Supplementary Information

to

Evolution of dispersal, habit, and pollination in Africa pushed Apocynaceae diversification after the Eocene-Oligocene climate transition

by

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Content:

Table S1 Species Data: Species included in the study are detailed by name, clade assignment (acc. to Fishbein et al. 2018), sampling fraction (%), described species per clade (richness), species included in the phylogeny, and species distributions (acc. to Endress et al. 2018).

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Acokanthera oblongifolia	Carisseae	0.320	25	8	Africa
Acokanthera oppositifolia	Carisseae	0.320	25	8	Africa
Acokanthera rotundata	Carisseae	0.320	25	8	Africa
Adenium obesum	Nerieae	0.127	71	9	Africa
Aganosma cymosa	Apocyneae	0.287	115	33	tropical Asia
Aganosma schlechteriana	Apocyneae	0.287	115	33	tropical Asia
Aganosma wallichii	Apocyneae	0.287	115	33	tropical Asia
Alafia barteri	Nerieae	0.127	71	9	Africa
Alafia thouarsii	Nerieae	0.127	71	9	Africa (Madagascar)
Allamanda cathartica	Plumerieae	0.218	55	12	North America, South America
Allamanda schottii	Plumerieae	0.218	55	12	South America
Allomarkgrafia brenesiana	EOM	0.217	479	104	North America
Allomarkgrafia plumeriiflora	EOM	0.217	479	104	North America, South America
Alstonia scholaris	Alstonieae	0.044	45	2	tropical Asia, Oceania
Alyxia grandis	Alyxieae	0.072	138	10	Oceania
Alyxia oblongata	Alyxieae	0.072	138	10	Oceania
Alyxia reinwardtii	Alyxieae	0.072	138	10	tropical Asia
Alyxia spicata	Alyxieae	0.072	138	10	Oceania
Amalocalyx microlobus	Apocyneae	0.287	115	33	tropical Asia
Ambelania acida	Tabernaemontaneae	0.542	168	91	South America
Amphineurion marginatum	Apocyneae	0.287	115	33	tropical Asia
Amsonia elliptica	Amsonieae	0.188	16	3	Eurasia
Amsonia tabernaemontana	Amsonieae	0.188	16	3	North America
Anemotrochus viridivenius	MOG	0.173	1053	182	North America
Angadenia berteroi	EOM	0.217	479	104	North America
Angadenia sagraei	EOM	0.217	479	104	North America
Anisotoma cordifolia	Anisotominae	0.167	30	5	Africa
Anodendron oblongifolium	Apocyneae	0.287	115	33	tropical Asia
Anodendron parviflorum	Apocyneae	0.287	115	33	tropical Asia
Anomalluma dodsoniana	Stapeliinae	0.138	705	97	Africa
Anomalluma mccoyi	Stapeliinae	0.138	705	97	Africa
Apocynum androsaemifolium	Apocyneae	0.287	115	33	North America
Apocynum cannabinum	Apocyneae	0.287	115	33	North America
Apteranthes burchardii	Stapeliinae	0.138	705	97	Africa
Apteranthes europaea	Stapeliinae	0.138	705	97	Africa, Eurasia
Apteranthes joannis	Stapeliinae	0.138	705	97	Africa
Apteranthes munbyana	Stapeliinae	0.138	705	97	Africa, Eurasia
Apteranthes staintonii	Stapeliinae	0.138	705	97	tropical Asia
Apteranthes tuberculata	Stapeliinae	0.138	705	97	Eurasia, tropical Asia
Araujia angustifolia	MOG	0.173	1053	182	South America
Araujia odorata	MOG	0.173	1053	182	South America
Araujia plumosa	MOG	0.173	1053	182	South America
Araujia sericifera	MOG	0.173	1053	182	South America
Artia balansae	EOM	0.217	479	104	Oceania
Asclepias albens	Asclepiadinae	0.475	364	173	Africa
Asclepias albicans	Asclepiadinae	0.475	364	173	North America
Asclepias alpestris	Asclepiadinae	0.475	364	173	Africa
Asclepias amplexicaulis	Asclepiadinae	0.475	364	173	North America
Asclepias angustifolia	Asclepiadinae	0.475	364	173	North America
Asclepias arenaria	Asclepiadinae	0.475	364	173	North America
Asclepias atroviolacea	Asclepiadinae	0.475	364	173	North America
Asclepias aurea	Asclepiadinae	0.475	364	173	Africa
Asclepias auriculata	Asclepiadinae	0.475	364	173	North America
Asclepias barjoniifolia	Asclepiadinae	0.475	364	173	South America
Asclepias boliviensis	Asclepiadinae	0.475	364	173	South America
Asclepias brachystephana	Asclepiadinae	0.475	364	173	North America
