SUPPLEMENTAL APPENDIX 1. Morphology data matrix. Polymorphic states coded as follows: a=0/1; b=0/2; c=0/3; d=0/4; e=0/5; f=1/2; g=1/3; h=1/4; I=1/5; j=2/3; k=2/4; m=3/4; n=4/5; o=4/7; p=5/7; q=0/1/2; r=1/2/3; s=2/3/4; t=3/4/5; u=0/2/3; v=0/1/3; w=0/1/4; x=0/1/2/3; y=1/2/3/4. Missing or inapplicable data is denoted with a ?.

Character number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Moraceae																																						
Antiaris toxicaria	4	1	1	0	1	0	0	0	1	1	0	0	r	0	0	1	1	1	1	1	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	a
Antiaropsis decipiens	m	1	1	0	0	0	?	1	0	1	0	0	2	0	0	0	0	0	1	0	1	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0
Artocarpus altilis	4	1	1	0	0	0	1	0	0	0	0	0	g	0	1	0	0	1	1	1	1	0	0	1	0	0	1	1	0	1	0	0	1	1	0	1	0
Artocarpus heterophyllus	4	1	1	0	0	0	1	0	0	0	0	0	g	0	1	0	0	1	1	1	1	0	0	1	f	0	1	1	0	1	0	0	1	1	0	0	0
Artocarpus vrieseanus	4	1	1	0	0	0	1	0	0	0	0	0	g	0	1	0	0	1	1	1	1	0	0	1	1	0	1	1	0	1	0	0	0	0	0	0	0
Bagassa guianensis	4	1	1	0	0	0	1	0	0	0	1	0	g	0	0	0	1	1	1	1	1	0	0	1	0	0	?	1	0	1	0	1	0	2	1	1	j
Batocarpus amazonicus	4	1	0	0	0	1	0	a	0	0	0	0	r	0	1	0	0	1	1	0	1	0	0	1	0	0	?	1	0	1	0	0	0	0	0	0	c
Batocarpus costaricensis	4	1	0	0	0	1	0	a	0	0	0	0	r	0	1	0	0	1	1	0	1	0	0	1	1	0	1	1	0	1	0	0	0	0	0	0	1
Bleekrodea madagascariensis	3	1	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	1	0	1	0	1	0	0	0	0	a
Brosimum alicastrum	4	1	1	0	0	0	0	a	0	0	0	0	r	1	0	1	1	1	1	0	1	0	0	1	0	1	1	1	0	1	0	0	0	0	0	0	a
Brosimum guianense	m	1	1	0	0	0	0	a	0	0	0	0	r	1	0	1	1	1	1	0	1	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	a
Brosimum lactescens	4	1	1	0	0	0	0	a	0	0	0	0	r	1	a	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	0	0	0	0	0	0	0
Brosimum rubescens	4	1	1	0	0	0	0	a	0	0	0	0	r	1	0	1	1	1	1	0	1	0	0	1	0	0	1	1	0	1	2	0	1	0	0	0	0
Brosimum utile	4	1	1	0	0	0	0	a	0	0	0	0	r	1	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	2	0	1	0	0	0	0
Broussonetia papyrifera	4	1	a	a	0	0	0	a	1	0	0	0	f	0	0	1	0	1	1	0	1	0	0	1	1	0	1	1	0	0	0	0	0	1	0	1	2
Castilla elastica	4	1	1	0	0	1	0	1	a	1	0	0	r	0	1	0	0	1	1	0	1	0	0	1	1	0	1	0	0	1	2	0	1	0	0	0	1
Castilla ulei	4	1	1	0	0	1	0	1	a	1	0	0	r	0	1	0	0	1	1	0	1	0	0	1	?	?	?	0	0	1	2	0	1	0	0	0	1
Clarisia biflora	4	1	a	0	0	0	0	1	0	0	0	0	f	0	1	0	0	1	1	0	1	0	0	1	1	0	?	1	0	1	0	0	0	0	0	0	0
Clarisia ilicifolia	m	1	a	0	0	0	0	1	0	0	0	0	f	0	1	1	1	1	1	0	1	0	0	1	1	0	?	1	0	1	0	a	0	0	0	0	5
Dorstenia bahiensis	1	1	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	0	1	0	1	0	1	0	0	g
Dorstenia choconiana	1	1	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	3	0	0	?	0	1	0	1	0	1	0	1	0
Fatoua pilosa	1	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	0	0	?	?	0	1	0	0	0	0	b	0	g
Ficus asperula	3	1	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	0	0	1	1	0	0	0
Ficus copiosa	4	1	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	1	0	0	f	2	0	a
Ficus edelfeltii	4	1	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	1	0	1	1	2	0	0
