Electronic supplementary materials

Title: Divergent strategies of epiphytic pteridophytes and angiosperms responding to dry and wet seasons in a tropical cloud forest

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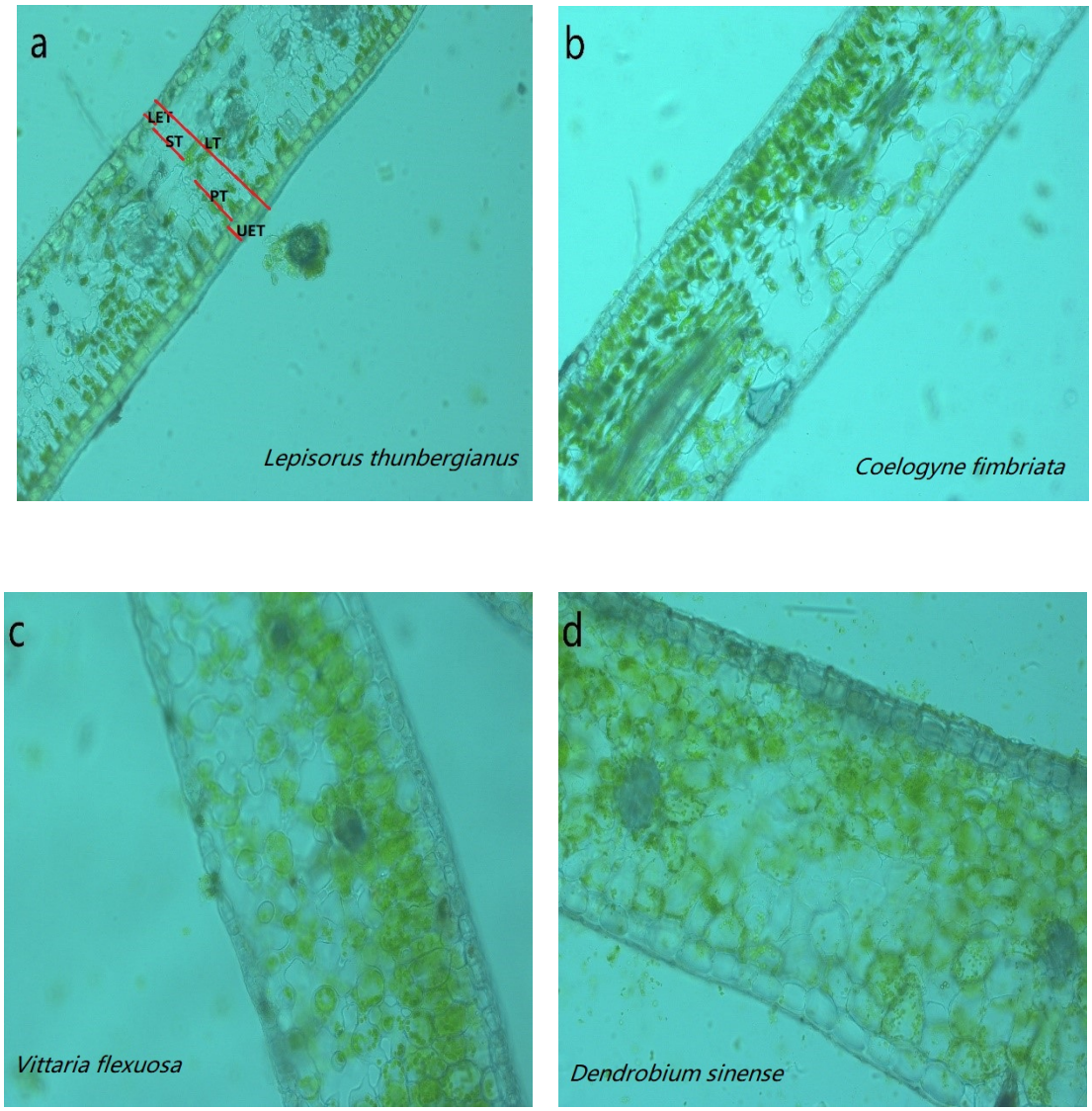
Table S1 Eleven epiphytic pteridophytes species and nineteen epiphytic angiosperm species in the tropical cloud forest plots of the Bawangling Nature Reserve (BNR).

