Functional Ecology Supporting Information: Shifting trait coordination along a soil-moisture-nutrient gradient in tropical forests.

Marion Boisseaux[1]*, Daniela Nemetschek[1,2], Christopher Baraloto[7], Benoit Burban[1], Angela Casado-Garcia[3], Jocelyn Cazal[1], Jeanne Clément[2], Géraldine Derroire[1], Claire Fortunel[2], Jean-Yves Goret[1], Jonathan Heras[3], Gaelle Jaouen[1], Isabelle Maréchaux[2], Christine Scoffoni[4], Ghislain Vieilledent[2], Jason Vleminckx[5], Sabrina Coste[1], Heidy Schimann[6], Clément Stahl[1].

[1]UMR EcoFoG, AgroParisTech, Cirad, CNRS, INRAE, Université des Antilles, Université de la Guyane. Campus Agronomique, 97310 Kourou, France

[2]AMAP, Université de Montpellier, CIRAD, CNRS, INRAE, IRD, Montpellier, France

[3]University of La Rioja, Department of Mathematics and Computer Science, Ed. CCT, C. Madre de Dios, 53, E-26004 Logroño, La Rioja, Spain.

[4]Department of Biological Sciences, California State University, Los Angeles, CA 90032, USA

[5]Université Libre de Bruxelles, Brussels, Belgium

[6]INRAE UMR BIOGECO 1202, Domaine de l'Hermitage 33612 Cestas

[7]Institute of Environment, Department of Biological Sciences, Florida International University, Miami, FL 33199, USA

*to whom correspondence should be addressed: email: marionboisseaux@gmail.com

Article title: Shifting trait coordination along a soil-moisture-nutrient gradient in tropical forests.

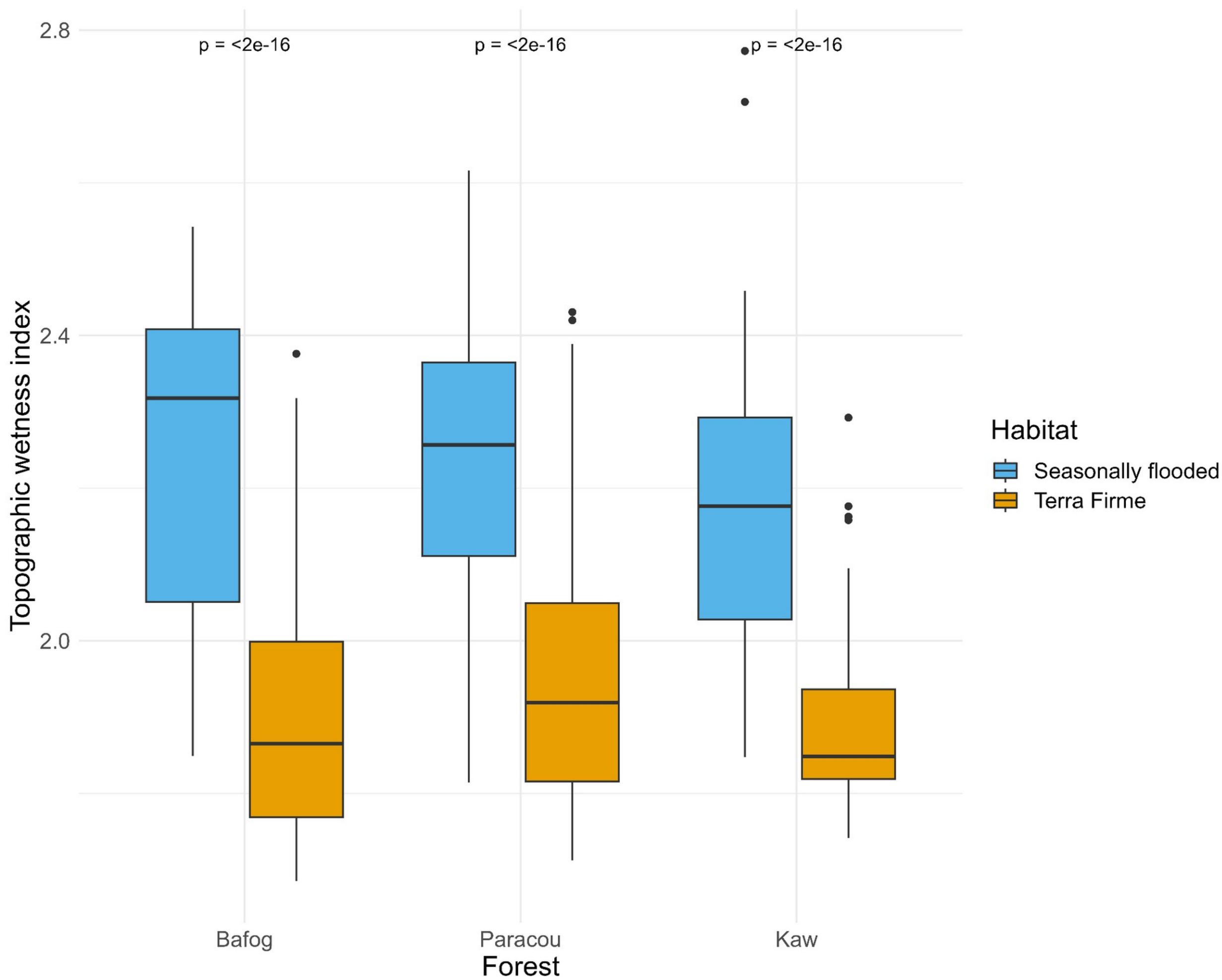

Figure S1: Discrimination of the habitats using the topographic wetness index (TWI). The topographic wetness index is $\log_e$-transformed. Analysis was carried out by a comparing habitats within each forest site using an unpaired Student's t test.

3

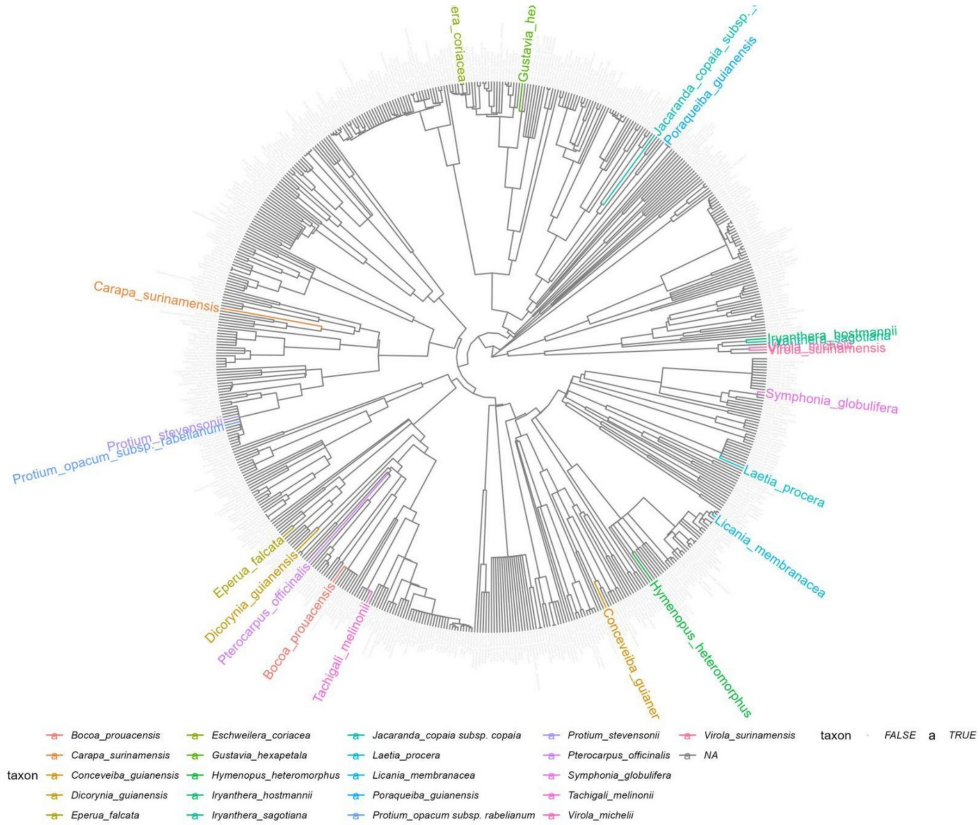

Figure S2: The 21 selected species' phylogeny. We constructed the phylogenetic tree for the selected focal species using the Paracou database (version of 30/08/2021) as the backbone phylogeny. The phylo.maker function from the V.PhyloMaker package in R was used to generate the phylogenetic tree. The GBOTB.extended tree and nodes.info.1 were used as parameters. The resulting phylogenetic tree was prepared for visualization using the fortify function from the ggtree package in R. 'NA' in the legend represents all the tropical tree species in Paracou.

