29	3.4	83		0.37
I6	4	9.00	7.1	333	141	10		341	4	42	6.4	1894	22	2.3	85		0.68
I7	4	5.50	5.8	150	152	12		101	2	24	3.7	859	21	2.4	40		0.81
I8	9	7.15	6.0	419	116	12		214	3	36	6.1	1490	22	2.7	67		0.67
I9	2	8.75	6.9	298	184	5		335	4	49		1235	24	3.7	51		0.50
I10	4	6.55	6.4	160	200	15		165	1	13	4.1	1093	27	3.7	40		0.53
I11	3	10.50	6.5	218	195	9		258	2	41	3.6	821	21	2.4	39		0.58
I12	12	1.40	4.4	285	86	7			5		3.7	869	17	2.2	50		0.62
I13	6	5.25	6.3	244	158	6		301	3	41	4	1242	25	4	49		0.66
I14	2	7.30	7.1	326	178	10		200	2	21	3.7	1240	20	3.4	61		0.55
I15	7	6.87	6.7	262	148	10		174	1	21	4.5	1554	20	2.5	73		0.63
I16	3	8.65	6.4	182	180	10		103	1	19	3.7	1296	20	3	65		0.76
I17	9	6.40	7.0	325	147	12		236	2	24	4.5	1293	18	2.3	72		0.76
M1	12		3.5	625	105	16	10	415	2	30	6.7	1640	25	4.4	66	12	0.90
M2	8	8.75	5.2	205	110	8	28	190	3	28	6	1015	15	2.5	70	12.5	0.87
M3	2	7.60	5.8	290	180	5	23	240	3	51	3.6	1415	24	4.7	64	15	0.81
M4	2	7.55	7.0	300	205	5	38	235	3	27	3.3	1260	19	3.2	67	14	0.63
M5	2	8.75	4.3	175	170	6	26	145	4	36	2.9	940	26	5.1	38	10	0.68
M6	3	7.25	6.9	260	155	11	16	195	2	30	5.5	1275	19	3.9	73	20	1.07
M7	193	4.00	3.7	335	45	8	8	180	1	13	5.9	735	20	3.1	35	8	0.91
M8	3	11.70	5.0	375	210	8	20	347	2	52	4.7	1887	27	4.8	72	18	0.44
M9	5	9.10	6.0	310	140	6	30	240	3	33	6.2	1265	16	3	84	18	0.97
M10	3	4.35	4.5	280	130	5		335	4	40	3.6	1430	21	4.2	72	19	0.69
M11	12	8.10	3.5	260	125	7		405	4	45	3.1	1270	15	2.3	85	15	0.72
M12	4	9.90	4.5	270	215	8	52	295	4	47	2.6	1440	20	4.1	77	21	0.66
M13	8	5.15	4.0	195	80	11	13	155	2	25	3.9	835	12	1.8	71	18	1.29
M14	2		3.8	215	145	20	12	240	2	25	5.3	1180	20	3.1	63	14	1.25
M15	2	8.40	5.2	205	170	9	11	150	2	31	4.1	925	19	4	52	14	0.74
M16	5	8.25	4.5	150	115	13	10	155	2	17	5.7	700	18	3.5	40	8	1.25
M17	5	8.80	6.2	245	105	10	27	190	2	18	4	1175	16	2.3	75	14	1.16
M18	4	4.15	4.4	320	105	18	11	280	3	30	3.9	1010	17	2.9	62	14	0.76
M19	5	9.25	6.4	325	160	7	28	220	2	25	6.1	1110	18	3.5	65	14	1.09
M20	3	8.50	6.6	285	190	15	17	200	2	21	5.4	1270	14.5	3.3	91	21	0.98
M21	4	4.00	3.1	280	135	7	28	310	4	50	3	1485	21	3.9	72	14	0.60
M22	4	4.50	5.5	425	205	5		515	5	92	4.4	1630	22	4.9	79	20	0.67
M23	2	8.25	5.0	215	205	8	30	185	3	35	6.9	1520	19	3.5	79	18	0.87
M24	4	10.20	3.6	225	145	9	35	240	3	35	3.3	1040	13	2.5	83	19	0.77
M25	1	9.50	7.0	240	170	9	20	200	3	45	7.2	1350	24	4	60	12.5	0.70
M26	3	7.95	4.0	210	145	19	9	170	2	23	4.3	1165	16	3.2	77	13	0.74
M27	3	5.00	5.0	220	150	6	24	205	2	25	3	1400	19	4.2	75	24	0.50
M28	15	8.75	3.1	405	83	10	10	165	2	16	3.7	1270	15	2.5	92	21	0.80
M29	3	8.90	4.8	200	200	13	6	125	2	19	2.8	1135	26	5.5	46	12.5	0.58
M30	1	15.85	4.5	560	285	9	8	295	1	25	2.7	1255	46	11.0	29	7	0.23
M31	19	7.85	3.7	365	80	19	11	210	2	14	2.9	810	15	2.3	55	11	1.00
M32	4	8.45	4.1	325	230	3		1500	>10	205	6.6	2150	21	3.3	107	20	0.58