Asclepias brevipes	Asclepiadinae	0.475	364	173	Africa
Asclepias buchwaldii	Asclepiadinae	0.475	364	173	Africa
Asclepias candida	Asclepiadinae	0.475	364	173	South America
Asclepias cinerea	Asclepiadinae	0.475	364	173	North America
Asclepias circinalis	Asclepiadinae	0.475	364	173	North America
Asclepias connivens	Asclepiadinae	0.475	364	173	North America
Asclepias cordifolia	Asclepiadinae	0.475	364	173	North America
Asclepias coulteri	Asclepiadinae	0.475	364	173	North America
Asclepias crispa	Asclepiadinae	0.475	364	173	Africa
Asclepias cucullata	Asclepiadinae	0.475	364	173	Africa
Asclepias curassavica	Asclepiadinae	0.475	364	173	North America, South America
Asclepias curtissii	Asclepiadinae	0.475	364	173	North America

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Asclepias cutleri	Asclepiadinae	0.475	364	173	North America
Asclepias densiflora	Asclepiadinae	0.475	364	173	Africa
Asclepias depressa	Asclepiadinae	0.475	364	173	Africa
Asclepias elata	Asclepiadinae	0.475	364	173	North America
Asclepias elegantula	Asclepiadinae	0.475	364	173	North America
Asclepias emoryi	Asclepiadinae	0.475	364	173	North America
Asclepias engelmanniana	Asclepiadinae	0.475	364	173	North America
Asclepias eriocarpa	Asclepiadinae	0.475	364	173	North America
Asclepias erosa	Asclepiadinae	0.475	364	173	North America
Asclepias exaltata	Asclepiadinae	0.475	364	173	North America
Asclepias fascicularis	Asclepiadinae	0.475	364	173	North America
Asclepias feayi	Asclepiadinae	0.475	364	173	North America
Asclepias fournieri	Asclepiadinae	0.475	364	173	North America
Asclepias gentryi	Asclepiadinae	0.475	364	173	North America
Asclepias gibba	Asclepiadinae	0.475	364	173	Africa
Asclepias glaucescens	Asclepiadinae	0.475	364	173	North America
Asclepias hallii	Asclepiadinae	0.475	364	173	North America
Asclepias hirtella	Asclepiadinae	0.475	364	173	North America
Asclepias humistrata	Asclepiadinae	0.475	364	173	North America
Asclepias hypoleuca	Asclepiadinae	0.475	364	173	North America
Asclepias inaequalis	Asclepiadinae	0.475	364	173	Africa
Asclepias incarnata	Asclepiadinae	0.475	364	173	North America
Asclepias involucrata	Asclepiadinae	0.475	364	173	North America
Asclepias jaliscana	Asclepiadinae	0.475	364	173	North America
Asclepias jorgeana	Asclepiadinae	0.475	364	173	North America
Asclepias labriformis	Asclepiadinae	0.475	364	173	North America
Asclepias lanceolata	Asclepiadinae	0.475	364	173	North America
Asclepias latifolia	Asclepiadinae	0.475	364	173	North America
Asclepias lemmonii	Asclepiadinae	0.475	364	173	North America
Asclepias leptopus	Asclepiadinae	0.475	364	173	North America
Asclepias linaria	Asclepiadinae	0.475	364	173	North America
Asclepias linearis	Asclepiadinae	0.475	364	173	North America
Asclepias longifolia	Asclepiadinae	0.475	364	173	North America
Asclepias lynchiana	Asclepiadinae	0.475	364	173	North America
Asclepias macropus	Asclepiadinae	0.475	364	173	Africa
Asclepias macrosperma	Asclepiadinae	0.475	364	173	North America
Asclepias macrotis	Asclepiadinae	0.475	364	173	North America
Asclepias macroura	Asclepiadinae	0.475	364	173	North America
Asclepias masonii	Asclepiadinae	0.475	364	173	North America
Asclepias mcvaughii	Asclepiadinae	0.475	364	173	North America
Asclepias meadii	Asclepiadinae	0.475	364	173	North America
Asclepias melantha	Asclepiadinae	0.475	364	173	North America
Asclepias mellodora	Asclepiadinae	0.475	364	173	South America
Asclepias mexicana	Asclepiadinae	0.475	364	173	South America
Asclepias michauxii	Asclepiadinae	0.475	364	173	North America
Asclepias mirifica	Asclepiadinae	0.475	364	173	North America
Asclepias nivea	Asclepiadinae	0.475	364	173	North America
Asclepias notha	Asclepiadinae	0.475	364	173	North America