Ficus habrophylla	4	1	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	0	0	1	1	0	0	e
Ficus insipida	4	1	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	0	0	1	?	0	0	0
Ficus racemosa	4	1	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	0	0	1	1	0	1	0	0	1	a	2	0	0
Ficus variegata	4	1	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	2	0	1	1	2	0	0
Ficus virens	0	1	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	0	0	1	1	2	0	0

1

Character number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Ficus wassa	4	2	1	0	0	0	0	a	0	0	0	1	2	0	0	1	1	1	1	0	1	0	0	1	?	?	?	1	0	1	0	0	0	1	2	0	v
Helianthostylis sprucei	m	1	1	0	0	?	1	1	0	0	0	0	g	1	0	0	0	1	1	0	1	0	0	1	0	?	?	1	0	1	0	0	0	0	0	0	0
Helicostylis pedunculata	4	1	1	0	1	0	1	1	0	1	0	0	r	0	1	1	1	1	1	0	1	0	0	1	?	?	?	0	0	1	0	0	0	0	0	0	1
Helicostylis tomentosa	4	1	1	0	1	0	1	1	0	1	0	0	r	0	1	1	1	1	1	0	1	0	0	1	?	?	?	0	0	1	0	0	0	0	0	0	a
Maclura amboinensis	j	1	1	1	0	0	1	a	1	0	0	0	g	0	0	1	1	1	1	1	1	0	0	1	0	0	?	1	1	1	0	0	0	0	0	0	0
Maclura pomifera	4	1	0	1	0	0	1	a	1	0	0	0	g	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0
Maclura tricuspidata	3	1	0	1	0	0	1	a	1	0	0	0	g	0	0	0	1	1	1	1	1	0	0	1	?	?	?	1	1	1	0	0	0	0	0	0	0
Maquira costaricana	m	1	1	0	1	0	0	0	a	1	0	0	r	0	1	1	1	0	1	1	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	c
Mesogyne insignis	3	1	0	0	0	0	0	0	0	1	1	0	g	0	1	0	0	1	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	c
Milicia excelsa	4	1	a	0	0	0	1	a	a	0	0	0	g	0	0	1	1	0	1	1	1	0	0	1	0	0	?	1	0	1	0	0	0	0	0	0	c
Morus alba	4	1	0	1	0	0	1	1	1	0	0	1	r	0	0	1	1	1	1	1	1	0	0	1	0	0	1	1	0	0	0	0	0	0	1	2
Morus nigra	4	1	0	1	0	0	1	1	1	0	0	1	r	0	0	1	1	1	1	1	1	0	0	1	2	1	1	1	0	0	0	0	0	1	1	2
Naucleopsis caloneura	4	1	1	0	1	0	0	1	a	1	0	0	r	0	1	1	1	1	1	1	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	0
Naucleopsis guianensis	4	1	1	0	1	0	0	1	a	1	0	0	r	0	1	1	1	1	1	1	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	0
Naucleopsis krukovii	4	1	1	0	1	0	0	1	a	1	0	0	r	0	1	1	1	1	1	1	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	c
Naucleopsis naga	4	1	1	0	1	0	0	1	a	1	0	0	r	0	1	1	1	1	1	1	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	0
Naucleopsis ternstroemiiflora	4	1	1	0	1	0	0	1	a	1	0	0	r	0	1	1	1	1	1	1	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	0
Naucleopsis ulei	4	1	1	0	1	0	0	1	a	1	0	0	r	0	1	1	1	1	1	1	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	0
Parartocarpus venenosus	4	1	1	0	0	1	0	0	0	0	0	0	r	0	0	0	1	1	0	0	1	0	0	0	1	0	0	1	0	1	2	0	0	1	0	0	0
Perebea angustifolia	4	1	1	0	1	0	0	1	a	1	0	0	g	0	1	a	0	1	1	0	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	2
Perebea humilis	3	1	1	0	1	0	0	1	a	1	0	0	g	0	1	a	0	1	1	0	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	1
Perebea longepedunculata	4	1	1	0	1	0	0	1	a	1	0	0	g	0	1	a	0	1	1	0	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	a