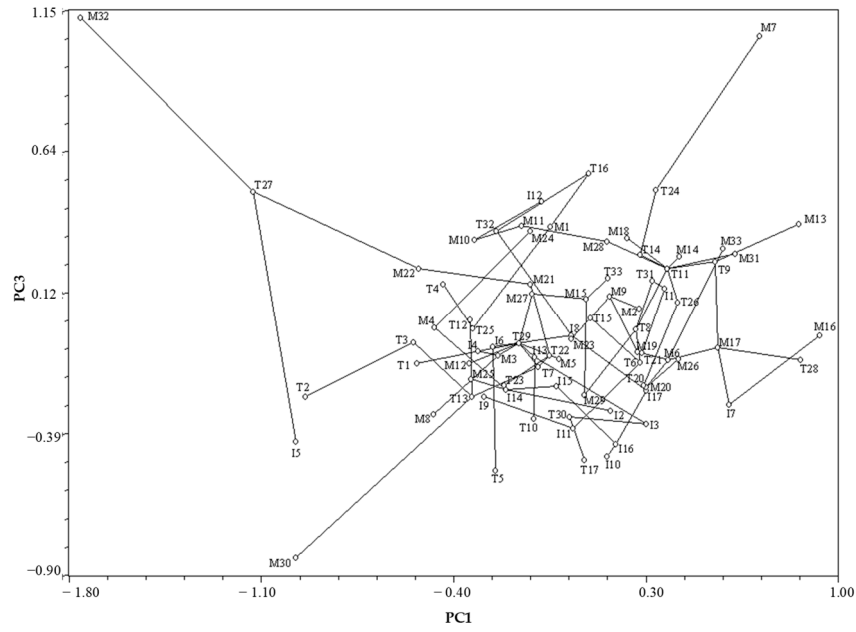
Code	V1	V4	V5	V6	V7	R1	R3	R5	R7	R8	F1	F2	F4	F5	F6	F7	FIS1
M33	7	7.60	4.0	190	100	9	17	155	2	34	6.7	1045	16	2.5	70	15	1.02
T1	2	6.00	9.6	248	222	5	15	181	2	215	4.6	990	27	4.7	38	8	0.51
T2	1	11.00	6.2	850	208	8			2		3.1	1704	33	5	53	11	0.46
T3	4	4.00	6.2	542	150	6	10	323	2	34	2.7	1393	33	4.3	42	8	0.40
T4	8	7.00	5.4	445	102	14			2		4.6	2184	31	4	70	12	0.55
T5	7	11.00	6.1		124	10			3		5.7	2252	38	5	62	13	0.66
T6	3		5.9	297	150	12	5	114	2	19	3.5	967	19	2	52	10	0.70
T7	7	6.00	4.4	285	142	5	9	253	2	22	2.5	1005	24	4	46	15	0.46
T8	11		5.6	301	133	12	7	164	2	15	3.5	1167	17	3	68	17	0.67
T9	13	6.00	4.6	353	89	12	13	248	2	14	4.8	1170	14	2	85	14	1.01
T10	4	5.00	5.9	289	173	5	8	249	3	41	2.8	1132	27	4	43	9	0.46
T11	16		4.7	304	75	17			2		3.8	1040	18	2	56	7	0.86
T12	7	12.00	5.3	456	78	15			3		2.4	1194	30	4	41	8	0.51
T13	3		6.1	260	164	7	11	272	1	28	2.4	993	33	7	32	11	0.42
T14	23	5.00	5.7	264	78	12	7	132	2	13	3.1	913	15	2	62	11	0.73
T15	6	5.00	5.7	252	135	6	11	284		38	3.5	1343	25	3.9	58	12	0.63
T16	16	4.00	5.0	578	78	13			3		6	1350	16	3	91	21	0.86
T17	3	6.00	9.8	287	201	7		246	2	23	3.9	1474	20	3	77	14	0.83
T18	6		5.0	524	152	18			2		3	1426	35	5	42	6	
T19	10		5.1	255	108	17	6	155	2	15	3.9	888	21	3	43	8	
T20	4	4.00	7.3	372	166	14	11	230	2	24	4.2	1012	17	2.5	60	12	0.84
T21	3	6.00	7.7	198	164	11	5	133	2	20	3.4	1088	21	3.6	53	12	0.70
T22	4	4.00	5.0	320	103	8			2		2.4	1243	26	5	51	15	0.44
T23	4	6.00	5.7	363	108	10			3		2.7	1249	29	5	43	8	0.50
T24	63	5.00	4.8	230	59	8	7	116	2	18	3.9	898	18	4.3	60	15	0.76
T25	6	6.00	6.2	540	124	13			2		5.5	1949	31	4.7	65	13	0.74
T26	9	5.00	5.3	276	89	17			2		3.7	998	17	3	60	11	0.96
T27	3	7.00	6.3	355	214	3		1042	7	161	5.4	1949	21	3.3	95	18	0.73
T28	9	6.00	6.0	212	83	12	12	187	2	17	3.5	1023	14	2	73	12	1.37
T29	6	7.00	6.5	250	150	4			3		3.6	1200	25	4	50	10	0.63
T30	4	6.00	9.1	308	200	6	10	229	2	35	4.1	1216	21	1.9	58	11	0.75
T31	7	4.00	6.1	215	110	6	8	157	3	26	4.5	1056	19	3	58	12	0.77
T32	8	5.00	5.2	472	106	12	12	346	3	31	7	1576	24	2.9	70	9	0.69
T33	14	9.00	6.3	217	110	8	9	183	2	25	4.6	1022	20	3	55	10	1.01
N1	2	2.49	8.0	229	148	2	67	475	6	64	5.4	1131	21	3.0	54		
N2	2	4.49	10.7	376	170	6	13	260	2	43	5.2	1268	18	3.1	70		
N3	5	2.05	7.2	312	100	5	22	272	3	37	5.6	1272	23	3.5	55		
N4	2	1.49	11.9	243	102	6	15	303	4	65	4.6	974	22	2.6	44		
N5	5	1.16	4.7	238	54	6	25	309	4	50	4.8	1086	20	2.9	54		
N6	2	3.20	8.4	241	104	14	18	348	2	17	3.7	885	19	2.0	47		
N7	6	2.19	5.2	281	69	3	22	392	3	39	4.7	1211	16	1.9	39		
N8	4	3.15	6.1	318	110	12	11	226	2	25	4.4	1356	17	2.2	80		
N9	2	3.99	10.1	207	182	6	17	269	4	45	4.3	1252	16	2.3	78		
N10	11	1.47	13.0	194	69	23	11	112	1	17	5.8	1411	23	3.2	61		
N11	2	1.66	6.5	249	140	4	15	327	2	39	4.4	1362	16	1.6	85		
N12	12	3.31	3.3	360	48	7	14	300	2	30	4.5	1396	20	2.8	70		
N13	6	2.93	3.3	264	62	7	20	355	2	22	4.7	851	16	1.9	53		
N14	3	2.90	6.0	186	103	5	13	196	5	46	4.9	3780	26	4.3	145		
N15	5	1.98	15.6	238	87	15	14	189	2	26	5.1	911	18	1.7	51		