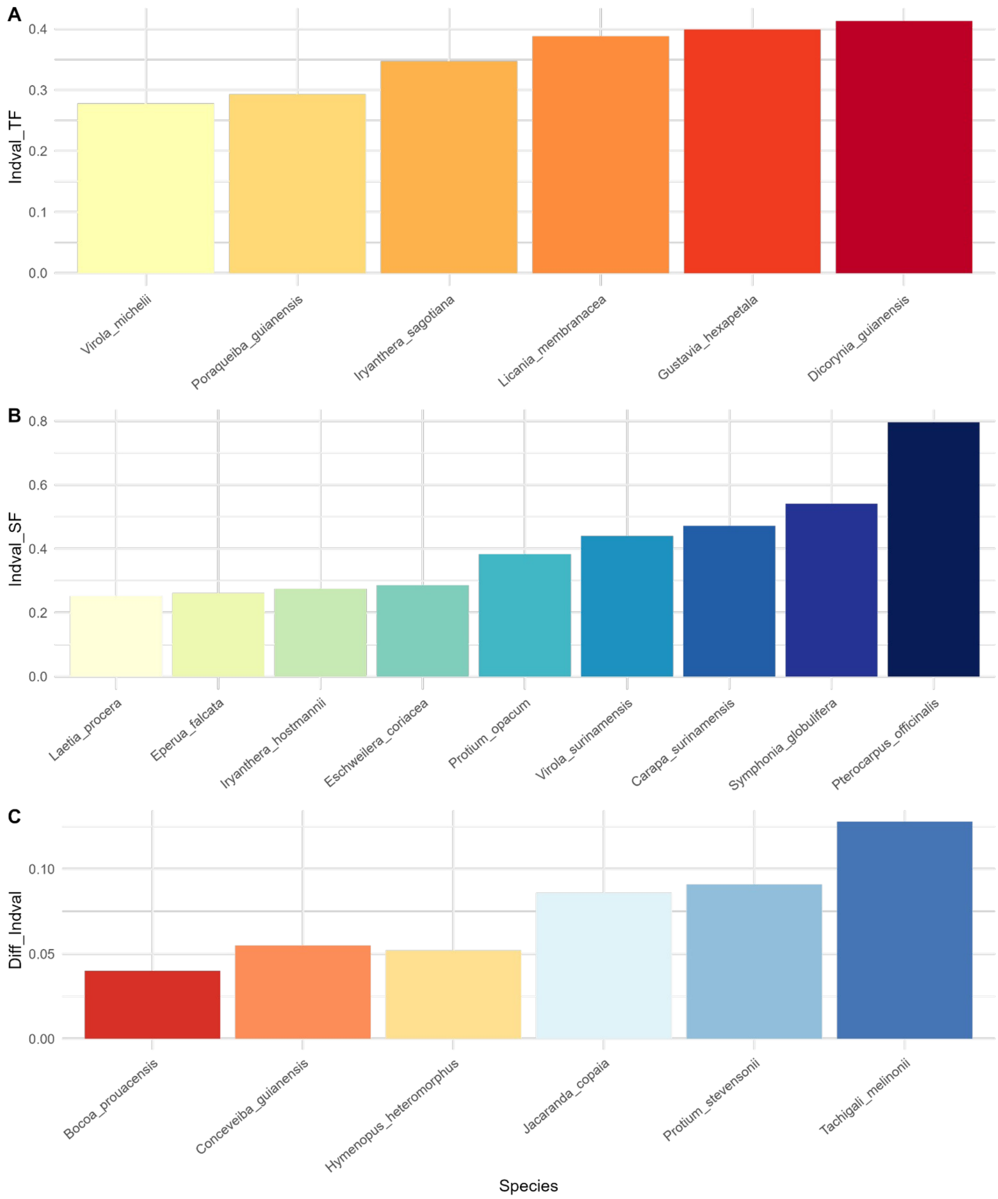

Figure S3. Indval values for the studied species.

(A) for the six specialist species of *Terra firme* habitat; (B) for the nine specialist species of seasonally flooded habitat; and (C) the Indval value difference for the generalist species (Indval in SF - Indval in TF). We note that even among generalists some species tend to be more affiliated to *Terra firme* (colored in red) and some species tend to be more affiliated to seasonally flooded soils (colored in blue).

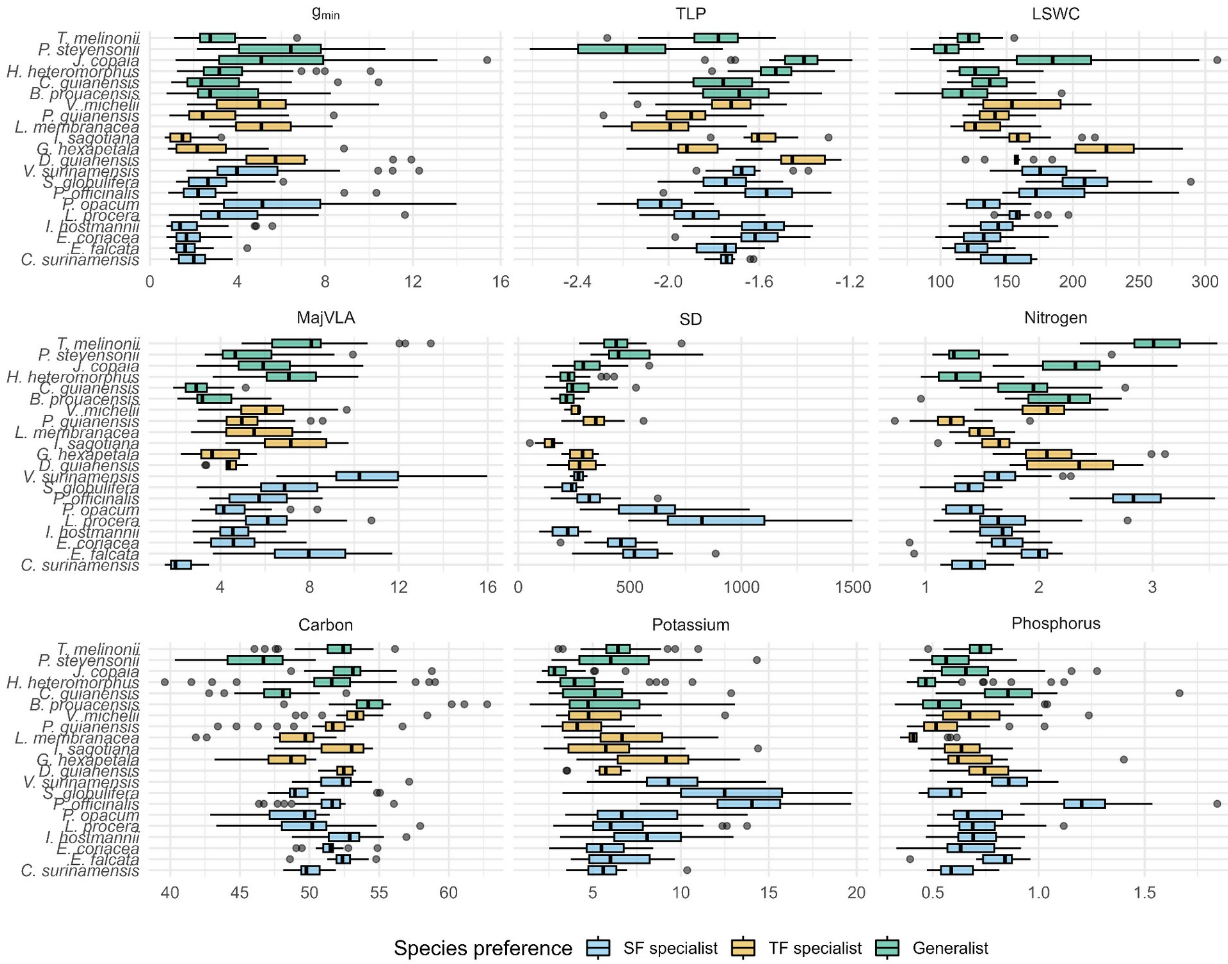

Figure S4: Variation of leaf trait values among species.