Perebea rubra	4	1	1	0	1	0	0	1	a	1	0	0	g	0	1	a	0	1	1	0	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	a
Perebea xanthochyma	4	1	1	0	1	0	0	1	a	1	0	0	g	0	1	a	0	1	1	0	1	0	0	1	?	?	?	0	0	1	0	0	1	0	0	0	a
Poulsenia armata	4	1	1	0	0	1	0	0	0	0	0	0	r	0	1	0	0	1	1	1	1	0	0	1	?	?	?	1	1	1	0	0	1	a	0	0	0
Prainea limpato	4	1	0	0	0	0	1	0	0	1	0	0	r	0	1	0	0	1	1	1	1	0	0	1	?	?	?	1	0	1	0	0	0	0	0	0	0
Prainea papuana	4	1	0	0	0	0	1	0	0	1	0	0	r	0	1	0	0	1	1	1	1	0	0	1	?	?	?	1	0	1	0	0	0	0	0	0	0
Pseudolmedia laevigata	4	1	1	0	0	0	0	a	0	1	0	0	g	0	1	1	1	1	1	1	1	0	0	0	?	?	?	0	0	1	0	0	1	0	0	0	0
Pseudolmedia laevis	4	1	1	0	0	0	0	a	0	1	0	0	g	0	1	1	1	1	1	1	1	0	0	0	?	?	?	0	0	1	0	0	1	0	0	0	a
Pseudolmedia macrophylla	4	1	1	0	0	0	0	a	0	1	0	0	g	0	1	1	1	1	1	1	1	0	0	0	?	?	?	0	0	1	0	0	1	0	0	0	0
Pseudolmedia spuria	4	1	1	0	0	0	0	a	0	1	0	0	g	0	1	1	1	1	1	1	1	0	0	0	4	0	1	0	0	1	0	0	1	0	0	0	0
Sorocea affinis	m	1	0	0	0	a	0	a	0	0	0	0	2	0	0	1	1	1	1	1	1	0	0	1	0	?	?	1	0	1	0	0	0	0	0	0	b
Sorocea bonplandii	3	1	0	0	0	a	0	a	0	0	0	0	2	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	0	1	0	0	0	0	0	0	4
Sorocea briquetii	3	1	0	0	0	a	0	a	0	0	0	0	2	0	0	1	1	1	1	1	1	0	0	1	0	?	?	1	0	1	0	0	0	0	0	0	2

Character number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Sorocea pubivena	m	1	0	0	0	a	0	a	0	0	0	0	2	0	0	1	1	1	1	1	1	0	0	1	0	?	?	1	0	1	0	0	0	0	0	0	b
Sparattosyce dioica	4	1	0	0	0	1	?	1	0	1	0	0	2	0	1	1	1	1	1	1	1	0	0	1	?	?	?	1	0	1	0	0	0	0	0	0	0
Streblus elongatus	4	1	0	0	0	0	1	a	a	0	0	0	r	1	1	0	1	1	1	1	1	0	0	1	?	?	?	1	0	1	0	0	1	0	0	0	0
Streblus glaber	4	1	0	0	0	0	1	a	a	0	0	0	r	0	1	1	1	1	1	1	1	0	0	1	?	?	?	1	0	1	0	0	0	0	0	0	0
Streblus pendulinus	m	1	0	0	0	0	1	a	a	0	0	0	2	0	1	1	1	1	1	1	1	0	0	1	?	?	?	1	0	1	0	0	0	0	0	0	k
Streblus smithii	4	1	0	0	0	0	1	a	a	0	0	?	?	?	?	0	1	?	?	?	?	?	?	?	?	?	?	?	1	0	1	0	0	0	0	0	?
Trophis involucrata	3	1	a	0	0	0	1	1	0	0	0	?	?	?	0	1	0	?	?	?	?	?	?	?	0	?	?	1	0	1	0	0	0	0	0	0	a
Trophis racemosa	4	1	a	0	0	0	1	0	0	0	0	0	2	0	0	1	1	1	1	1	1	0	0	1	0	0	1	1	0	1	0	0	0	0	0	1	a
Trophis scandens	2	1	1	0	0	0	1	1	0	0	0	?	r	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	0	1	0	0	0	0	0	0	a
Trymatococcus amazonicus	m	1	1	0	0	0	1	a	0	0	0	0	g	1	0	1	0	0	1	1	1	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0
Trymatococcus oligandrus	4	1	1	0	0	0	1	a	0	0	0	0	g	1	0	1	0	0	1	1	1	0	0	1	0	?	?	1	0	1	0	0	0	0	0	0	0
Utsetela neglecta	3	1	?	?	?	?	?	?	?	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	3	0	0	1	0	1	0	0	0	0	2	a	0
Cannabaceae																																					
Cannabis sativa	1	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	1	1	0	?	0	1	0	1	0	b	1	1	2
Celtis philippinensis	4	0	0	a	0	1	?	?	0	0	0	0	r	0	0	0	1	1	?	?	1	1	1	0	1	1	0	?	1	1	0	0	0	1	2	0	0
Humulus lupulus	1	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	1	1	0	?	0	1	0	1	0	2	1	1	2
Urticaceae																																					
Boehmeria nivea	3	0	0	0	0	?	?	?	0	1	0	0	2	0	0	0	0	0	1	1	0	1	1	0	1	0	1	?	0	1	0	0	0	1	2	0	2
Cecropia insignis	4	2	a	0	0	2	0	1	0	0	0	1	r	0	0	1	1	0	1	1	1	1	0	1	?	?	?	1	0	1	2	0	1	1	1	1	0