Code	FIS2	FIS3	FIS4	FIS5	FIS6	FIS7	FIS8	FIS9	FIS10	FIS11	FIS12	C4	C5	C6	C7
I1	0.85		19.3	7.53	4.50	2.46	0.45	0.39	0.23	0.12	0.03	46.56	16.61	22.26	14
I2	0.68		30.0	13.62	9.17	3.90	0.01	0.45	0.29	0.15	0.00	70.61	6.33	23.93	4
I3	0.78		21.0	8.13	5.42	2.35	0.20	0.38	0.25	0.12	0.01	40.97	12.10	14.95	14
I4	0.58		21.0	9.57	6.21	3.00	0.20	0.46	0.30	0.15	0.01	62.24	13.46	32.83	8
I5	0.35		25.0	9.11	6.25	2.53	0.15	0.36	0.23	0.12	0.01	62.39	6.30	23.10	3
I6	0.66		26.0	12.80	8.37	3.85	0.20	0.49	0.31	0.15	0.01	54.17	12.21	21.03	14
I7	0.76		19.5	10.12	6.66	2.95	0.23	0.52	0.33	0.17	0.02	37.01	7.29	8.34	25
I8	0.63		30.0	12.18	8.46	3.16	0.03	0.40	0.27	0.12	0.00	53.48	10.36	15.97	14
I9	0.47		31.0	10.16	7.01	2.89	0.01	0.33	0.21	0.11	0.00	65.78	3.42	14.29	26
I10	0.51		25.0	11.41	6.96	4.00	0.20	0.46	0.26	0.18	0.01	54.80	10.83	20.01	14
I11	0.55		27.0	9.59	5.62	3.47	0.03	0.36	0.19	0.15	0.00	60.52	6.47	19.69	26
I12	0.59		26.0	10.99	6.92	3.57	0.20	0.43	0.27	0.15	0.01	72.95	5.64	28.08	5
I13	0.62		20.0	9.82	6.38	2.94	0.26	0.49	0.31	0.16	0.01	46.62	8.76	20.01	8
I14	0.51		24.0	8.95	5.00	3.24	0.65	0.37	0.19	0.14	0.04	69.84	7.04	25.77	5
I15	0.59		29.0	11.81	7.65	3.58	0.27	0.41	0.26	0.14	0.00	61.64	7.62	28.76	14
I16	0.72		28.0	14.33	8.36	5.17	0.30	0.51	0.29	0.20	0.01	54.85	11.91	23.54	14
I17	0.73		27.0	14.29	8.89	4.66		0.52	0.30	0.19	0.00	42.34	12.87	18.52	21
M1	0.86	12.10	10.8	7.70	4.60	2.70	0.20	0.63	0.38	0.22	0.02	60.80	10.21	22.45	18
M2	0.81	13.90	12.2	7.40	4.60	2.50	0.30	0.53	0.33	0.18	0.02	44.35	7.94	18.10	16
M3	0.75	14.10	12.3	5.60	3.00	2.20	0.20	0.40	0.21	0.16	0.01	55.85	15.61	25.13	14
M4	0.60	10.90	9.8	5.00	3.60	1.20	0.10	0.46	0.33	0.13	0.01	70.65	6.71	32.46	8
M5	0.63	13.10	11.6	4.20	2.30	1.60	0.30	0.33	0.18	0.12	0.02	42.89	10.49	17.59	14
M6	1.01	13.30	11.8	7.00	3.90	2.70	0.20	0.53	0.30	0.20	0.02	41.38	14.40	15.21	21
M7	0.88	10.20	9.3	6.50	3.50	2.60	0.30	0.63	0.35	0.25	0.03	57.51	10.92	21.66	14
M8	0.41	13.90	12.2	6.60	3.90	2.30	0.40	0.47	0.28	0.17	0.03	51.05	14.93	22.82	20
M9	0.92	12.00	10.7	5.80	3.10	2.20	0.30	0.48	0.27	0.18	0.02	42.93	12.19	15.57	21
M10	0.65	12.00	10.7	6.30	3.90	2.00	0.30	0.52	0.33	0.17	0.02	75.63	3.93	22.66	8
M11	0.69	12.40	11.0	6.70	4.40	2.10	0.10	0.54	0.36	0.17	0.01	73.80	5.91	23.30	13
M12	0.62	13.60	12.1	6.60	3.80	2.50	0.30	0.48	0.28	0.18	0.02	48.56	10.85	22.39	16
M13	1.23	11.30	10.1	5.30	3.00	2.00	0.30	0.47	0.26	0.18	0.02	37.66	11.73	12.92	21
M14	1.20	11.70	10.5	6.90	5.00	1.60	0.10	0.59	0.43	0.14	0.01	55.94	10.55	23.57	14
M15	0.69	10.10	9.2	3.50	1.60	1.40	0.30	0.34	0.16	0.13	0.03	64.12	9.49	23.53	14
M16	1.18	13.00	11.5	6.10	4.10	1.90	0.10	0.47	0.32	0.15	0.01	25.91	1.86	0.97	27
M17	1.11	12.50	11.1	7.70	4.60	2.90		0.61	0.37	0.23		34.29	9.98	10.95	21
M18	0.72	11.70	10.5	5.90	3.40	2.20	0.30	0.51	0.29	0.19	0.02	61.53	7.93	14.80	1
M19	1.01	13.60	12.0	6.20	3.00	2.70	0.30	0.45	0.22	0.20	0.02	40.72	14.57	16.15	19
M20	0.91	14.60	12.8	7.20	3.80	2.80	0.30	0.49	0.26	0.19	0.02	44.60	10.54	15.95	14
M21	0.56	14.80	12.9	7.10	3.70	3.00	0.20	0.48	0.25	0.20	0.02	53.25	11.86	21.10	21
M22	0.62	13.70	12.2	5.30	2.80	1.90	0.20	0.39	0.23	0.14	0.01	53.25	11.86	21.10	21
M23	0.81	12.90	11.4	6.40	3.80	2.50	0.10	0.50	0.29	0.19	0.01	39.71	7.74	13.33	14
M24	0.74	10.50	9.5	5.00	3.10	1.80	0.10	0.47	0.29	0.17	0.01	67.38	8.77	34.89	13
M25	0.65	15.40	13.5	7.40	4.20	2.70	0.40	0.48	0.27	0.18	0.02	70.45	7.60	27.19	8
M26	0.69	15.10	13.2	6.70	4.20	2.20	0.20	0.44	0.27	0.14	0.01	46.19	8.81	15.41	14
M27	0.47	10.90	9.9	4.00	2.30	1.50	0.10	0.36	0.21	0.14	0.01	66.13	11.36	23.83	14
M28	0.76	12.00	10.7	6.30	4.20	2.10		0.55	0.36	0.18		64.59	7.18	25.02	14
M29	0.55	12.00	10.7	4.00	2.20	1.40	0.30	0.33	0.19	0.12	0.03	50.26	12.48	20.61	14
M30	0.22	14.60	12.6	3.80	2.10	1.30	0.50	0.26	0.14	0.09	0.03	75.02	3.49	22.13	1
M31	0.94	12.20	10.9	5.20				0.43				44.34	10.73	17.91	14
M32	0.55	12.00	10.8	5.30	3.80	1.30	0.10	0.44	0.32	0.11	0.01	66.67	10.77	29.42	14