From top-left to bottom right, leaf traits include minimum leaf conductance (g_{min}, mmol.m^{-2} .s^{-1}), turgor loss point (TLP, MPa), leaf saturated water content (LSWC, g.g^{-1}), major vein density (MajVLA, cm.cm^{-2}), stomatal density (SD, mm^{-2}), leaf nitrogen (Nitrogen, %), leaf carbon (Carbon, %), leaf phosphorus content (Phosphorus, g.kg^{-1}) and leaf potassium (Potassium, g.kg^{-1}). Boxplots are colored by the median value. Habitats preference of the species (SF, seasonally flooded and TF, *Terra firme*, generalist) are indicated by different colors.

6

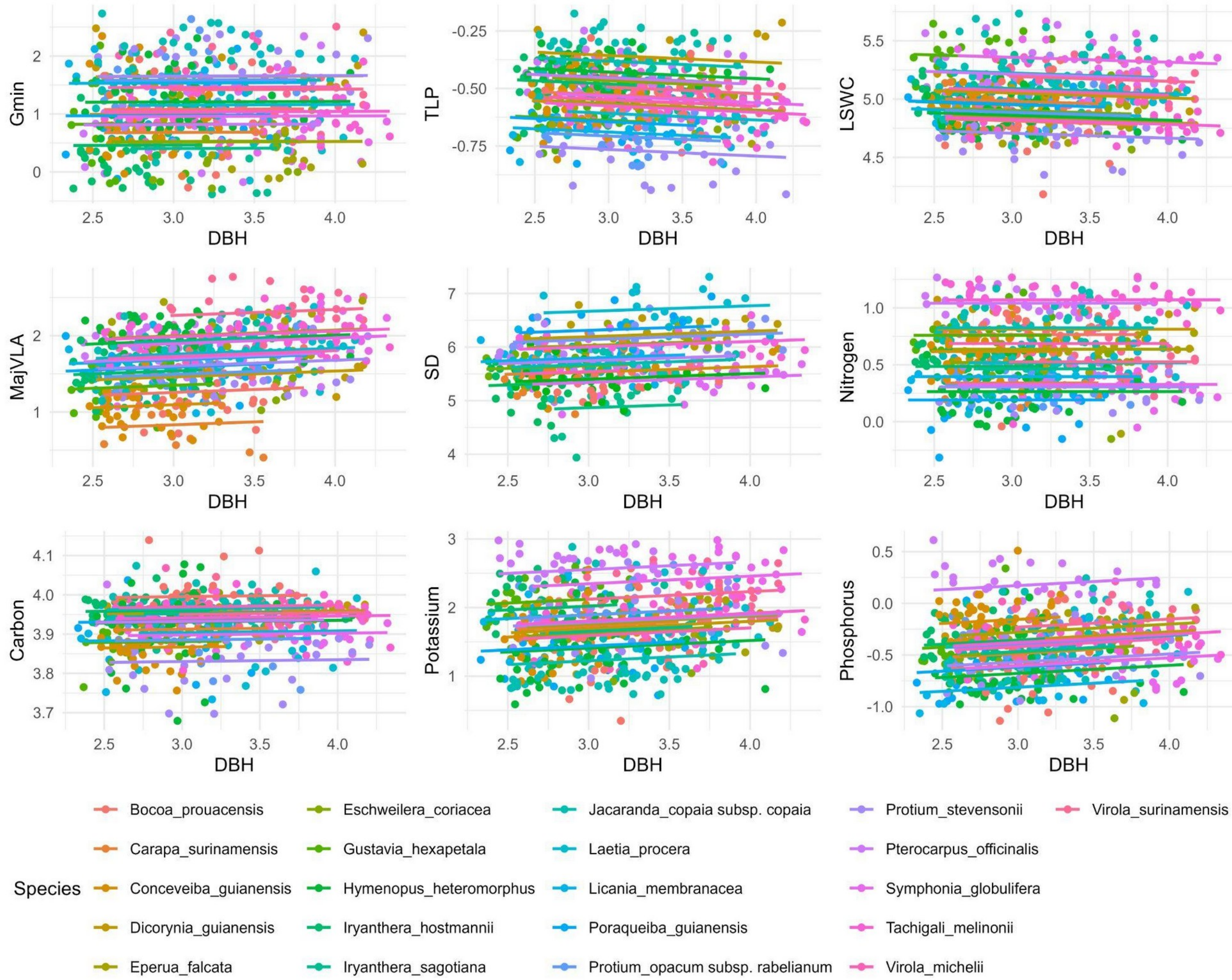

Figure S5: Scatter plots showing the relationship between DBH and leaf traits for 21 species. From top-left to bottom right, leaf traits include minimum leaf conductance (g_{min}, mmol.m^{-2}.s^{-1}), turgor loss point (TLP, MPa), leaf saturated water content (LSWC, g.g^{-1}), major vein density (MajVLA, cm.cm^{-2}), stomatal density (SD, mm^{-2}), leaf nitrogen (Nitrogen, %), leaf carbon (Carbon, %), leaf phosphorus content (Phosphorus, g.kg^{-1}) and leaf potassium (Potassium, g.kg^{-1}). Each point represents an individual observation, colored by its species identity. The lines represent the mixed-effect model fits with species as random effect.

7

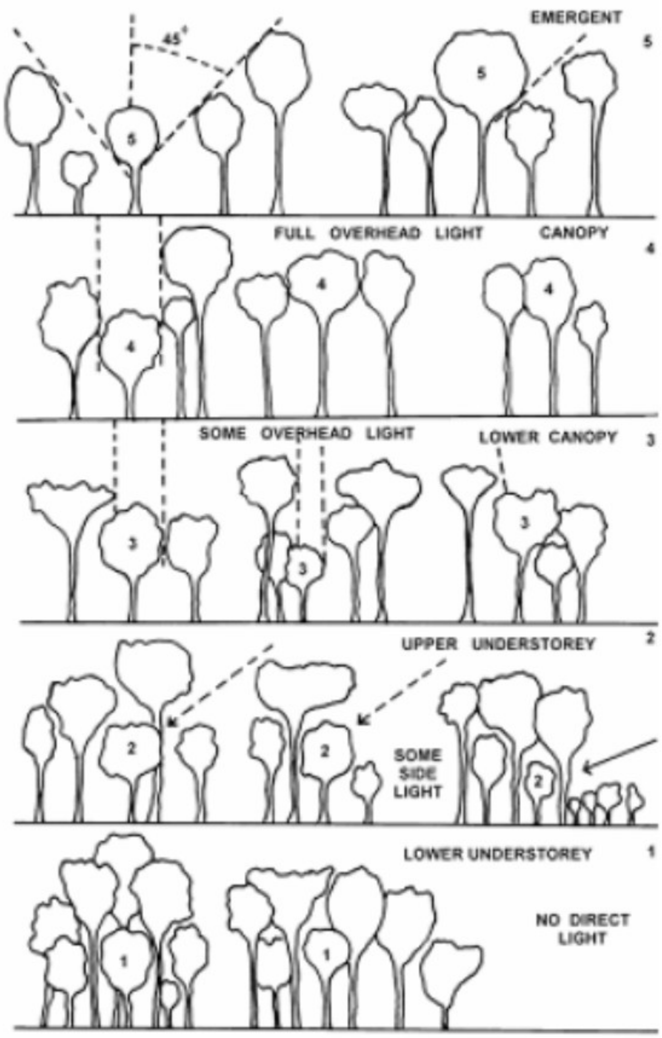

Figure S6: The Dawkins index classes of crown position. As suggested by Alder and Synnott 1992, **Index 1** : no direct light; **Index 2** : medium lateral light (crown lit only on one side); **Index 3**: vertical light (10-90 %); **Index 4**: full vertical light (>90 % of the vertical projection of the crown is exposed to vertical light), **Index 5**: the crown is completely exposed to vertical and lateral light in a 90° cone surrounding the crown.