Asclepias nummularia	Asclepiadinae	0.475	364	173	North America
Asclepias nyctaginifolia	Asclepiadinae	0.475	364	173	North America
Asclepias obovata	Asclepiadinae	0.475	364	173	North America
Asclepias oenotheroides	Asclepiadinae	0.475	364	173	North America
Asclepias otarioides	Asclepiadinae	0.475	364	173	North America
Asclepias ovalifolia	Asclepiadinae	0.475	364	173	North America
Asclepias ovata	Asclepiadinae	0.475	364	173	North America
Asclepias pedicellata	Asclepiadinae	0.475	364	173	North America
Asclepias pellucida	Asclepiadinae	0.475	364	173	North America
Asclepias perennis	Asclepiadinae	0.475	364	173	North America
Asclepias pilgeriana	Asclepiadinae	0.475	364	173	South America
Asclepias praemorsa	Asclepiadinae	0.475	364	173	Africa
Asclepias pratensis	Asclepiadinae	0.475	364	173	North America
Asclepias prostrata	Asclepiadinae	0.475	364	173	North America
Asclepias pseudofimbriata	Asclepiadinae	0.475	364	173	Africa
Asclepias puberula	Asclepiadinae	0.475	364	173	North America
Asclepias pumila	Asclepiadinae	0.475	364	173	North America
Asclepias purpurascens	Asclepiadinae	0.475	364	173	North America
Asclepias quadrifolia	Asclepiadinae	0.475	364	173	North America
Asclepias quinquedentata	Asclepiadinae	0.475	364	173	North America
Asclepias randii	Asclepiadinae	0.475	364	173	Africa
Asclepias rubra	Asclepiadinae	0.475	364	173	North America
Asclepias ruthiae	Asclepiadinae	0.475	364	173	North America
Asclepias sanjuanensis	Asclepiadinae	0.475	364	173	North America
Asclepias scaposa	Asclepiadinae	0.475	364	173	North America
Asclepias schaffneri	Asclepiadinae	0.475	364	173	North America
Asclepias scheryi	Asclepiadinae	0.475	364	173	North America

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Asclepias senecionifolia	Asclepiadinae	0.475	364	173	North America
Asclepias similis	Asclepiadinae	0.475	364	173	North America
Asclepias solanoana	Asclepiadinae	0.475	364	173	North America
Asclepias sp. nova	Asclepiadinae	0.475	364	173	North America
Asclepias speciosa	Asclepiadinae	0.475	364	173	North America
Asclepias standleyi	Asclepiadinae	0.475	364	173	North America
Asclepias stathmostelmoides	Asclepiadinae	0.475	364	173	Africa
Asclepias stellifera	Asclepiadinae	0.475	364	173	Africa
Asclepias stenophylla	Asclepiadinae	0.475	364	173	North America
Asclepias subaphylla	Asclepiadinae	0.475	364	173	North America
Asclepias subulata	Asclepiadinae	0.475	364	173	North America
Asclepias subverticillata	Asclepiadinae	0.475	364	173	North America
Asclepias sullivantii	Asclepiadinae	0.475	364	173	North America
Asclepias syriaca	Asclepiadinae	0.475	364	173	North America
Asclepias texana	Asclepiadinae	0.475	364	173	North America
Asclepias tomentosa	Asclepiadinae	0.475	364	173	North America
Asclepias tuberosa	Asclepiadinae	0.475	364	173	North America
Asclepias uncialis	Asclepiadinae	0.475	364	173	North America
Asclepias variegata	Asclepiadinae	0.475	364	173	North America
Asclepias verticillata	Asclepiadinae	0.475	364	173	North America
Asclepias vinosa	Asclepiadinae	0.475	364	173	North America
Asclepias viridiflora	Asclepiadinae	0.475	364	173	North America
Asclepias viridis	Asclepiadinae	0.475	364	173	North America
Asclepias viridula	Asclepiadinae	0.475	364	173	North America
Asclepias virletii	Asclepiadinae	0.475	364	173	North America
Asclepias welshii	Asclepiadinae	0.475	364	173	North America
Asclepias woodii	Asclepiadinae	0.475	364	173	Africa
Asclepias woodsoniana	Asclepiadinae	0.475	364	173	North America, South America
Asclepias zanthodacryon	Asclepiadinae	0.475	364	173	North America
Aspidoglossum heterophyllum	Asclepiadinae	0.475	364	173	Africa
Aspidonepsis diploglossa	Asclepiadinae	0.475	364	173	Africa
Aspidonepsis flava	Asclepiadinae	0.475	364	173	Africa
Aspidosperma australe	Aspidospermateae	0.116	69	8	South America