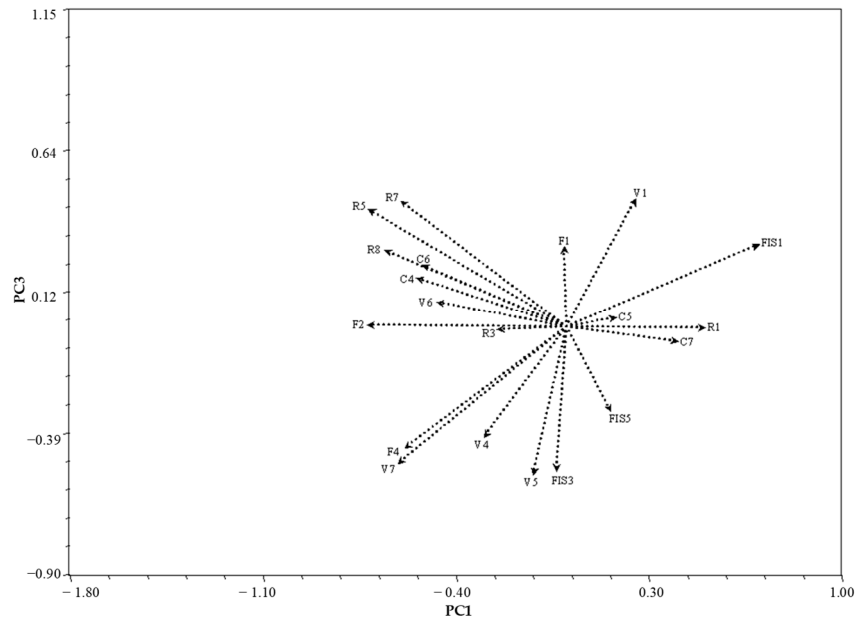
Code	FIS2	FIS3	FIS4	FIS5	FIS6	FIS7	FIS8	FIS9	FIS10	FIS11	FIS12	C4	C5	C6	C7
M33	1.00	11.30	10.2	7.50				0.67				39.87	19.77	16.74	21
T1	0.48	10.90	9.8	4.00				0.37				55.95	12.49	23.49	17
T2	0.43	11.20	10.1	5.03				0.45				85.11	3.22	21.72	2
T3	0.38	11.90	10.6	4.10				0.34				72.87	5.53	23.10	7
T4	0.52	11.00	9.9	4.94				0.50				60.88	11.19	33.89	11
T5	0.61	16.90	14.4	8.53				0.51				38.16	12.85	13.84	20
T6	0.66	12.40	11.0	5.41				0.43				62.87	5.91	14.03	21
T7	0.42	15.20	13.2	5.24				0.34				67.98	8.97	21.35	15
T8	0.63	12.30	10.9	6.11				0.49				57.95	12.43	19.82	20
T9	0.98	11.90	10.6	8.50	5.60	2.60	0.20	0.77	0.50	0.24	0.02	42.70	10.03	14.30	20
T10	0.43	15.50	13.4	8.50	4.50	3.20	0.60	0.55	0.29	0.21	0.04	43.61	15.59	21.39	15
T11	0.82	12.20	10.8	7.17				0.58				57.97	7.97	18.05	16
T12	0.48	10.70	9.6	4.18				0.39				79.81	4.27	18.09	2
T13	0.39	12.10	10.8	3.83				0.32				73.62	6.85	26.15	8
T14	0.70	11.60	10.4	6.48				0.55				76.46	7.93	24.30	8
T15	0.60	10.40	9.4	5.10				0.49				51.65	6.41	9.16	26
T16	0.83	10.80	9.8	7.03				0.70				65.45	9.39	21.39	15
T17	0.77	14.60	12.8	6.40	3.90	2.30	0.20	0.44	0.26	0.15	0.01	42.79	10.33	16.91	24
T18												60.60	8.58	19.15	8
T19												59.67	11.25	18.23	24
T20	0.80	15.20	13.2	9.40	5.10	4.10	0.10	0.62	0.33	0.27	0.01	51.08	13.69	19.76	15
T21	0.67	10.00	9.1	5.10	2.80	1.90	0.30	0.51	0.28	0.19	0.03	49.59	20.29	23.31	21
T22	0.40	14.90	13.0	4.89				0.33				67.40	7.34	16.67	20
T23	0.46	15.40	13.4	7.60				0.49				67.99	6.91	17.41	8
T24	0.71	11.70	10.5	4.50				0.39				60.51	11.75	28.32	7
T25	0.71	13.00	11.6	8.60	5.40	2.50	0.40	0.66	0.42	0.20	0.03	55.41	13.77	32.23	11
T26	0.91	14.80	12.9	8.54				0.60				59.90	11.65	20.99	15
T27	0.69	13.40	11.8	7.90	4.20	3.40	0.20	0.59	0.31	0.25	0.01	62.71	10.94	23.67	15
T28	1.31	15.60	13.5	11.20	6.00	4.70	0.20	0.72	0.38	0.30	0.01	35.21	9.45	9.93	22
T29	0.59	12.30	10.9	5.04				0.40				55.44	8.93	23.20	17
T30	0.71	13.00	11.5	6.70				0.52				52.94	13.77	20.85	24
T31	0.73	11.40	10.2	5.83				0.51				47.37	11.85	20.03	24
T32	0.66	12.00	10.7	6.50				0.54				72.20	5.98	21.60	8
T33	0.95	10.70	9.7	4.20				0.39				69.96	6.50	21.22	11
N1												64.31	4.30	19.96	12
N2												41.24	14.26	14.40	21
N3												45.59	16.91	20.36	18
N4												50.02	15.09	23.44	18
N5												40.19	10.40	14.49	24
N6												60.86	14.10	24.43	10
N7												64.87	10.01	26.84	13
N8												60.31	12.67	23.34	11
N9												53.92	13.37	28.65	17
N10												73.03	9.86	34.44	9
N11												58.92	12.67	24.19	20
N12												59.01	12.62	24.03	17
N13												58.12	8.64	16.93	23
N14												67.38	10.98	24.41	6
N15												61.80	13.71	24.15	18