Cecropia obtusifolia	4	2	a	0	0	2	0	1	0	0	0	1	r	0	0	1	1	0	1	1	1	1	0	1	?	?	?	1	0	1	2	0	1	1	1	1	0
Cecropia palmata	4	2	a	0	0	2	0	1	0	0	0	1	r	0	0	1	1	0	1	1	1	1	0	1	?	?	?	1	0	1	2	0	1	1	1	1	0
Cecropia peltata	4	2	a	0	0	2	0	1	0	0	0	1	r	0	0	1	1	0	1	1	1	1	0	1	0	0	1	1	0	1	2	0	1	1	1	1	0
Coussapoa latifolia	0	2	a	0	0	a	?	?	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	?	?	?	1	0	1	2	0	1	1	0	0	0
Coussapoa nymphaeifolia	d	2	a	0	0	a	?	?	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	?	?	?	1	0	1	2	0	1	1	0	0	c
Coussapoa panamensis	0	2	a	0	0	a	?	?	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	?	?	?	1	0	1	2	0	1	1	0	0	0
Coussapoa schotii	d	2	a	0	0	a	?	?	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	?	?	?	1	0	1	2	0	1	1	0	0	0
Coussapoa villosa	d	2	a	0	0	a	?	?	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	0	0	1	1	0	1	2	0	1	1	0	0	c
Debregeasia longifolia	3	0	0	0	0	?	?	?	0	0	0	0	2	0	0	0	0	0	1	0	0	1	1	0	1	0	1	?	0	1	2	0	0	a	2	?	2
Leucosyke sp	4	0	0	0	0	?	?	?	a	1	0	0	2	0	1	0	0	0	1	1	0	1	1	0	?	?	?	1	0	1	2	0	0	1	2	?	u
Pilea fontana	1	0	0	0	0	?	?	?	a	0	0	1	2	0	0	0	0	1	1	0	1	0	0	1	0	1	0	?	0	1	2	0	0	2	2	0	1
Poikilospermum sp	4	0	0	0	0	?	?	?	a	0	0	1	2	0	0	0	1	0	?	?	1	1	1	0	?	?	?	?	0	1	2	0	0	1	a	0	0
Pourouma sp	4	2	a	0	0	0	1	1	0	0	0	1	r	0	0	1	1	0	1	1	1	1	0	1	?	?	?	1	0	1	2	0	1	1	a	?	0

Character number	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
Moraceae																																						
Antiaris toxicaria	0	0	0	2	1	0	1	0	2	5	2	0	y	1	0	0	0	0	3	?	2	0	?	0	1	3	3	1	0	?	0	0	1	1	1	0	1
Antiaropsis decipiens	0	0	0	1	1	0	1	0	?	5	0	0	y	1	0	0	0	2	s	5	0	1	0	1	1	3	1	f	0	0	0	0	0	1	0	0	1
Artocarpus altilis	1	1	0	0	1	0	0	0	2	4	a	1	1	3	0	0	?	0	0	4	a	1	1	a	1	1	2	?	?	0	0	0	1	1	0	0	1
Artocarpus heterophyllus	1	1	0	0	1	0	0	0	2	4	a	a	1	3	0	0	?	0	0	4	a	1	1	2	1	r	2	?	?	0	0	0	1	1	0	0	1
Artocarpus vrieseanus	1	0	0	0	1	0	0	0	2	4	a	2	y	3	0	0	?	0	0	4	a	1	1	2	1	r	2	1	?	0	0	0	1	1	0	0	1
Bagassa guianensis	0	0	0	1	0	0	0	0	?	1	a	2	3	3	?	0	2	y	r	4	a	1	q	f	?	2	3	1	0	0	0	0	?	1	0	1	0
Batocarpus amazonicus	1	0	0	1	0	0	0	1	?	1	b	2	y	1	0	0	?	0	a	4	0	1	q	2	?	3	3	1	?	0	0	0	?	1	0	0	1
Batocarpus costaricensis	1	0	0	1	0	0	0	1	?	1	b	2	y	1	0	0	?	0	a	4	0	?	?	2	?	3	2	1	?	0	0	0	?	1	0	0	1
Bleekrodea madagascariensis	1	?	0	0	0	2	0	0	?	k	0	2	4	2	?	1	0	2	4	k	0	1	0	1	1	3	3	1	0	0	0	0	0	1	0	1	?
Brosimum alicastrum	1	1	0	1	?	0	0	0	1	4	a	2	0	0	0	0	f	0	0	4	a	0	?	2	0	0	0	2	d	1	0	0	0	1	1	0	1
Brosimum guianense	1	1	0	0	?	1	0	0	1	p	0	2	y	3	0	0	f	0	0	o	0	1	q	2	0	0	0	1	4	1	0	0	0	1	1	0	1
Brosimum lactescens	1	1	0	1	?	0	0	0	1	4	1	2	3	3	0	0	f	0	r	n	0	?	?	2	0	0	0	f	0	1	0	0	0	1	1	0	1
Brosimum rubescens	1	0	0	0	?	2	0	0	1	p	0	2	y	g	0	0	f	0	a	o	0	?	?	2	0	0	0	1	d	1	0	0	0	1	1	0	1
Brosimum utile	1	0	0	0	?	1	0	0	1	p	1	2	3	2	0	0	f	0	a	o	0	?	?	2	0	0	0	f	d	1	0	0	0	1	1	0	1
Broussonetia papyrifera	1	0	0	1	0	0	0	0	1	1	b	a	3	2	0	1	f	y	3	4	0	1	q	1	?	3	2	2	0	0	0	0	1	1	?	1	?