Aspidosperma cylindrocarpon	Aspidospermateae	0.116	69	8	South America
Aspidosperma desmanthum	Aspidospermateae	0.116	69	8	North America, South America
Aspidosperma excelsum	Aspidospermateae	0.116	69	8	North America, South America
Aspidosperma spruceanum	Aspidospermateae	0.116	69	8	South America
Astephanus triflorus	Astephaninae	0.200	15	3	Africa
Australluma peschii	Stapeliinae	0.138	705	97	Africa
Baissea leonensis	Baisseeae	0.172	29	5	Africa
Baissea multiflora	Baisseeae	0.172	29	5	Africa
Barjonia chlorifolia	MOG	0.173	1053	182	South America
Barjonia erecta	MOG	0.173	1053	182	South America
Barjonia glazioui	MOG	0.173	1053	182	South America
Barjonia laxa	MOG	0.173	1053	182	South America
Beaumontia grandiflora	Apocyneae	0.287	115	33	tropical Asia
Blepharodon ampliflorum	MOG	0.173	1053	182	South America
Blepharodon bicuspidatum	MOG	0.173	1053	182	South America
Blepharodon costae	MOG	0.173	1053	182	South America
Blepharodon glaucescens	MOG	0.173	1053	182	South America
Blepharodon grandiflorum	MOG	0.173	1053	182	South America
Blepharodon lineare	MOG	0.173	1053	182	South America
Blepharodon manicatum	MOG	0.173	1053	182	South America
Blepharodon mucronatum	MOG	0.173	1053	182	North America, South America
Blepharodon pictum	MOG	0.173	1053	182	South America
Boucerosia crenulata	Stapeliinae	0.138	705	97	tropical Asia
Boucerosia crenulata	Stapeliinae	0.138	705	97	tropical Asia
Boucerosia diffusa	Stapeliinae	0.138	705	97	tropical Asia (India)
Boucerosia frerei	Stapeliinae	0.138	705	97	tropical Asia (India)
Boucerosia indica	Stapeliinae	0.138	705	97	tropical Asia (India)
Boucerosia pauciflora	Stapeliinae	0.138	705	97	tropical Asia (India)
Boucerosia procumbens	Stapeliinae	0.138	705	97	tropical Asia (India)
Boucerosia umbellata	Stapeliinae	0.138	705	97	tropical Asia
Calciphila galgalensis	Asclepiadinae	0.475	364	173	Africa
Calciphila gillettii	Asclepiadinae	0.475	364	173	Africa
Callichilia barteri	Tabernaemontaneae	0.542	168	91	Africa
Callichilia bequaertii	Tabernaemontaneae	0.542	168	91	Africa
Callichilia inaequalis	Tabernaemontaneae	0.542	168	91	Africa
Callichilia orientalis	Tabernaemontaneae	0.542	168	91	Africa
Callichilia subsessilis	Tabernaemontaneae	0.542	168	91	Africa
Calocrater preussii	Tabernaemontaneae	0.542	168	91	Africa
Calotropis gigantea	Asclepiadinae	0.475	364	173	tropical Asia
Calotropis procera	Asclepiadinae	0.475	364	173	Africa, Eurasia, tropical Asia
Camptocarpus mauritianus	Periplocoideae	0.153	177	27	Africa (Madagascar)
Caralluma arachnoidea	Stapeliinae	0.138	705	97	Africa

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Caralluma bhupinderana	Stapeliinae	0.138	705	97	tropical Asia (India)
Caralluma dicapuae	Stapeliinae	0.138	705	97	Africa
Caralluma flavovirens	Stapeliinae	0.138	705	97	Africa
Caralluma furta	Stapeliinae	0.138	705	97	Africa
Caralluma peckii	Stapeliinae	0.138	705	97	Africa
Caralluma priogonium	Stapeliinae	0.138	705	97	Africa
Caralluma sarkariae	Stapeliinae	0.138	705	97	tropical Asia (India)
Caralluma stalagmifera	Stapeliinae	0.138	705	97	tropical Asia (India)
Caralluma subulata	Stapeliinae	0.138	705	97	Africa
Caralluma turneri	Stapeliinae	0.138	705	97	Africa
Carissa bispinosa	Carisseae	0.320	25	8	Africa, Eurasia
Carissa carandas	Carisseae	0.320	25	8	tropical Asia (India)
Carissa macrocarpa	Carisseae	0.320	25	8	Africa
Carissa spinarum	Carisseae	0.320	25	8	Africa, Eurasia, tropical Asia, Oceania
Carissa spinarum	Carisseae	0.320	25	8	Oceania
Carvalhoa campanulata	Tabernaemontaneae	0.542	168	91	Africa
Catharanthus roseus	Vinceae	0.154	156	24	Africa (Madagascar)
Caudanthera edulis	Stapeliinae	0.138	705	97	Africa, Eurasia, tropical Asia
Caudanthera sinaica	Stapeliinae	0.138	705	97	Africa