Table S2. Statistics of the principal component analyses (PCA) for the anatomical and physical wood characteristics (coded in Table 2) of the tropical species sets (as described in Tables 1 and 3). Loadings of the anatomical and physical variables to the principal component (PC) 1–3 of variation.

Variable	81 species			87 species			54 species		
	PC1	PC2	PC3	PC1	PC2	PC3	PC1	PC2	PC3
V1	0.2515	0.2309	0.4690	0.5427	0.6141	0.0681	-	-	-
V4	-0.3038	-0.0050	-0.4060	-0.0818	-0.4814	0.5111	-	-	-
V5	-0.1231	-0.2070	-0.5405	-0.3007	-0.4093	-0.0822	-	-	-
V6	-0.4745	0.3481	0.0915	-0.2649	0.5069	0.6807	-	-	-
V7	-0.6173	-0.2679	-0.4981	-0.4665	-0.7444	0.2250	-	-	-
V1	0.2515	0.2309	0.4690	0.5427	0.6141	0.0681	-	-	-
R1	0.5057	0.2433	-0.0057	0.6176	0.0928	0.4587	-	-	-
R3	-0.2567	-0.4913	-0.0094	-0.5295	-0.1746	-0.2768	-	-	-
R5	-0.7234	-0.3546	0.4290	-0.6095	0.6320	-0.0169	-	-	-
R7	-0.6060	-0.4831	0.4593	-0.6135	0.2791	-0.4570	-	-	-
R8	-0.6626	-0.4092	0.2799	-0.8422	0.1954	-0.2551	-	-	-
F1	-0.0092	-0.4795	0.2951	-0.1737	0.1947	0.0662	-	-	-
F2	-0.7265	-0.2865	0.0060	-0.6578	0.1878	0.5585	-	-	-
F4	-0.5913	0.3130	-0.4423	-0.4596	-0.0435	0.6334	-	-	-
C4	-0.5512	0.6898	0.1776	-	-	-	0.4160	0.6318	0.3112
C5	0.1819	-0.4806	0.0332	-	-	-	-0.0583	-0.4194	0.3181
C6	-0.5281	0.2970	0.2259	-	-	-	0.3687	0.4180	0.5789
C7	0.4070	-0.6119	-0.0536	-	-	-	-0.3926	-0.4750	-0.4826
FIS1	0.7012	-0.3895	0.3006	-	-	-	-0.4748	-0.6593	-0.2174
FIS3	-0.0387	-0.3688	-0.5274	-	-	-	-	-	-
FIS 4	-	-	-	-	-	-	-0.4066	0.8428	-0.0486
FIS5	0.1614	-0.3091	-0.3094	-	-	-	-0.7757	0.5559	0.2020
FIS6	-	-	-	-	-	-	-0.7441	0.6105	0.1241
FIS7	-	-	-	-	-	-	-0.7862	0.3534	0.2720
FIS8	-	-	-	-	-	-	0.4033	-0.2183	0.6122
FIS9	-	-	-	-	-	-	-0.6473	-0.5457	0.4163
FIS10	-	-	-	-	-	-	-0.6045	-0.3683	0.3129
FIS11	-	-	-	-	-	-	-0.5972	-0.5443	0.3820
FIS12	-	-	-	-	-	-	0.5275	-0.4700	0.5041



(a)



(b)

Figure S1. a) PC1 and PC3 projection plot of the 81 tropical species (as listed in Table 1 and 3) based on both anatomical and physical wood characteristics (coded in Table 2), overlapped by the MST method. b) The indication of the correlation degree between the variables based on the position of the vector.