8

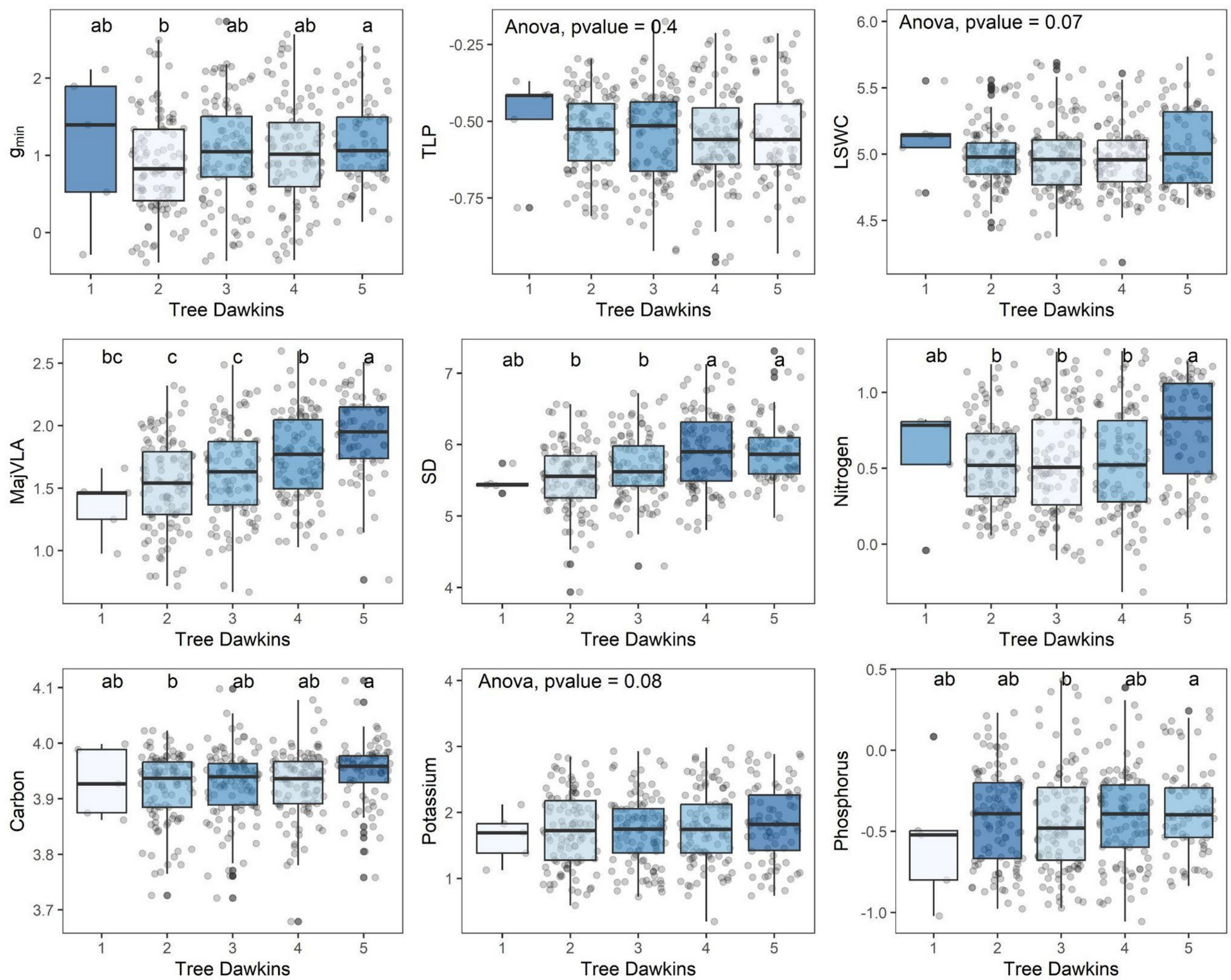

Figure S7: Trait variation according to the Dawkins index classes of crown position. Leaf traits are $\log_e$-transformed and include: minimum leaf conductance (g_{min}, mmol.m^{-2}.s^{-1}), turgor loss point (TLP, MPa), leaf saturated water content (LSWC, g.g^{-1}), major vein density (MajVLA, cm.cm^{-2}), stomatal density (SD, mm^{-2}), leaf nitrogen (Nitrogen, %), leaf carbon (Carbon, %), leaf phosphorus content (Phosphorus, g.kg^{-1}) and leaf potassium (Potassium, g.kg^{-1}). Boxplots are colored by the median value. Analysis was carried out by one-way ANOVA followed by Tukey's post hoc test.

9

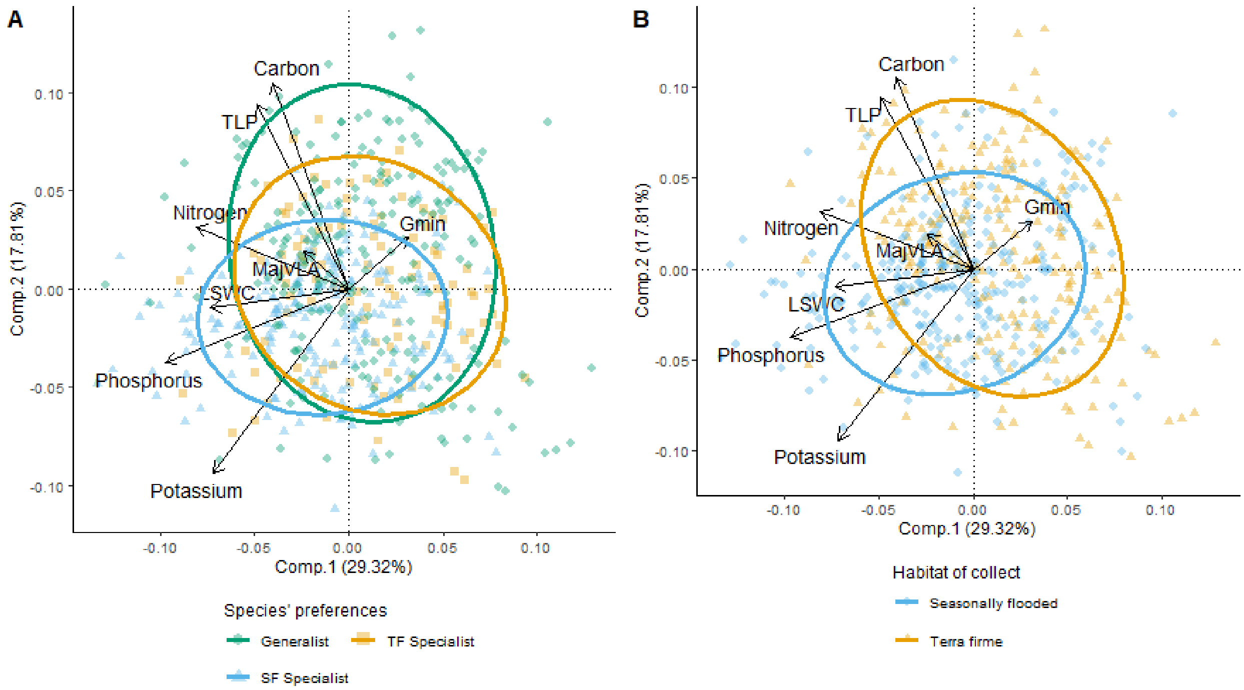

Figure S8: Principal components analysis (PCA) among eight leaf traits for 552 trees belonging to 21 studied species (n=552): leaf carbon content (Carbon, %), minimum leaf conductance (g_{min}, mmol.m-2.s-1), leaf potassium content (Potassium, g.kg-1), leaf saturated water content (LSWC, g.g-1), major vein density (MajVLA, cm.cm-2), leaf nitrogen content (Nitrogen, %), leaf phosphorus content (Phosphorus, g.kg-1) and leaf turgor loss point (TLP, MPa). Individuals are colored according to (A) their preferences, green for generalist species, blue for seasonally flooded specialists, and brown for *terra firme* specialists, (B) the habitat of collect where the tree was sampled, blue for seasonally flooded habitat, and brown for *terra firme* habitat. Confidence intervals ellipses were computed at 85 % around habitat preference.