Castilla elastica	0	0	0	3	1	0	1	0	2	8	2	1	0	0	?	0	f	0	a	5	2	1	1	0	1	3	3	f	4	1	0	0	1	?	0	0	1
Castilla ulei	0	0	0	3	1	0	1	0	2	8	2	1	0	0	?	0	f	0	a	5	2	1	a	0	0	r	3	2	4	1	0	0	1	?	?	0	1
Clarisia biflora	1	0	0	1	0	0	0	1	2	1	2	2	y	1	0	0	2	0	a	?	0	0	?	2	1	r	3	1	d	1	0	0	1	1	1	0	1
Clarisia ilicifolia	1	0	0	1	0	0	0	1	2	1	2	2	y	3	0	0	2	0	0	4	1	1	0	2	1	3	3	1	3	0	0	0	1	1	1	0	1
Dorstenia bahiensis	1	1	0	0	?	1	0	0	3	5	?	0	1	1	1	0	?	0	1	5	?	1	2	0	0	f	2	1	0	0	0	0	0	1	0	1	0
Dorstenia choconiana	1	1	0	0	?	1	0	0	1	7	0	0	1	1	1	0	?	0	1	7	0	1	2	0	0	1	2	f	0	0	0	0	0	1	0	1	0
Fatoua pilosa	1	0	0	0	0	1	0	0	1	2	1	b	3	2	?	1	0	2	3	2	1	1	0	?	1	3	3	2	0	0	0	0	0	0	?	1	0
Ficus asperula	0	1	1	0	1	1	1	0	1	3	1	1	y	f	?	0	0	y	q	3	1	1	q	1	1	r	f	1	0	0	0	0	1	?	0	1	0
Ficus copiosa	0	1	1	4	1	2	1	0	1	3	2	1	y	1	?	0	0	y	a	3	?	1	q	1	1	r	1	0	0	0	0	0	1	?	0	1	0
Ficus edelfeltii	0	1	1	0	1	1	1	0	1	3	a	1	y	1	?	0	0	?	0	3	a	1	q	1	1	r	1	2	0	0	0	0	1	?	0	1	0
Ficus habrophylla	0	1	1	0	1	1	1	0	1	3	1	1	y	3	?	0	0	?	1	3	1	1	q	1	1	r	3	2	0	0	0	0	1	?	0	1	0
Ficus insipida	0	1	1	0	1	1	1	0	1	3	0	1	2	1	?	0	0	?	1	3	0	1	q	1	1	2	1	?	0	0	0	0	1	?	0	1	0
Ficus racemosa	0	1	1	0	1	1	1	0	1	3	2	0	2	1	?	0	0	0	1	3	2	1	q	0	1	2	1	?	0	0	0	0	1	?	0	1	0
Ficus variegata	0	1	1	4	1	2	1	0	1	3	2	0	y	f	?	0	0	y	1	3	2	1	q	1	1	r	1	0	0	0	0	0	1	?	0	1	0
Ficus virens	0	1	1	0	1	1	1	0	1	3	a	1	y	f	?	0	0	?	0	3	a	1	q	1	1	r	1	?	0	0	0	0	1	?	0	1	0
Ficus wassa	0	1	1	4	1	2	1	0	1	3	0	1	y	1	?	0	0	y	a	3	2	1	q	1	1	r	f	0	0	0	0	0	1	?	0	1	0
Helianthostylis sprucei	1	1	0	3	?	2	0	0	?	4	0	2	y	3	0	0	f	1	3	o	0	0	?	1	0	j	2	f	0	1	0	0	?	?	1	0	1
Helicostylis pedunculata	0	0	0	2	?	0	1	0	?	5	2	0	3	3	1	0	f	0	3	5	2	1	0	0	1	3	2	f	4	1	0	0	1	1	1	0	1

Character number	3 8	3 9	4 0	4 1	4 2	4 3	4 4	4 5	4 6	4 7	4 8	4 9	5 0	5 1	5 2	5 3	5 4	5 5	5 6	5 7	5 8	5 9	6 0	6 1	6 2	6 3	6 4	6 5	6 6	6 7	6 8	6 9	7 0	7 1	7 2	7 3	7 4
Helicostylis tomentosa	0	0	0	2	?	0	1	0	?	5	2	0	3	3	1	0	f	0	3	5	2	1	0	0	1	3	3	f	4	1	0	0	1	1	1	0	1
Maclura amboinensis	0	0	0	1	0	0	0	1	2	4	a	1	3	f	0	0	0	2	3	4	2	1	1	1	1	3	g	1	3	0	0	0	1	1	0	1	0
Maclura pomifera	0	0	0	1	0	0	0	1	2	0	0	1	3	f	0	1	0	4	3	4	0	1	0	?	1	3	g	?	0	0	0	0	1	1	0	1	0
Maclura tricuspidata	?	?	0	1	0	0	0	1	2	1	a	1	3	f	?	0	0	4	3	4	0	1	0	?	1	3	3	1	0	0	0	0	1	1	0	1	0
Maquira costaricana	0	0	0	1	1	0	1	0	?	5	a	0	3	3	a	0	f	0	3	5	0	1	0	0	?	r	3	1	3	1	0	0	1	1	1	0	1
Mesogyne insignis	0	0	0	0	1	0	1	0	?	5	2	0	y	3	?	0	1	0	r	?	a	0	?	0	?	r	?	1	3	1	0	0	1	1	?	0	1
Milicia excelsa	0	0	0	1	0	0	0	0	?	1	0	1	3	?	?	1	0	3	3	1	0	1	0	1	1	3	1	2	0	0	0	0	1	?	?	1	?