Cerbera manghas	Plumerieae	0.218	55	12	Africa (Madagascar), tropical Asia, Oceania
Cerbera manghas	Plumerieae	0.218	55	12	Africa (Madagascar), tropical Asia, Oceania
Cerbera odollam	Plumerieae	0.218	55	12	tropical Asia, Oceania
Ceropegia bulbosa	Stapeliinae	0.138	705	97	Africa, Eurasia, tropical Asia
Ceropegia dichotoma	Stapeliinae	0.138	705	97	Africa
Ceropegia intermedia	Stapeliinae	0.138	705	97	tropical Asia (India)
Ceropegia juncea	Stapeliinae	0.138	705	97	tropical Asia
Ceropegia lawii	Stapeliinae	0.138	705	97	tropical Asia (India)
Ceropegia maccannii	Stapeliinae	0.138	705	97	tropical Asia (India)
Ceropegia malwanensis	Stapeliinae	0.138	705	97	tropical Asia (India)
Ceropegia media	Stapeliinae	0.138	705	97	tropical Asia (India)
Ceropegia panchganiensis	Stapeliinae	0.138	705	97	tropical Asia (India)
Ceropegia rollae	Stapeliinae	0.138	705	97	tropical Asia (India)
Ceropegia sahyadrica	Stapeliinae	0.138	705	97	tropical Asia (India)
Chilocarpus costatus	Alyxieae	0.072	138	10	tropical Asia
Chilocarpus rostratus	Alyxieae	0.072	138	10	tropical Asia
Chilocarpus suaveolens	Alyxieae	0.072	138	10	tropical Asia
Chlorocyathus monteiroae	Periplocoideae	0.153	177	27	Africa
Chloropetalum denticulatum	MOG	0.173	1053	182	North America, South America
Chonemorpha fragrans	Apocyneae	0.287	115	33	tropical Asia
Cibirhiza albersiana	Fockeeae	0.833	6	5	Africa
Cibirhiza dhofarensis	Fockeeae	0.833	6	5	Africa
Cleghornia malaccensis	Apocyneae	0.287	115	33	tropical Asia
Condylocarpon isthmicum	Alyxieae	0.072	138	10	South America
Cordylogyne globosa	Asclepiadinae	0.475	364	173	Africa
Couma guianensis	Willughbeieae	0.042	144	6	South America
Craspidospermum verticillatum	Melodineae1	0.100	30	3	Africa (Madagascar)
Crioceras dipladeniiflorus	Tabernaemontaneae	0.542	168	91	Africa
Cryptolepis buchananii	Periplocoideae	0.153	177	27	tropical Asia, Eurasia
Cryptolepis capensis	Periplocoideae	0.153	177	27	Africa
Cryptolepis oblongifolia	Periplocoideae	0.153	177	27	Africa
Cryptolepis sinensis	Periplocoideae	0.153	177	27	tropical Asia, Eurasia
Cryptostegia grandiflora	Periplocoideae	0.153	177	27	Africa (Madagascar)
Cryptostegia madagascariensis	Periplocoideae	0.153	177	27	Africa (Madagascar)
Cycladenia humilis	EOM	0.217	479	104	North America
Cynanchum abyssinicum	Cynanchinae	0.290	252	73	Africa
Cynanchum acutum	Cynanchinae	0.290	252	73	Africa, Eurasia
Cynanchum africanum	Cynanchinae	0.290	252	73	Africa
Cynanchum altiscandens	Cynanchinae	0.290	252	73	Africa
Cynanchum ampanihense	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum angavokeliense	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum appendiculatopsis	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum arenarium	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum auriculatum	Cynanchinae	0.290	252	73	Eurasia
Cynanchum blandum	Cynanchinae	0.290	252	73	South America
Cynanchum boudieri	Cynanchinae	0.290	252	73	Eurasia
Cynanchum boveanum	Cynanchinae	0.290	252	73	Africa
Cynanchum comorense	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum crassiantherae	Cynanchinae	0.290	252	73	Africa
Cynanchum crassipedicellatum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum ellipticum	Cynanchinae	0.290	252	73	Africa
Cynanchum erythranthum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum ethiopicum	Cynanchinae	0.290	252	73	Africa
Cynanchum falcatum	Cynanchinae	0.290	252	73	Africa
Cynanchum floribundum	Cynanchinae	0.290	252	73	Oceania
Cynanchum foetidum	Cynanchinae	0.290	252	73	North America

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Cynanchum folotsioides	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum gerrardii	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum gonoloboides	Cynanchinae	0.290	252	73	Africa