10

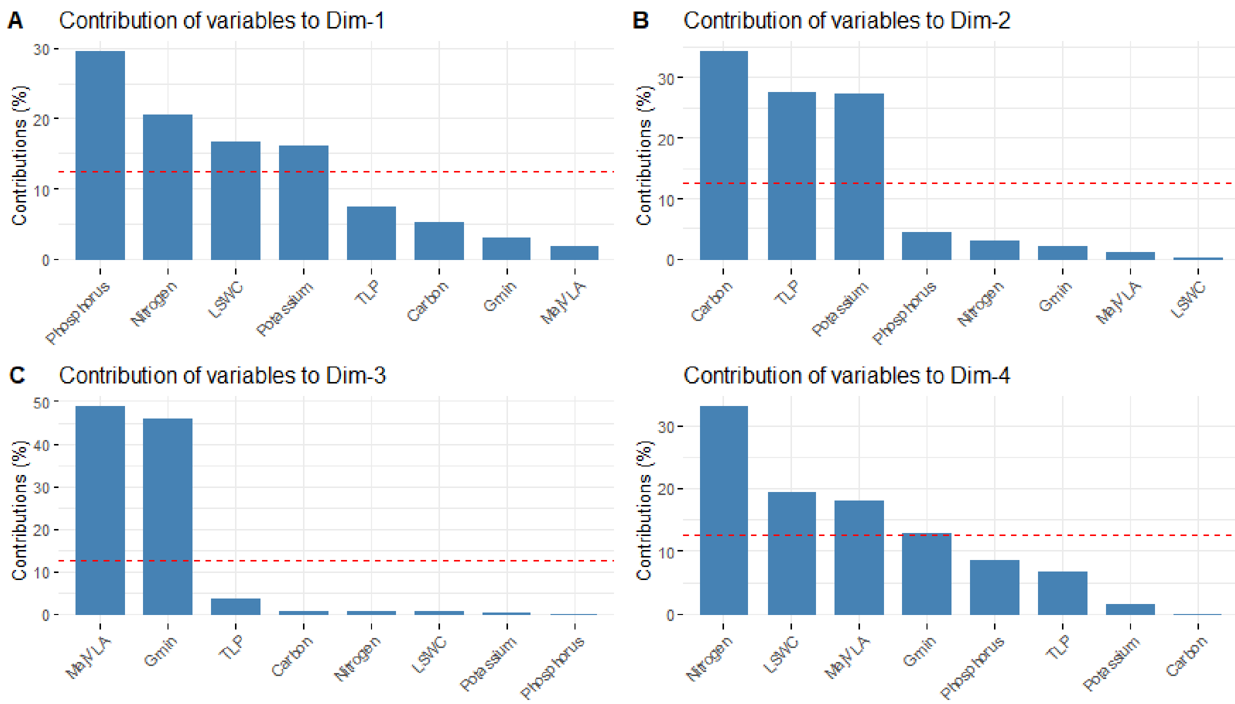

Figure S9: Trait contributions to first four principal component axes among leaf traits.

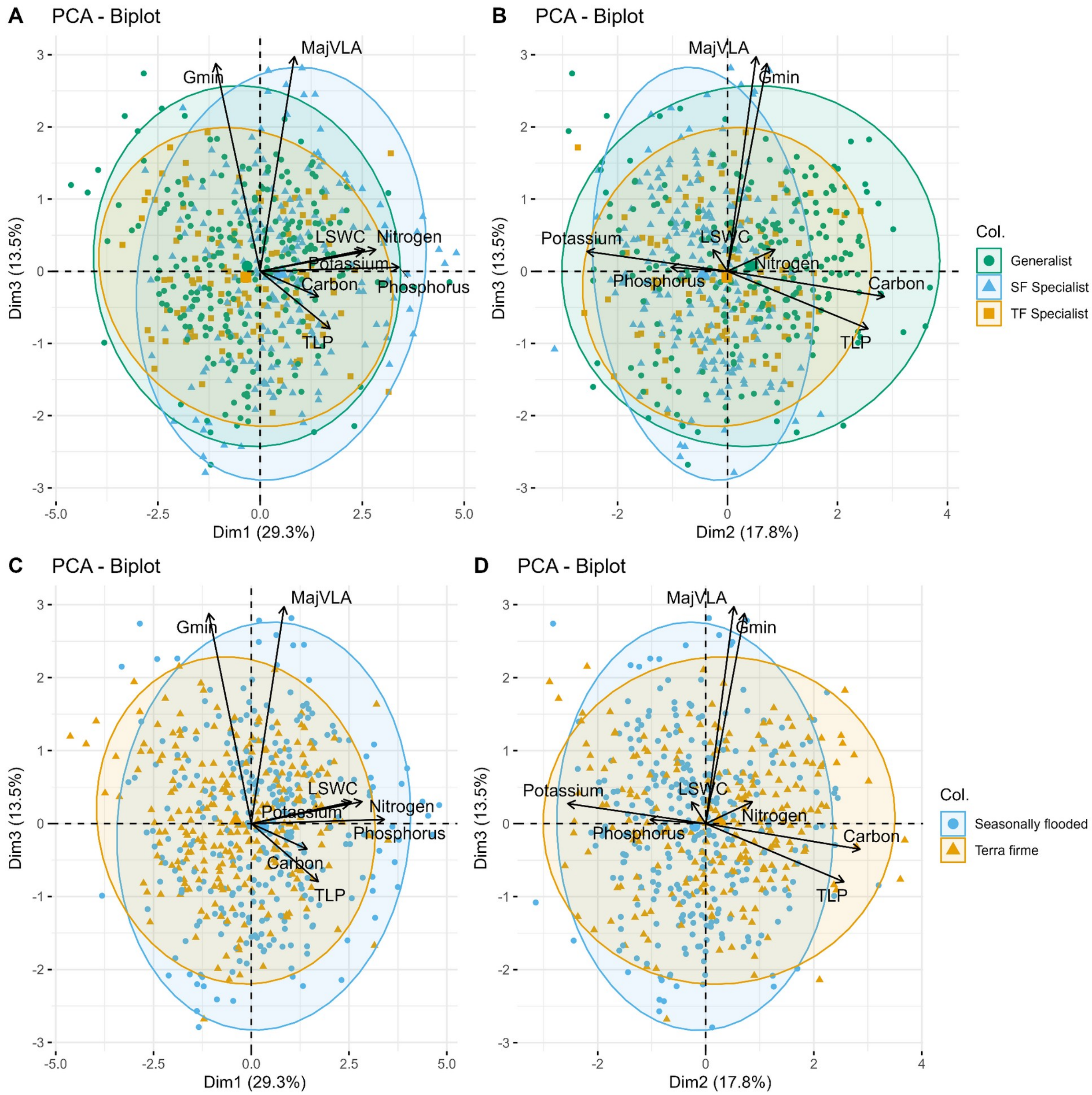

Figure S10: Principal components analysis with the third axis.

PCA among eight leaf traits for 552 trees belonging to 21 studied species (n=552).