Morus alba	0	1	0	1	0	0	0	0	2	a	a	0	3	1	0	1	0	3	3	1	a	1	0	0	1	3	1	1	3	0	0	0	1	1	?	1	0
Morus nigra	0	1	0	2	0	0	0	0	2	1	0	?	3	1	0	1	0	3	3	1	2	1	0	0	1	3	1	1	3	0	0	0	1	1	?	1	0
Naucleopsis caloneura	0	0	0	1	1	0	1	0	?	5	2	0	y	1	0	0	f	0	r	5	0	1	1	1	0	r	g	1	d	1	0	0	1	0	1	0	1
Naucleopsis guianensis	0	0	0	1	1	0	1	0	0	5	2	0	y	1	0	0	f	0	r	5	0	1	1	1	0	r	g	f	4	1	0	0	1	0	1	0	1
Naucleopsis krukovii	0	0	0	1	1	0	1	0	?	5	2	0	y	2	1	0	f	0	1	5	0	1	1	1	0	r	1	f	m	1	0	0	1	0	1	0	1
Naucleopsis naga	0	0	0	1	1	0	1	0	?	5	2	0	y	1	0	0	f	0	3	5	0	1	1	1	0	r	1	f	4	1	0	0	1	0	1	0	1
Naucleopsis ternstroemiiflora	0	0	0	1	1	0	1	0	?	5	2	0	y	1	0	0	f	0	r	5	0	1	1	1	0	r	2	f	0	1	0	0	1	0	1	0	1
Naucleopsis ulei	0	0	0	1	1	0	1	0	?	5	2	0	y	2	1	0	f	0	a	5	0	1	1	1	0	r	1	f	4	1	0	0	1	0	1	0	1
Parartocarpus venenosus	0	0	0	1	?	0	1	0	?	4	0	1	r	3	2	0	1	0	q	4	0	1	2	1	0	0	0	0	3	0	0	0	1	1	0	1	1
Perebea angustifolia	0	0	0	1	1	0	1	0	?	5	2	0	3	g	0	0	f	0	3	5	0	1	0	0	1	3	3	f	4	1	0	0	1	1	?	0	1
Perebea humilis	0	0	0	0	1	0	1	0	?	5	?	0	3	g	0	0	f	0	3	?	2	0	?	0	1	3	3	1	3	?	0	0	1	1	?	0	1
Perebea longepedunculata	0	0	0	1	1	0	1	0	?	5	2	0	3	1	0	0	f	0	3	5	0	1	0	0	1	3	3	1	3	0	0	0	1	1	?	0	1
Perebea rubra	0	0	0	2	1	0	1	0	?	5	a	0	y	g	0	0	f	0	f	5	2	1	a	0	1	3	3	2	0	?	0	0	0	1	a	0	1
Perebea xanthochyma	0	0	0	2	1	0	1	0	?	5	2	0	r	1	0	0	f	0	3	5	2	1	0	0	1	3	3	1	3	1	0	0	1	1	?	0	1
Poulsenia armata	0	1	0	2	1	0	1	0	?	4	a	?	3	3	a	0	?	0	3	4	a	1	1	0	1	3	3	1	0	0	0	0	1	0	0	0	1
Prainea limpato	0	?	0	0	?	0	0	0	?	4	0	2	1	3	0	0	?	0	0	4	0	1	0	2	1	3	3	1	3	0	0	0	1	1	0	0	1
Prainea papuana	0	?	0	0	?	0	0	0	?	4	0	2	1	3	0	0	?	0	0	4	0	1	0	2	1	3	3	1	3	0	0	0	1	1	0	0	1
Pseudolmedia laevigata	0	0	0	1	1	0	1	0	2	5	1	1	0	0	0	0	2	0	0	?	a	0	?	0	1	3	3	f	0	1	0	0	1	1	1	0	1
Pseudolmedia laevis	0	0	0	1	1	0	1	0	2	5	2	1	0	0	0	0	2	0	0	?	a	0	?	0	1	3	3	2	0	1	0	0	1	1	1	0	1
Pseudolmedia macrophylla	0	0	0	1	1	0	1	0	2	5	2	1	0	0	0	0	2	0	0	?	a	0	?	0	1	3	3	f	0	1	0	0	1	1	1	0	1
Pseudolmedia spuria	0	0	0	1	1	0	1	0	2	5	2	1	0	0	0	0	2	0	0	?	a	0	?	0	1	3	3	f	0	1	0	0	1	1	1	0	1
Sorocea affinis	0	0	0	1	?	0	0	0	?	0	0	2	3	3	0	0	1	0	3	0	0	1	0	2	1	3	3	1	3	1	0	0	1	1	?	0	1
Sorocea bonplandii	0	0	0	1	?	0	0	0	?	0	b	2	3	1	0	0	1	0	3	0	2	1	0	2	1	3	3	1	3	1	0	0	1	1	?	0	1
Sorocea briquetii	0	0	0	1	?	0	0	0	?	w	a	2	3	f	0	0	1	0	3	w	2	1	0	2	1	3	3	1	3	1	0	0	1	1	?	0	1
Sorocea pubivena	0	0	0	1	?	0	0	0	?	1	a	2	3	f	0	0	1	0	3	a	2	1	0	2	0	3	3	1	3	1	0	0	1	1	?	0	1
Sparattosyce dioica	0	0	0	1	1	0	1	0	?	6	1	0	y	1	0	0	?	2	t	6	1	1	0	?	1	r	1	0	0	0	0	0	0	0	0	0	1
Streblus elongatus	1	0	0	0	0	2	0	0	2	1	a	2	2	f	0	1	1	2	2	1	a	?	?	2	1	3	1	1	0	0	0	0	0	?	0	0	1

Character number	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
Streblus glaber	1	0	0	1	0	0	0	0	2	1	2	1	3	f	0	1	1	3	s	h	2	?	?	f	1	3	g	1	?	0	0	0	1	0	0	0	1
Streblus pendulinus	1	0	0	1	0	0	0	0	2	1	a	2	3	f	0	1	1	y	4	h	a	a	0	2	1	3	3	1	3	0	0	0	1	1	0	0	1
Streblus smithii	1	1	0	1	0	0	0	0	2	1	?	f	3	f	0	1	1	y	s	1	a	1	q	f	1	3	g	1	?	0	0	0	1	?	0	0	1
Trophis involucrata	0	1	0	1	0	0	0	0	2	0	0	1	3	2	0	1	0	3	3	4	a	?	?	1	1	3	3	1	0	?	0	0	1	0	0	0	1
Trophis racemosa	1	1	0	1	0	0	0	0	2	1	a	f	3	2	0	0	0	3	3	1	0	1	0	1	1	3	3	1	0	1	0	0	1	1	1	0	1
Trophis scandens	1	1	0	1	0	0	0	0	2	1	b	1	2	1	0	0	0	3	3	4	b	?	?	1	1	3	3	1	0	?	0	0	1	1	0	0	1
Trymatococcus amazonicus	1	1	0	0	?	1	0	0	?	7	1	2	2	3	0	0	0	y	2	7	1	0	?	2	0	0	0	f	0	1	0	0	1	1	1	0	1
Trymatococcus oligandrus	1	1	0	0	?	1	0	0	?	7	a	2	2	3	0	0	0	2	2	7	a	0	?	2	0	0	0	f	0	1	0	0	1	1	1	0	1
Utsetela neglecta	1	1	0	0	0	1	0	0	?	4	?	a	r	3	2	0	2	0	1	4	?	1	2	0	0	3	3	f	0	0	0	0	0	1	0	?	1
Cannabaceae																																					
Cannabis sativa	0	1	0	1	0	0	0	0	0	2	2	0	4	1	0	0	1	0	4	1	2	1	0	0	1	1	3	1	0	0	0	0	1	0	?	1	0
Celtis philippinensis	?	1	0	0	0	2	0	0	0	b	a	?	m	2	?	1	0	?	n	2	a	1	q	?	1	r	2	f	0	?	0	0	?	?	?	0	?