Cynanchum grandidieri	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum hastifolium	Cynanchinae	0.290	252	73	Africa
Cynanchum implicatum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum insigne	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum insipidum	Cynanchinae	0.290	252	73	Africa
Cynanchum itremense	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum juliani-marnieri	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum laeve	Cynanchinae	0.290	252	73	North America
Cynanchum ligulatum	Cynanchinae	0.290	252	73	North America
Cynanchum macranthum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum madagascariense	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum marnierianum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum messeri	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum mevei	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum meyeri	Cynanchinae	0.290	252	73	Africa
Cynanchum montevidense	Cynanchinae	0.290	252	73	North America, South America
Cynanchum moramangense	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum natalitium	Cynanchinae	0.290	252	73	Africa
Cynanchum obovatum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum obtusifolium	Cynanchinae	0.290	252	73	Africa
Cynanchum orangeanum	Cynanchinae	0.290	252	73	Africa
Cynanchum ovalifolium	Cynanchinae	0.290	252	73	tropical Asia, Oceania
Cynanchum pachycladon	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum papillatum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum pearsonianum	Cynanchinae	0.290	252	73	Africa
Cynanchum perrieri	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum phillipsonianum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum polyanthum	Cynanchinae	0.290	252	73	Africa
Cynanchum praecox	Cynanchinae	0.290	252	73	Africa
Cynanchum pycnoneuroides	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum radians	Cynanchinae	0.290	252	73	Africa
Cynanchum radiatum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum rauhianum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum repandum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum rossii	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum rostellatum	Cynanchinae	0.290	252	73	Eurasia
Cynanchum roulinioides	Cynanchinae	0.290	252	73	South America
Cynanchum rubricoronae	Cynanchinae	0.290	252	73	Africa
Cynanchum rungweense	Cynanchinae	0.290	252	73	Africa
Cynanchum sessiliflorum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum sigridiae	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum somaliense	Cynanchinae	0.290	252	73	Africa
Cynanchum subpaniculatum	Cynanchinae	0.290	252	73	South America
Cynanchum thesioides	Cynanchinae	0.290	252	73	Eurasia
Cynanchum toliari	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum verrucosum	Cynanchinae	0.290	252	73	Africa (Madagascar)
Cynanchum viminale	Cynanchinae	0.290	252	73	Africa, tropical Asia, Oceania
Cynanchum wilfordii	Cynanchinae	0.290	252	73	Eurasia
Desmidorchis adenensis	Stapeliinae	0.138	705	97	Africa
Desmidorchis awdeliana	Stapeliinae	0.138	705	97	Africa
Desmidorchis edithae	Stapeliinae	0.138	705	97	Africa
Desmidorchis lavrani	Stapeliinae	0.138	705	97	Africa
Desmidorchis retrospiciens	Stapeliinae	0.138	705	97	Africa
Desmidorchis speciosa	Stapeliinae	0.138	705	97	Africa
Dewevrella cochliostema	Baisseeae	0.172	29	5	Africa
Dictyanthus parviflorus	MOG	0.173	1053	182	North America
Dictyanthus reticulatus	MOG	0.173	1053	182	North America
Diplolepis australis	MOG	0.173	1053	182	South America
Diplolepis biflora	MOG	0.173	1053	182	South America
Diplolepis boerhaviifolia	MOG	0.173	1053	182	South America
Diplolepis bulligera	MOG	0.173	1053	182	South America
Diplolepis descolei	MOG	0.173	1053	182	South America