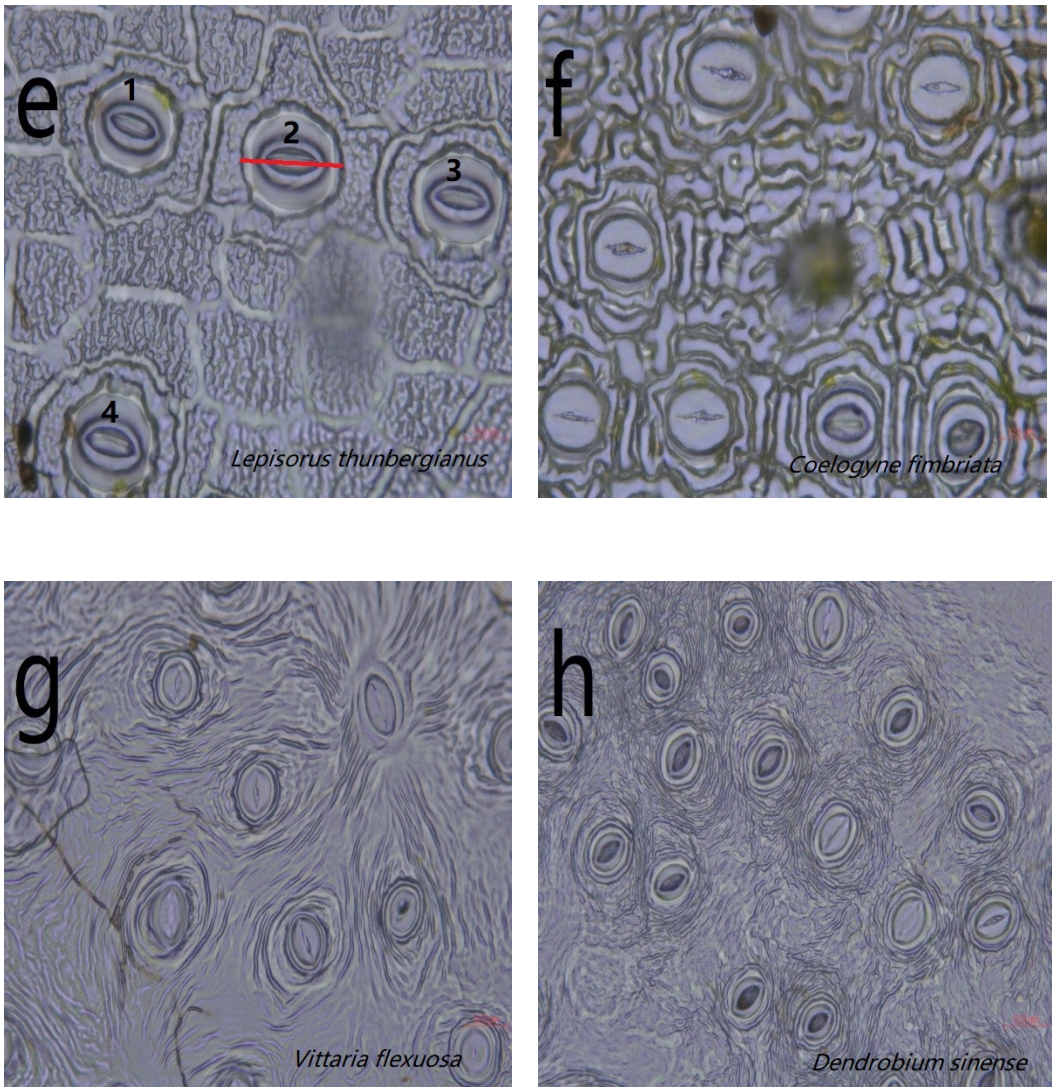
Species	Genus	Family	Phylum
Lepidogrammitis rostrate	Lepidogrammitis	Polypodiaceae	Pteridophyta
Lepisorus thunbergianus	Lepisorus	Polypodiaceae	Pteridophyta
Pyrrosia eberhardtii	Pyrrosia	Polypodiaceae	Pteridophyta
Pseudodrynaria coronans	Pseudodrynaria	Polypodiaceae	Pteridophyta
Davallia mariesii	Davallia	Davalliaceae	Pteridophyta
Humata repens	Humata	Davalliaceae	Pteridophyta
Selaginella tamariscina	Selaginella	Selaginellaceae	Pteridophyta
Phlegmariurus phlegmaria	Phlegmariurus	Lycopodiaceae	Pteridophyta
Neottopteris nidus	Neottopteris	Aspleniaceae	Pteridophyta
Elaphoglossum conforme	Elaphoglossum	Dryopteridaceae	Pteridophyta
Vittaria flexuosa	Vittaria	Pteridaceae	Pteridophyta
Cleisostoma paniculatum	Cleisostoma	Orchidaceae	Angiosperm
Bulbophyllum ambrosia	Bulbophyllum	Orchidaceae	Angiosperm
Bulbophyllum kwangtungense	Bulbophyllum	Orchidaceae	Angiosperm
Bulbophyllum retusiusculum	Bulbophyllum	Orchidaceae	Angiosperm
Bulbophyllum ledungense	Bulbophyllum	Orchidaceae	Angiosperm
Dendrobium williamsonii	Dendrobium	Orchidaceae	Angiosperm
Dendrobium sinense	Dendrobium	Orchidaceae	Angiosperm
Dendrobium densiflorum	Dendrobium	Orchidaceae	Angiosperm
Epigeneium clemensiae	Epigeneium	Orchidaceae	Angiosperm
Coelogyne fimbriata	Coelogyne	Orchidaceae	Angiosperm
Eria thao	Eria	Orchidaceae	Angiosperm
Eria quinquelamellosa	Eria	Orchidaceae	Angiosperm
Eria obvia	Eria	Orchidaceae	Angiosperm
Schoenorchis gemmata	Schoenorchis	Orchidaceae	Angiosperm
Liparis bootanensis	Liparis	Orchidaceae	Angiosperm
Pholidota yunnanensis	Pholidota	Orchidaceae	Angiosperm
Pholidota chinensis	Pholidota	Orchidaceae	Angiosperm
Hoya lancilimba	Hoya	Apocynaceae	Angiosperm
Psychotria serpens	Psychotria	Rubiaceae	Angiosperm