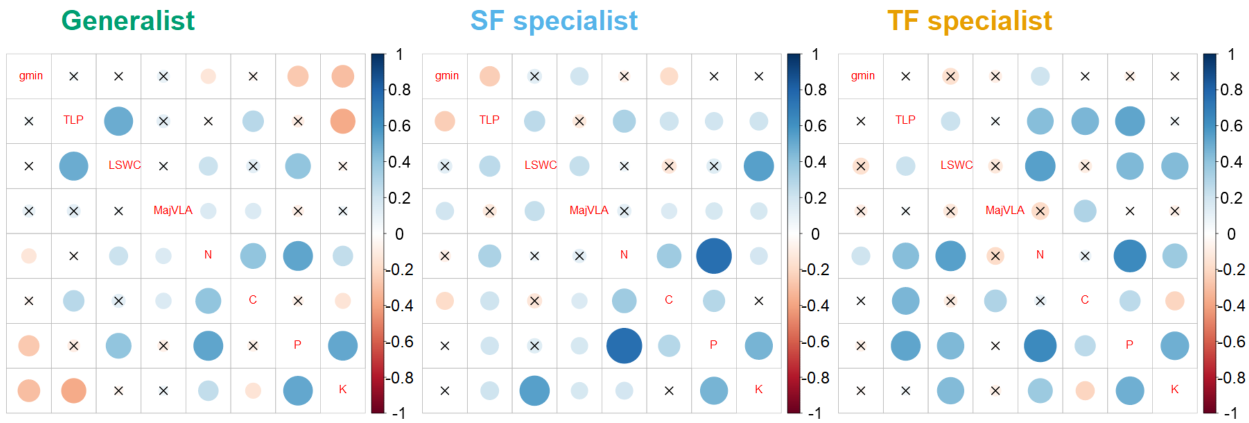

Figure S11: Spearman correlation coefficients among leaf traits for each category of species preference.

Non-significant correlations are crossed. Pairwise tables of the correlation coefficients and of the associated p-values are shown in Table S5. Leaf traits for the 21 studied species (n=552) divide among species preference include: minimum leaf conductance (g_{min}, mmol.m^{-2}.s^{-1}), turgor loss point (TLP, MPa), leaf saturated water content (LSWC, g.g^{-1}), major vein density (MajVLA, cm.cm^{-2}), leaf nitrogen content (N, %), leaf carbon content (C, %), leaf phosphorus content (P, g.kg^{-1}) and leaf potassium content (K, g.kg^{-1}).

13

Table S1. Sampling sites supplementary information.

Summary of sampling site information

Study site	Plot	Area (ha)	Number of trees	UTMZone	Latitude	Longitude
Paracou	6	6.25	40	22	5.27	-52.93
Paracou	11	6.25	20	22	5.25	-52.93
Paracou	13	6.25	44	22	5.27	-52.94
Paracou	14	6.25	56	22	5.27	-52.93
Paracou	15	6.25	46	22	5.28	-52.93
Paracou	16	25	20	22	5.26	-52.94
Bafog	2	4	25	22	5.48	-54.00
Bafog	3	4	79	22	5.49	-53.99
Bafog	4	4	1	22	5.49	-53.99
Bafog	5	4	76	22	5.46	-53.89
Kaw	Montagne de Kaw	6.25	46	22	4.56	-52.20
Kaw	Réserve Naturelle Régionale Trésor	1	20	22	4.61	-52.28
Kaw	Crique Gabrielle	Out of plot	14	22	4.72	-52.28
Kaw	Waiki Village	Out of plot	10	22	4.74	-52.32
Kaw	OutPlot1	Out of plot	26	22	4.72	-52.30
Kaw	OutPlot2	Out of plot	29	22	4.68	-52.36

14

Table S2. Individuals per species collected in the three forest sites.

Individuals per species collected on the 3 sites

Family	Genus	Species	Paracou	Bafog	Kaw	Total
Fabaceae	*Bocoa*	*prouacensis*	15	10	3	28
Meliaceae	*Carapa*	*surinamensis*	10	1	0	11
Euphorbiaceae	*Conceveiba*	*guianensis*	20	16	0	36
Fabaceae	*Dicorynia*	*guianensis*	6	6	0	12
Fabaceae	*Eperua*	*falcata*	10	0	10	20
Lecythidaceae	*Eschweilera*	*coriacea*	10	10	0	20
Lecythidaceae	*Gustavia*	*hexapetala*	5	9	5	19
Chrysobalanaceae	*Hymenopus*	*heteromorphus*	22	14	8	44
Myristicaceae	*Iryanthera*	*hostmannii*	9	10	10	29
Myristicaceae	*Iryanthera*	*sagotiana*	5	5	9	19
Bignoniaceae	*Jacaranda*	*copaia subsp. copaia*	20	13	15	48
Salicaceae	*Laetia*	*procera*	9	10	10	29
Chrysobalanaceae	*Licania*	*membranacea*	5	4	5	14
Metteniusaceae	*Poraqueiba*	*guianensis*	11	10	10	31
Burseraceae	*Protium*	*opacum subsp. rabelianum*	10	0	11	21
Burseraceae	*Protium*	*stevensonii*	12	12	1	25
Fabaceae	*Pterocarpus*	*officinalis*	10	10	10	30
Clusiaceae	*Symphonia*	*globulifera*	10	9	10	29
Fabaceae	*Tachigali*	*melinonii*	16	15	13	44
Myristicaceae	*Virola*	*michelii*	5	7	6	18
Myristicaceae	*Virola*	*surinamensis*	6	10	9	25
Total	-	-	226	181	145	552

15

Table S3: Species chosen for the study according to the Indicator values (*Indval*) within each habitat in French Guiana.

Family	Genus	Species	Indval_SF	Indval_TF	P.value	Type
Fabaceae	*Bocoa*	*prouacensis*	0.001	0.041	0.0056	Generalist
Euphorbiaceae	*Conceveiba*	*guianensis*	0.222	0.277	0.0020	Generalist
Chrysobalanaceae	*Hymenopus*	*heteromorphus*	0.119	0.067	0.0026	Generalist
Bignoniaceae	*Jacaranda*	*copaia subsp. copaia*	0.001	0.087	0.0020	Generalist
Burseraceae	*Protium*	*stevensonii*	0.000	0.091	0.0012	Generalist
Fabaceae	*Tachigali*	*melinonii*	0.137	0.009	0.0010	Generalist
Lecythidaceae	*Eschweilera*	*coriacea*	0.286	0.160	0.0006	SF specialist
Meliaceae	*Carapa*	*surinamensis*	0.472	0.190	0.0002	SF specialist
Fabaceae	*Eperua*	*falcata*	0.261	0.024	0.0012	SF specialist
Myristicaceae	*Iryanthera*	*hostmannii*	0.275	0.071	0.0002	SF specialist
Salicacea	*Laetia*	*procera*	0.252	0.023	0.0002	SF specialist
Burseraceae	*Protium*	*opacum subsp. rabelianum*	0.383	0.127	0.0004	SF specialist
Fabaceae	*Pterocarpus*	*officinalis*	0.796	0.000	0.0002	SF specialist
Clusiaceae	*Symphonia*	*globulifera*	0.541	0.000	0.0002	SF specialist
Myristicaceae	*Virola*	*surinamensis*	0.440	0.001	0.0002	SF specialist
Myristicaceae	*Virola*	*michelii*	0.043	0.278	0.0004	TF specialist
Fabaceae	*Dicorynia*	*guianensis*	0.046	0.413	0.0002	TF specialist
Lecythidaceae	*Gustavia*	*hexapetala*	0.079	0.399	0.0002	TF specialist
Myristicaceae	*Iryanthera*	*sagotiana*	0.020	0.347	0.0002	TF specialist
Chrysobalanaceae	*Licania*	*membranacea*	0.001	0.388	0.0002	TF specialist
Metteniusaceae	*Poraqueiba*	*guianensis*	0.011	0.293	0.0002	TF specialist

Notes: Type: habitat preference of the species; SF Habitat: Seasonally flooded habitat; TF Habitat: Terra firme *habitat; p-value for the test of Indval differences among habitats. Table adapted from Baraloto et al. 2021.*

16

Table S4: Permutational Manova analysis and post-hoc pairwise analysis.