Diplolepis diemii	MOG	0.173	1053	182	South America
Diplolepis geminiflora	MOG	0.173	1053	182	South America
Diplolepis hieronymi	MOG	0.173	1053	182	South America
Diplolepis menziesii	MOG	0.173	1053	182	South America
Diplolepis mucronata	MOG	0.173	1053	182	South America
Diplolepis nummulariifolia	MOG	0.173	1053	182	South America
Diplolepis pachyphylla	MOG	0.173	1053	182	South America
Diplorhynchus condylocarpon	Melodineae2	0.133	30	1	Africa
Dischidia astephana	Marsdenieae	0.060	737	44	tropical Asia
Dischidia hirsuta	Marsdenieae	0.060	737	44	tropical Asia

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Ditassa auriflora	MOG	0.173	1053	182	South America
Ditassa banksii	MOG	0.173	1053	182	South America
Ditassa blanchetii	MOG	0.173	1053	182	South America
Ditassa burchellii	MOG	0.173	1053	182	South America
Ditassa capillaris	MOG	0.173	1053	182	South America
Ditassa conceptionis	MOG	0.173	1053	182	South America
Ditassa cordeiroana	MOG	0.173	1053	182	South America
Ditassa crassifolia	MOG	0.173	1053	182	South America
Ditassa eximia	MOG	0.173	1053	182	South America
Ditassa fasciculata	MOG	0.173	1053	182	South America
Ditassa hastata	MOG	0.173	1053	182	South America
Ditassa hispida	MOG	0.173	1053	182	South America
Ditassa mucronata	MOG	0.173	1053	182	South America
Ditassa obcordata	MOG	0.173	1053	182	South America
Ditassa obcordata	MOG	0.173	1053	182	South America
Ditassa pohliana	MOG	0.173	1053	182	South America
Ditassa retusa	MOG	0.173	1053	182	South America
Ditassa rotundifolia	MOG	0.173	1053	182	South America
Ditassa tomentosa	MOG	0.173	1053	182	South America
Duvalia angustiloba	Stapeliinae	0.138	705	97	Africa
Duvalia eilensis	Stapeliinae	0.138	705	97	Africa
Duvalia polita	Stapeliinae	0.138	705	97	Africa
Duvaliandra dioscoridis	Stapeliinae	0.138	705	97	Africa
Dyera costulata	Alstonieae	0.044	45	2	tropical Asia
Echidnopsis cereiformis	Stapeliinae	0.138	705	97	Africa
Echidnopsis dammanniana	Stapeliinae	0.138	705	97	Africa
Echidnopsis leachii	Stapeliinae	0.138	705	97	Africa
Echidnopsis malum	Stapeliinae	0.138	705	97	Africa
Echidnopsis repens	Stapeliinae	0.138	705	97	Africa
Echidnopsis squamulata	Stapeliinae	0.138	705	97	Africa
Echites agglutinatus	EOM	0.217	479	104	North America
Echites panduratus	EOM	0.217	479	104	North America
Echites umbellatus	EOM	0.217	479	104	North America
Echites woodsonianus	EOM	0.217	479	104	North America
Echites yucatanensis	EOM	0.217	479	104	North America
Ectadium virgatum	Periplocoideae	0.153	177	27	Africa
Edithcolea grandis	Stapeliinae	0.138	705	97	Africa
Elytropus chilensis	EOM	0.217	479	104	South America
Epigynum auritum	Apocyneae	0.287	115	33	tropical Asia
Epigynum cochinchinense	Apocyneae	0.287	115	33	tropical Asia
Epigynum griffithianum	Apocyneae	0.287	115	33	tropical Asia
Epigynum ridleyi	Apocyneae	0.287	115	33	tropical Asia
Eustegia minuta	Eustegieae	0.250	4	1	Africa
Fanninia caloglossa	Asclepiadinae	0.475	364	173	Africa
Farquharia elliptica	Nerieae	0.127	71	9	Africa
Finlaysonia insularum	Periplocoideae	0.153	177	27	tropical Asia
Fockea capensis	Fockeeae	0.833	6	5	Africa
Fockea edulis	Fockeeae	0.833	6	5	Africa
Fockea multiflora	Fockeeae	0.833	6	5	Africa
Forsteronia acouci	EOM	0.217	479	104	North America, South America
Forsteronia guyanensis	EOM	0.217	479	104	South America
Forsteronia refracta	EOM	0.217	479	104	South America
Forsteronia velloziana	EOM	0.217	479	104	South America
Funastrum arenarium	MOG	0.173	1053	182	North America
Funastrum clausum	MOG	0.173	1053	182	North America, South America
Funastrum odoratum	MOG	0.173	1053	182	North America
Funtumia africana	Malouetieae	0.189	95	18	Africa
Funtumia elastica	Malouetieae	0.189	95	18	Africa
Galactophora schomburgkiana	Malouetieae	0.189	95	18	South America