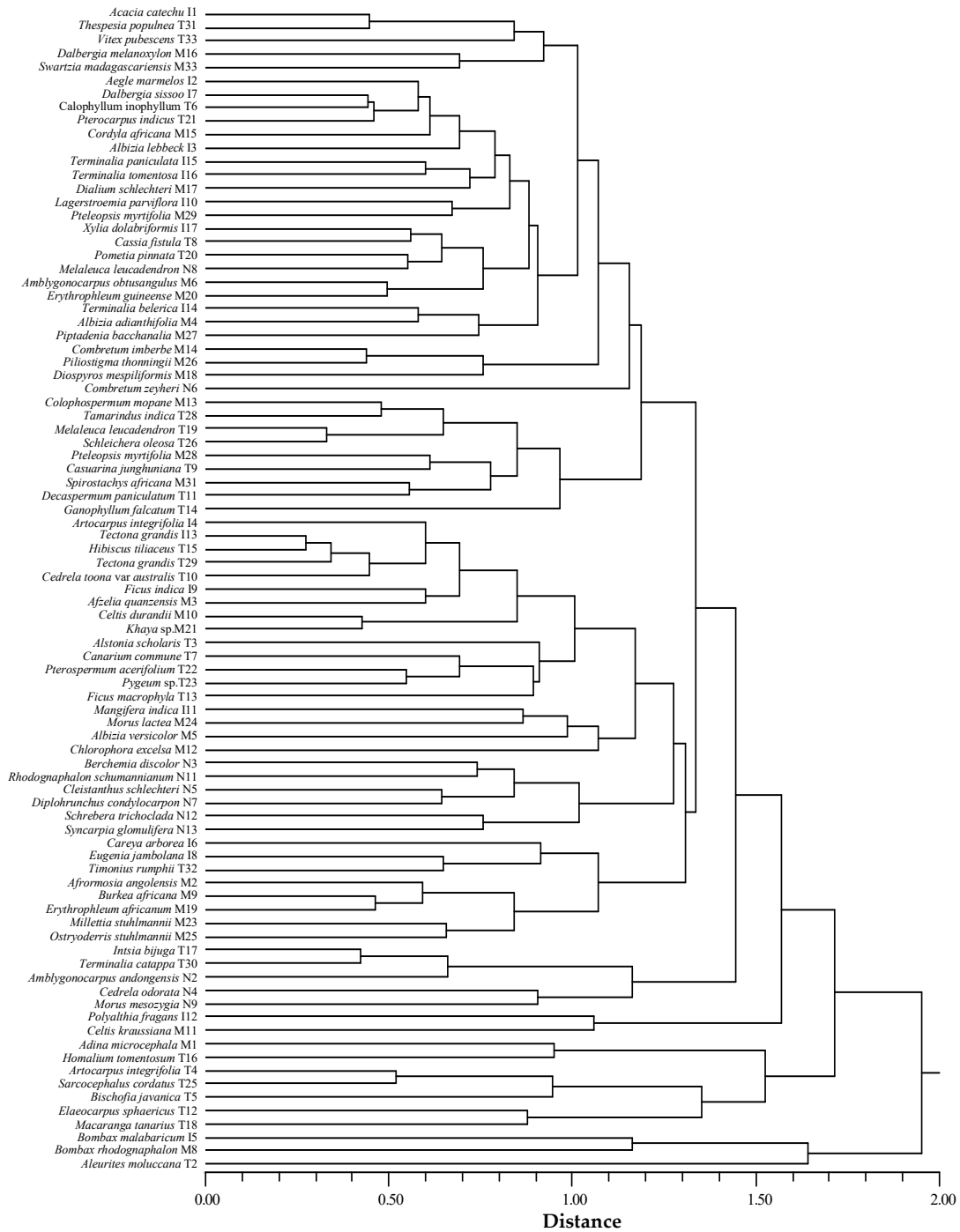
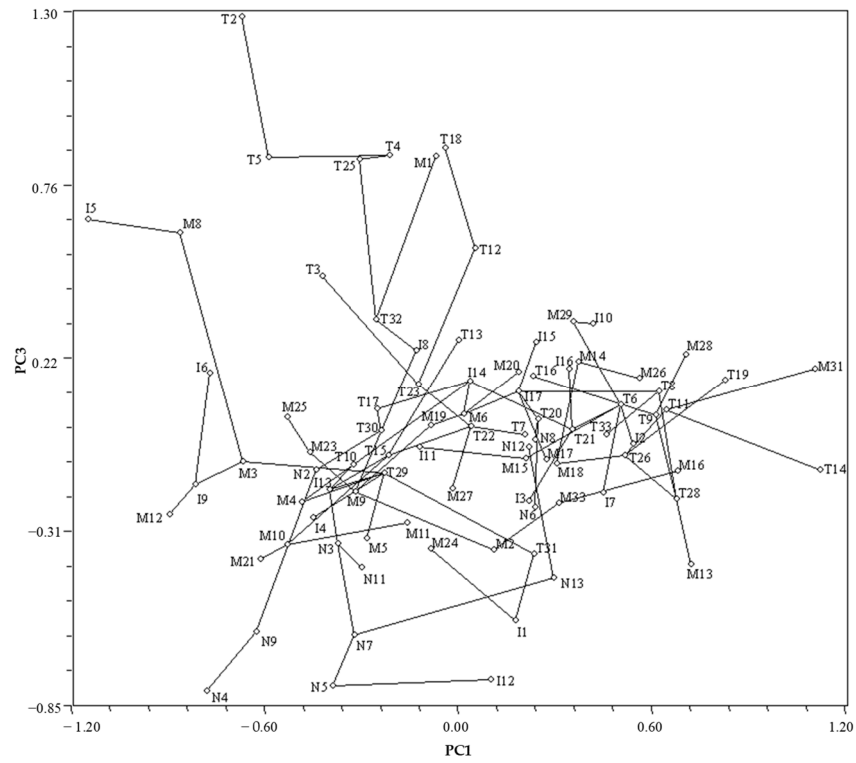