Humulus lupulus	0	1	0	1	0	0	0	0	0	2	?	0	4	1	0	0	1	0	4	2	?	1	0	?	1	?	3	1	0	0	0	0	1	0	?	1	0
Urticaceae																																					
Boehmeria nivea	0	1	0	0	0	0	0	0	2	1	2	?	3	2	0	1	?	y	3	1	2	1	0	?	1	3	3	0	0	?	1	1	?	0	?	1	0
Cecropia insignis	a	1	0	1	0	0	0	0	2	0	1	0	1	3	0	0	0	0	1	0	1	1	0	0	1	r	3	0	i	0	1	1	1	0	?	1	0
Cecropia obtusifolia	1	1	0	1	0	0	0	0	2	0	1	0	1	3	0	0	0	0	1	0	1	1	0	0	1	r	3	0	1	0	1	1	1	0	?	1	0
Cecropia palmata	1	1	0	1	0	0	0	0	2	0	1	0	1	3	0	0	0	0	1	0	1	1	0	0	1	r	3	0	1	0	1	1	1	0	?	1	0
Cecropia peltata	1	1	0	1	1	0	0	0	2	0	1	0	1	3	0	0	0	0	1	0	1	1	1	0	1	r	3	0	5	0	1	1	1	0	?	1	0
Coussapoa latifolia	?	1	0	1	?	0	0	0	2	4	1	f	2	3	?	0	?	0	1	4	1	1	0	2	1	r	3	0	i	0	1	1	1	1	0	1	0
Coussapoa nymphaeifolia	?	1	0	1	?	0	0	0	2	4	1	f	2	3	?	0	?	0	2	4	1	1	0	b	1	r	3	0	i	0	1	1	1	1	0	1	0
Coussapoa panamensis	0	1	0	1	?	0	0	0	2	4	1	f	2	3	?	0	?	0	q	4	1	1	0	?	1	r	3	0	i	0	1	1	1	1	0	1	0
Coussapoa schotii	?	1	0	1	?	0	0	0	2	4	1	f	2	3	?	0	?	0	q	4	1	1	0	?	1	r	3	0	i	0	1	1	1	1	0	1	0
Coussapoa villosa	?	1	0	1	?	0	0	0	2	4	1	f	2	3	?	0	?	0	1	4	1	1	0	1	1	r	3	0	i	0	1	1	1	1	0	1	0
Debregeasia longifolia	0	1	0	2	0	0	0	0	2	2	2	?	3	2	0	1	?	y	3	2	2	1	0	?	1	3	3	0	1	1	1	1	1	?	?	1	0
Leucosyke sp	?	1	0	1	0	0	0	0	?	k	?	?	m	3	0	1	?	y	m	k	?	1	0	?	1	r	f	0	1	?	1	0	1	?	?	1	0
Pilea fontana	0	1	0	2	0	1	0	0	a	2	2	?	m	3	0	1	?	2	j	2	2	1	0	?	?	2	3	0	1	?	1	1	1	?	?	?	0
Poikilospermum sp	0	1	0	1	?	0	0	0	?	2	?	?	r	f	?	1	?	0	x	2	?	?	?	?	?	3	3	0	?	0	1	1	1	?	?	0	0
Pourouma sp	0	1	0	1	1	0	0	0	?	1	1	0	j	g	0	0	?	0	3	?	1	1	0	0	?	3	3	0	5	0	1	1	1	0	0	0	1

Character number	75	76	77	78	79	80	81
Moraceae							
Antiaris toxicaria	1	1	0	0	?	1	0
Antiaropsis decipiens	1	1	1	0	?	1	1
Artocarpus altilis	1	0	1	0	0	1	0
Artocarpus heterophyllus	1	0	0	0	0	1	0
Artocarpus vrieseanus	1	1	0	0	0	1	0
Bagassa guianensis	?	1	0	1	1	0	1
Batocarpus amazonicus	1	1	?	0	?	1	1
Batocarpus costaricensis	1	1	?	0	?	1	1
Bleekrodea madagascariensis	1	0	0	0	1	1	1
Brosimum alicastrum	1	0	1	0	?	1	1
Brosimum guianense	1	0	1	0	?	1	1
Brosimum lactescens	1	0	1	0	?	1	1
Brosimum rubescens	1	a	a	0	?	1	1
Brosimum utile	1	a	a	0	?	1	1
Broussonetia papyrifera	0	0	1	1	?	1	1
Castilla elastica	1	1	0	0	?	1	1
Castilla ulei	1	1	0	0	?	1	1
Clarisia biflora	1	1	?	0	0	1	1
Clarisia ilicifolia	1	1	?	0	0	1	1
Dorstenia bahiensis	1	1	0	1	1	1	1
Dorstenia choconiana	1	1	0	1	1	1	1
Fatoua pilosa	?	1	0	1	?	?	1
Ficus asperula	?	1	0	?	1	?	1
Ficus copiosa	?	1	0	?	1	?	1