A. Species' preferences

Df	SumsOfSqs	F.Model	R2	p.value	p.adjusted	sig	pairs
1	17.700	16.944	0.050	0.001	0.003	*	TF specialist vs SF specialist
1	8.896	8.513	0.025	0.001	0.003	*	TF specialist vs generalist
1	52.045	48.803	0.100	0.001	0.003	*	SF specialist vs generalist

B. Habitat of collect

Df	SumsOfSqs	F.Model	R2	p.value	p.adjusted	sig	pairs
1	26.493	23.92	0.042	0.001	0.001	**	TF habitat vs SF habitat

17

Table S5: Pairwise tables for the spearman correlation.

Coefficients (A,B,C) of leaf traits for the 21 studied species (n=552) according to species preferences. Leaf traits include: minimum leaf conductance (g_{min}, mmol.m^{-2}.s^{-1}), turgor loss point (TLP, MPa), leaf saturated water content (LSWC, g.g^{-1}), major vein density (MajVLA, cm.cm^{-2}), nitrogen content (N, %), carbon content (C, %), phosphorus content (P, g.kg^{-1}) and potassium content (K, g.kg^{-1}). Bold values indicate significant associated p-values.

A. Pairwise table of the correlation coefficients for generalists

	gmin	TLP	LSWC	MajVLA	N	C	P	K
gmin	**1**	0.05	-0.01	0.1	**-0.14**	-0.05	**-0.26**	**-0.3**
TLP	0.05	**1**	**0.5**	0.11	-0.03	**0.27**	-0.09	**-0.37**
LSWC	-0.01	**0.5**	**1**	0.03	**0.21**	0.11	**0.39**	-0.06
MajVLA	0.1	0.11	0.03	**1**	**0.15**	**0.15**	-0.08	0.06
N	**-0.14**	-0.03	**0.21**	**0.15**	**1**	**0.39**	**0.53**	**0.25**
C	-0.05	**0.27**	0.11	**0.15**	**0.39**	**1**	-0.08	**-0.15**
P	**-0.26**	-0.09	**0.39**	-0.08	**0.53**	-0.08	**1**	**0.52**
K	**-0.3**	**-0.37**	-0.06	0.06	**0.25**	**-0.15**	**0.52**	**1**

B. Pairwise table of the correlation coefficients for SF specialists

	gmin	TLP	LSWC	MajVLA	N	C	P	K
gmin	**1**	**-0.24**	0.13	**0.2**	-0.08	**-0.19**	0.02	0.02
TLP	**-0.24**	**1**	**0.26**	-0.11	**0.31**	**0.21**	**0.2**	**0.2**
LSWC	0.13	**0.26**	**1**	**0.24**	0.07	-0.13	0.13	**0.54**
MajVLA	**0.2**	-0.11	**0.24**	**1**	0.12	**0.15**	**0.18**	**0.18**
N	-0.08	**0.31**	0.07	0.12	**1**	**0.36**	**0.76**	**0.19**
C	**-0.19**	**0.21**	-0.13	**0.15**	**0.36**	**1**	**0.29**	-0.02
P	0.02	**0.2**	0.13	**0.18**	**0.76**	**0.29**	**1**	**0.46**
K	0.02	**0.2**	**0.54**	**0.18**	**0.19**	-0.02	**0.46**	**1**

C. Pairwise table of the correlation coefficients for TF specialists

	gmin	TLP	LSWC	MajVLA	N	C	P	K
gmin	**1**	-0.02	-0.17	-0.1	**0.21**	0.02	-0.08	-0.04
TLP	-0.02	**1**	**0.22**	0.04	**0.42**	**0.45**	**0.53**	0.06
LSWC	-0.17	**0.22**	**1**	-0.12	**0.55**	-0.11	**0.44**	**0.44**
MajVLA	-0.1	0.04	-0.12	**1**	-0.18	**0.3**	-0.03	-0.08
N	**0.21**	**0.42**	**0.55**	-0.18	**1**	0.09	**0.64**	**0.37**
C	0.02	**0.45**	-0.11	**0.3**	0.09	**1**	**0.26**	**-0.21**
P	-0.08	**0.53**	**0.44**	-0.03	**0.64**	**0.26**	**1**	**0.48**
K	-0.04	0.06	**0.44**	-0.08	**0.37**	**-0.21**	**0.48**	**1**

18

Table S6: Model summary for each trait from linear mixed effect model (equation 1). For the categorical variable 'Forest', BAFOG is set as the reference category and its effects are captured in the intercept of the model.

	Value	Std.Error	DF	t-value	p-value
Gmin.(Intercept)	1.688	0.242	528	6.968	0.000
Gmin.TWI	-0.155	0.108	528	-1.440	0.150
Gmin.ForestKaw	-0.336	0.057	528	-5.941	0.000
Gmin.ForestParacou	-0.489	0.050	528	-9.865	0.000
TLP.(Intercept)	-0.612	0.048	528	-12.784	0.000
TLP.TWI	0.043	0.020	528	2.139	0.033
TLP.ForestKaw	-0.020	0.011	528	-1.929	0.054
TLP.ForestParacou	-0.052	0.009	528	-5.617	0.000
LSWC.(Intercept)	4.926	0.085	528	58.166	0.000
LSWC.TWI	0.041	0.036	528	1.124	0.261
LSWC.ForestKaw	0.033	0.019	528	1.755	0.080
LSWC.ForestParacou	-0.045	0.017	528	-2.734	0.006
MajVLA.(Intercept)	1.608	0.146	528	11.004	0.000
MajVLA.TWI	0.011	0.061	528	0.183	0.855
MajVLA.ForestKaw	0.100	0.032	528	3.142	0.002
MajVLA.ForestParacou	-0.023	0.028	528	-0.840	0.401
SD.(Intercept)	5.941	0.176	369	33.688	0.000
SD.TWI	-0.116	0.070	369	-1.644	0.101
SD.ForestKaw	0.251	0.038	369	6.684	0.000
SD.ForestParacou	-0.059	0.034	369	-1.747	0.081
Nitrogen.(Intercept)	0.675	0.093	528	7.253	0.000
Nitrogen.TWI	-0.018	0.037	528	-0.478	0.633
Nitrogen.ForestKaw	-0.044	0.019	528	-2.292	0.022
Nitrogen.ForestParacou	-0.148	0.017	528	-8.848	0.000
Carbon.(Intercept)	3.931	0.024	528	164.175	0.000
Carbon.TWI	-0.002	0.011	528	-0.211	0.833
Carbon.ForestKaw	0.000	0.006	528	-0.014	0.989
Carbon.ForestParacou	0.000	0.005	528	0.075	0.941
Phosphorus.(Intercept)	-0.538	0.110	528	-4.912	0.000
Phosphorus.TWI	0.072	0.048	528	1.496	0.135
Phosphorus.ForestKaw	0.046	0.025	528	1.833	0.067
Phosphorus.ForestParacou	-0.075	0.022	528	-3.409	0.001
Potassium.(Intercept)	1.192	0.189	528	6.295	0.000
Potassium.TWI	0.283	0.085	528	3.331	0.001
Potassium.ForestKaw	0.099	0.045	528	2.211	0.027
Potassium.ForestParacou	0.015	0.039	528	0.378	0.706

19

Table S7: Tree height and tree DBH ranges.