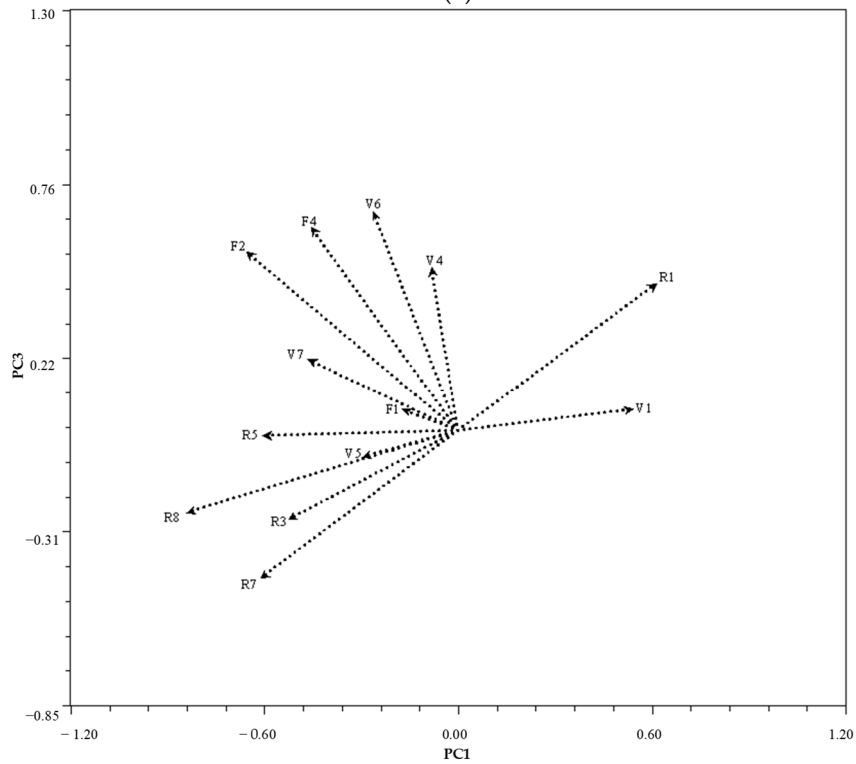