Table S2 Principal component analysis (PCA) for all species, epiphytic pteridophyte species and epiphytic angiosperm species, based on 14 functional traits of 30 species. PC loadings and the percentage of variance explained by the first two PCs are reported.

Functional traits	All species		Epiphytic angiosperms		Epiphytic pteridophytes	
	PCA1	PCA2	PCA1	PCA2	PCA1	PCA2
Leaf dry weight (LDW)	0.23	-0.14	-0.08	0.17	0.11	0.09
Leaf water content (LWC)	0.10	-0.75	-0.03	0.62	0.08	0.47
Specific leaf area (SLA)	-0.05	-0.61	-0.06	0.06	-0.09	0.87
Chlorophyll content (CHL)	0.32	0.27	-0.10	0.36	0.54	-0.35
Stomatal length (SL)	0.65	0.49	0.73	-0.41	0.87	0.21
stomatal density (SD)	0.52	0.37	0.61	-0.21	0.49	0.53
stomatal index (SI)	0.68	0.54	0.84	-0.33	0.72	0.37
Upper epidermis thickness (UET)	0.71	-0.12	0.81	-0.29	0.77	0.18
Palisade tissue thickness (PT)	0.77	-0.14	0.75	0.42	0.77	-0.42
Spongy tissue thickness (ST)	0.75	-0.14	0.48	0.76	0.86	-0.32
Lower epidermis thickness (LET)	0.73	-0.19	0.81	-0.16	0.82	-0.05
Leaf thickness (LT)	0.84	-0.23	0.68	0.67	0.89	-0.36
Leaf density (LD)	-0.52	0.52	-0.38	-0.35	-0.74	-0.54
Palisade tissue /Spongy tissue (P/S)	-0.34	0.07	0.27	-0.50	-0.67	0.04

Fig. S1. Leaf anatomical and stomatal structure of epiphytic pteridophytes species and epiphytic angiosperms species across dry and wet seasons. (a) anatomical structure of epiphytic pteridophytes species in dry season; (b) anatomical structure of epiphytic angiosperms species in dry season; (c) anatomical structure epiphytic pteridophytes species in wet season; (d) anatomical structure of epiphytic angiosperms species in wet season; (e) stomatal structure of epiphytic pteridophytes species in dry season; (f) stomatal structure of epiphytic angiosperms species in dry season; (g) stomatal structure of epiphytic pteridophytes species in wet season; (h) stomatal structure of epiphytic angiosperms species in wet season. UET: upper epidermis thickness; PT: palisade tissue thickness; ST: spongy tissue thickness; LET: lower epidermis thickness; LT: leaf thickness; SL: stomatal length; the number in the e is the number of stoma.

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Lepisorus thunbergianus
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Coelogyne fimbriata
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Vittaria flexuosa
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Dendrobium sinense