Name	range_DBH	range_TreeHeight
Bocoa_prouacensis	[13.1;45]	[12;35]
Carapa_surinamensis	[13.1;35]	[14;26]
Conceveiba_guianensis	[11.9;26.6]	[7;25]
Dicorynia_guianensis	[12.4;65]	[8;40]
Eperua_falcata	[13.7;64.7]	[11;30]
Eschweilera_coriacea	[13.7;43.3]	[8;30]
Gustavia_hexapetala	[10.7;25.9]	[10;20]
Hymenopus_heteromorphus	[11.6;60]	[12;30]
Iryanthera_hostmannii	[10.8;24]	[7;18]
Iryanthera_sagotiana	[15.7;38.2]	[13;26]
Jacaranda_copaia subsp. copaia	[12.4;50]	[8;35]
Laetia_procera	[15.2;61.8]	[14;34]
Licania_membranacea	[10.5;46]	[12;32]
Poraqueiba_guianensis	[10.3;36.5]	[10;27]
Protium_opacum subsp. rabelianum	[13.1;43]	[12;28]
Protium_stevensonii	[12.6;66.9]	[14;32]
Pterocarpus_officinalis	[11.5;50]	[9;38]
Symphonia_globulifera	[14.2;75.2]	[12;39]
Tachigali_melinonii	[13.1;76.6]	[13;40]
Virola_michelii	[13.4;55]	[8;32]
Virola_surinamensis	[19.7;65]	[12;37]

20

Appendix S1: Network analysis

Material and Methods

We explored another approach to the detection of trait coordination by using network analysis. To characterize trait coordination, statistically significant correlations among traits were graphically represented using trait covariation networks with the Igraph package (Csardi & Nepusz, 2006). Traits were represented as nodes and their spearman correlation as the edges linking them. As an indicator of network centrality the weighted degree (Dw), defined as the sum of all significant coefficients of correlation of a node, was calculated for each trait.. All traits were $\log_e$-transformed to improve the linearity of relationships.

Results

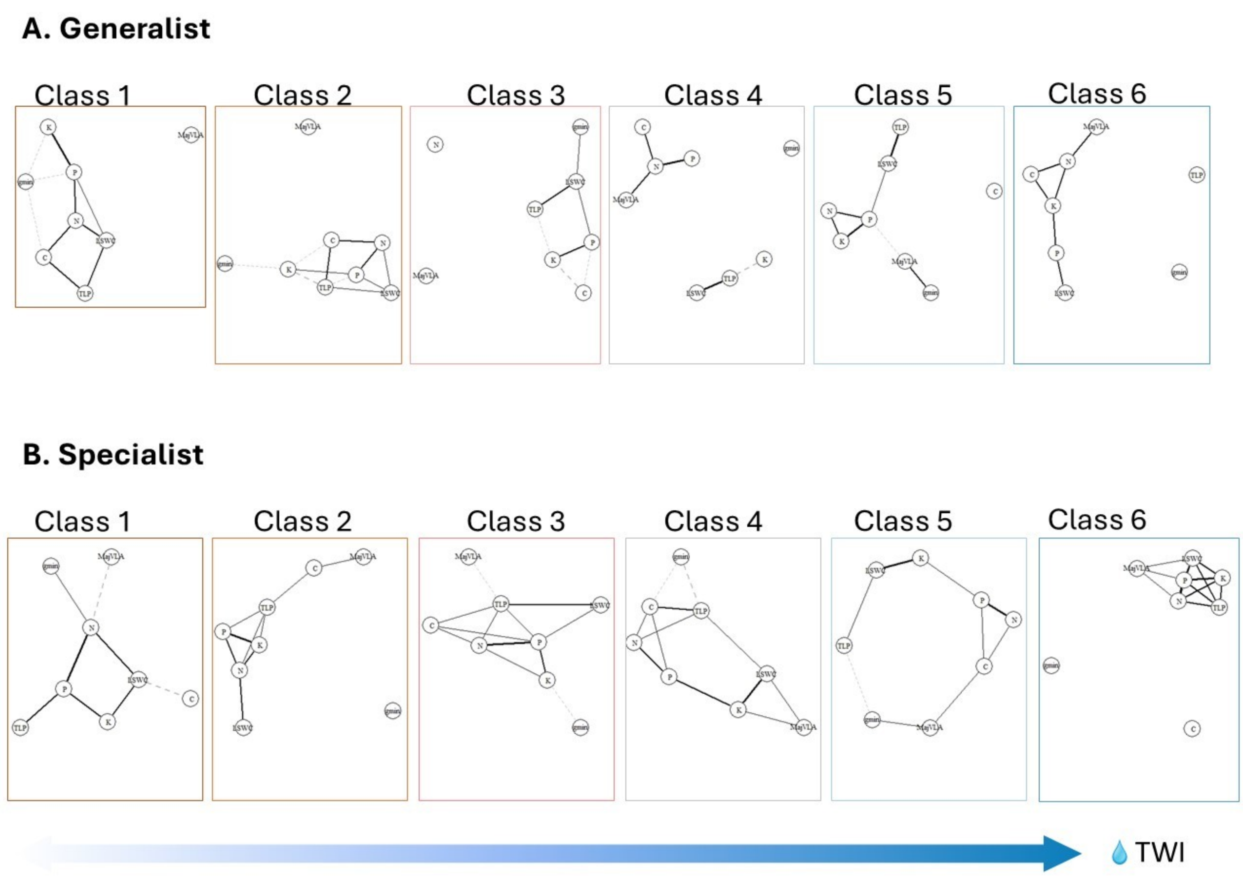

Figure 1: Trait correlation networks for generalist species (a) and specialist species (b) along the topographic wetness index (TWI). Solid black and grey dashed edges show positive and negative correlations, respectively. Correlation strength is represented by edge thickness. Only significant correlations are shown (P < 0.05). All traits were $\log_e$-transformed before analysis. Leaf traits include:

21

Carbon (Carbon, %), minimum leaf conductance (g_{min}, mmol.m^{-2}.s^{-1}), Potassium (Potassium, g.kg^{-1}), leaf saturated water content (LSWC, g.g^{-1}), major vein density (MajVLA, cm.cm^{-2}), nitrogen content (Nitrogen, %), Phosphorus (Phosphorus, g.kg^{-1}) and turgor loss point (TLP, MPa). All variables were log_e-transformed. TI > 0 represents an increase in trait coordination while TI <0 represents a decrease in trait coordination.

Table 1: Weighted degree of trait networks for generalists (a) and specialist (b) species along the topographic wetness index (TWI).

A. Generalist

Trait	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
gmin	5.15	1.50	1.75	0.00	2.40	0.00
TLP	5.10	8.50	4.15	6.00	3.30	0.00
LSWC	6.90	4.75	5.55	3.45	5.20	2.45
MajVLA	0.00	0.00	0.00	2.50	4.35	2.35
N	7.25	6.85	0.00	8.40	5.10	7.45
C	6.15	6.80	4.00	2.35	0.00	5.45
P	9.85	7.65	5.85	3.55	9.90	4.95
K	5.20	7.15	6.60	2.55	6.55	7.85
Total	45.60	43.20	27.90	28.80	36.80	30.50

B. Specialist

Trait	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
gmin	1.90	0.00	1.40	4.05	2.80	0.00
TLP	2.55	6.80	8.85	7.95	2.55	8.85
LSWC	7.50	2.05	3.55	6.50	4.30	11.15
MajVLA	2.20	1.70	1.60	3.25	2.70	5.45
N	9.90	9.50	8.45	6.15	5.65	13.80
C	2.30	3.55	5.25	7.15	5.00	0.00
P	8.05	7.80	10.80	6.50	7.15	14.55
K	4.90	7.20	5.80	7.35	4.45	11.80
Total	39.30	38.60	45.70	48.90	34.60	65.60

Trait coordination differed between generalist and specialist species along TWI (Fig. 1). For generalists, Dw decreased from class 1 to 4, then increased in class 5 (Dw = 36.8), and decreased again in class 6 (Dw = 30.5). Generally, we found more correlations between traits for generalists in TF habitats (in class 1 and 2) and in SF habitat (in class 5 and 6) than in the slope (in class 3 and 4). For generalists, the most important node when considering the weighted degree, by increasing class, was P (in class 1), TLP (in class 2), K (in class 3), N (in class 4), P (in class 5) and K (in class 6). Surprisingly, g_{min} and majVLA were the least connected traits for generalist species along TWI.

For specialist species, Dw was higher for class 6 (Dw = 65.6) than in class 1 (Dw = 39.3). DW increases from class 1 to 6, but we note a lower DW for class 5 (Dw = 34.6). The most important

22

node when considering the weighted degree, by increasing class, was N (in class 1 and 2), P (in class 3), TLP (in class 4), P (in class 5 and 6). The network in class 6 is very compact (Fig. 1).

23