Figure S2. Classification of 87 tropical species (listed in Tables 1 and 3) based on 13 anatomical wood characteristics (coded in Table 2). obtained by the UPGMA clustering method ($c = 0.695$).



(a)



(b)

Figure S3. a) PC1 and PC3 projection plots of the 87 tropical species (as listed in Tables 1 and 3) based on anatomical wood characteristics (coded in Table 2). overlapped by the MST method. b) The indication of the correlation degree between the variables based on the position of the vector.

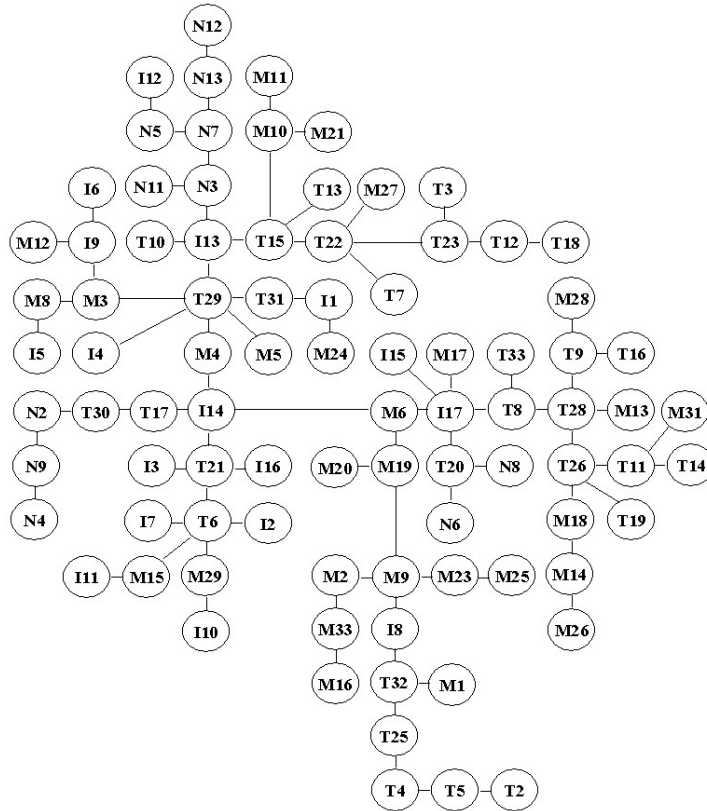


Figure S6. The minimum spanning tree (MST) also known as SCN (shortest connection network) showing the connections of the 87 tropical species set (distances are not at scale).

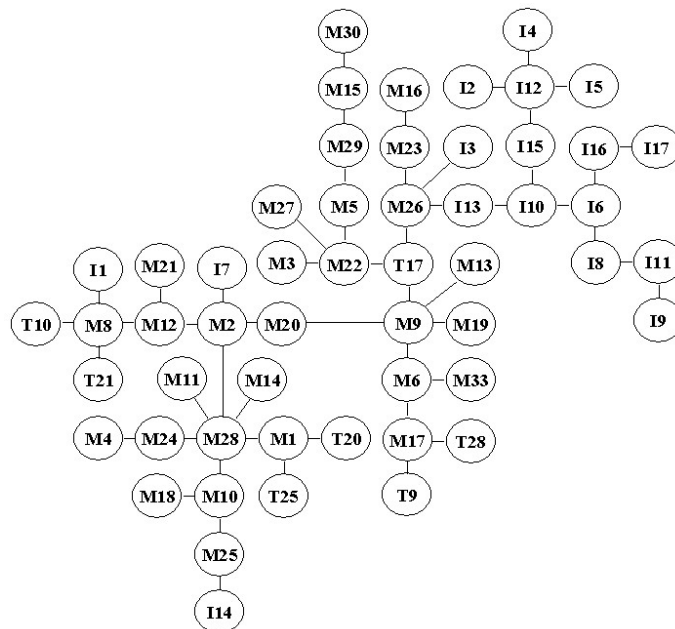


Figure S7. The minimum spanning tree (MST) also known as SCN (shortest connection network) showing the connections of the 54 tropical species set (distances are not at scale).