Ficus edelfeltii	?	1	0	?	1	?	1
Ficus habrophylla	?	1	0	?	1	?	1
Ficus insipida	?	1	0	?	1	?	1
Ficus racemosa	?	1	0	?	1	?	1
Ficus variegata	?	1	0	?	1	?	1
Ficus virens	?	1	0	?	1	?	1
Ficus wassa	?	1	0	?	1	?	1
Helianthostylis sprucei	1	1	0	0	?	1	1
Helicostylis pedunculata	1	1	0	0	0	1	1

Character number	75	76	77	78	79	80	81
Helicostylis tomentosa	1	1	0	0	0	1	1
Maclura amboinensis	0	1	0	1	?	1	1
Maclura pomifera	0	1	0	1	?	1	1
Maclura tricuspidata	0	1	0	1	?	1	1
Maquira costaricana	1	1	?	0	0	1	1
Mesogyne insignis	1	0	1	0	?	1	1
Milicia excelsa	?	1	0	1	?	1	1
Morus alba	?	1	0	1	?	1	1
Morus nigra	?	1	0	1	?	1	1
Naucleopsis caloneura	1	1	0	0	?	1	1
Naucleopsis guianensis	1	1	0	0	?	1	1
Naucleopsis krukovii	1	1	0	0	?	1	1
Naucleopsis naga	1	1	0	0	?	1	1
Naucleopsis ternstroemiiflora	1	1	0	0	?	1	1
Naucleopsis ulei	1	1	0	0	?	1	1
Parartocarpus venenosus	?	0	0	1	0	?	1
Perebea angustifolia	1	1	0	0	?	1	1
Perebea humilis	1	1	0	0	?	1	1
Perebea longepedunculata	1	1	0	0	?	1	1
Perebea rubra	1	1	0	0	?	1	1
Perebea xanthochyma	1	1	0	0	?	1	1
Poulsenia armata	1	1	?	0	?	1	1
Prainea limpato	1	1	?	0	?	?	0
Prainea papuana	1	1	?	0	?	?	0
Pseudolmedia laevigata	1	1	0	0	?	1	1
Pseudolmedia laevis	1	1	0	0	?	1	1
Pseudolmedia macrophylla	1	1	0	0	?	1	1
Pseudolmedia spuria	1	1	0	0	?	1	1
Sorocea affinis	1	0	1	0	1	1	0
Sorocea bonplandii	1	0	1	0	1	1	0
Sorocea briquetii	1	0	1	0	1	1	0
Sorocea pubivena	1	0	1	0	1	1	0
Sparattosyce dioica	1	1	1	1	1	1	1

Streblus elongatus	1	0	0	0	1	1	1
	7	7	7	7	7	8	8
Character number	5	6	7	8	9	0	1
Streblus glaber	0	0	0	1	1	1	1
Streblus pendulinus	0	0	0	1	1	1	1
Streblus smithii	0	0	1	1	1	1	1
Trophis involucrata	1	0	0	0	?	1	1
Trophis racemosa	1	1	0	0	?	1	1
Trophis scandens	1	0	0	0	?	1	1
Trymatococcus amazonicus	1	0	1	0	?	0	1
Trymatococcus oligandrus	1	0	1	0	?	0	1
Utsetela neglecta	1	0	1	0	?	1	1
Cannabaceae							
Cannabis sativa	1	1	?	?	1	?	1
Celtis philippinensis	?	?	1	?	?	?	1
Humulus lupulus	?	?	?	?	?	?	1
Urticaceae							
Boehmeria nivea	?	?	?	?	?	?	0
Cecropia insignis	1	1	0	1	0	?	0
Cecropia obtusifolia	1	1	0	1	0	?	0
Cecropia palmata	1	1	0	1	0	?	0
Cecropia peltata	1	1	0	1	0	?	0
Coussapoa latifolia	1	1	0	0	0	?	0
Coussapoa nymphaeifolia	1	1	0	0	0	?	0
Coussapoa panamensis	1	1	0	0	0	?	0
Coussapoa schotii	1	1	0	0	0	?	0
Coussapoa villosa	1	1	0	0	0	?	0
Debregeasia longifolia	?	?	?	?	?	?	0
Leucosyke sp	?	?	?	?	?	?	0
Pilea fontana	?	?	?	?	?	?	0
Poikilospermum sp	1	1	?	?	?	?	0
Pourouma sp	1	1	0	0	?	?	0