Geissospermum laeve	Aspidospermateae	0.116	69	8	South America
Glossostelma carsonii	Asclepiadinae	0.475	364	173	Africa
Gomphocarpus abyssinicus	Asclepiadinae	0.475	364	173	Africa
Gomphocarpus cancellatus	Asclepiadinae	0.475	364	173	Africa
Gomphocarpus fruticosus	Asclepiadinae	0.475	364	173	Africa
Gomphocarpus glaucophyllus	Asclepiadinae	0.475	364	173	Africa
Gomphocarpus physocarpus	Asclepiadinae	0.475	364	173	Africa
Gomphocarpus tomentosus	Asclepiadinae	0.475	364	173	Africa
Gongronema angolense	Marsdenieae	0.060	737	44	Africa
Gonioma kamassi	Hunterieae	0.200	20	4	Africa
Gonolobus albomarginatus	MOG	0.173	1053	182	North America, South America
Gonolobus arizonicus	MOG	0.173	1053	182	North America
Gonolobus barbatus	MOG	0.173	1053	182	North America
Gonolobus bibarbatus	MOG	0.173	1053	182	North America
Gonolobus breedlovei	MOG	0.173	1053	182	North America
Gonolobus chloranthus	MOG	0.173	1053	182	North America

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Gonolobus fraternus	MOG	0.173	1053	182	North America
Gonolobus gonoloboides	MOG	0.173	1053	182	North America
Gonolobus grandiflorus	MOG	0.173	1053	182	North America
Gonolobus iyanolensis	MOG	0.173	1053	182	North America
Gonolobus jaliscensis	MOG	0.173	1053	182	North America
Gonolobus jamaicensis	MOG	0.173	1053	182	North America
Gonolobus niger	MOG	0.173	1053	182	North America
Gonolobus parviflorus	MOG	0.173	1053	182	South America
Gonolobus pectinatus	MOG	0.173	1053	182	North America
Gonolobus stenosepalus	MOG	0.173	1053	182	North America
Gonolobus stephanotrichus	MOG	0.173	1053	182	North America
Gonolobus suberosus	MOG	0.173	1053	182	North America
Gonolobus uniflorus	MOG	0.173	1053	182	North America
Gonolobus waitukubuliensis	MOG	0.173	1053	182	North America
Gonolobus xanthotrichus	MOG	0.173	1053	182	North America
Gunnessia pepo	Marsdenieae	0.060	737	44	Oceania
Gymnanthera oblonga	Periplocoideae	0.153	177	27	tropical Asia, Oceania
Gymnema sylvestre	Marsdenieae	0.060	737	44	Africa, tropical Asia
Hancornia speciosa	Willughbeieae	0.042	144	6	South America
Haplophyton crooksii	Aspidospermateae	0.116	69	8	North America
Hemidesmus indicus	Periplocoideae	0.153	177	27	tropical Asia
Hemipogon abietoides	MOG	0.173	1053	182	South America
Hemipogon acerosus	MOG	0.173	1053	182	South America
Hemipogon hatschbachii	MOG	0.173	1053	182	South America
Hemipogon hemipogonoides	MOG	0.173	1053	182	South America
Hemipogon peruvianus	MOG	0.173	1053	182	South America
Hemipogon sprucei	MOG	0.173	1053	182	South America
Heterostemma piperifolium	Heterostemmatinae	0.033	30	1	tropical Asia
Himatanthus bracteatus	Plumerieae	0.218	55	12	South America
Holarrhena curtisii	Malouetieae	0.189	95	18	tropical Asia
Holarrhena pubescens	Malouetieae	0.189	95	18	Africa, tropical Asia
Hoodia gordonii	Stapeliinae	0.138	705	97	Africa
Hoodia officinalis	Stapeliinae	0.138	705	97	Africa
Hoodia triebneri	Stapeliinae	0.138	705	97	Africa
Hoya affinis	Marsdenieae	0.060	737	44	Oceania
Hoya albiflora	Marsdenieae	0.060	737	44	Oceania
Hoya anulata	Marsdenieae	0.060	737	44	Oceania
Hoya australis	Marsdenieae	0.060	737	44	tropical Asia, Oceania
Hoya bilobata	Marsdenieae	0.060	737	44	tropical Asia
Hoya camphorifolia	Marsdenieae	0.060	737	44	tropical Asia
Hoya carnosa	Marsdenieae	0.060	737	44	tropical Asia, Eurasia
Hoya caudata	Marsdenieae	0.060	737	44	tropical Asia
Hoya ciliata	Marsdenieae	0.060	737	44	tropical Asia
Hoya curtisii	Marsdenieae	0.060	737	44	tropical Asia
Hoya edeni	Marsdenieae	0.060	737	44	tropical Asia
Hoya heuschkeliana	Marsdenieae	0.060	737	44	tropical Asia
Hoya imbricata	Marsdenieae	0.060	737	44	tropical Asia
Hoya inflata	Marsdenieae	0.060	737	44	Oceania
Hoya kentiana	Marsdenieae	0.060	737	44	tropical Asia
Hoya kerrii	Marsdenieae	0.060	737	44	tropical Asia
Hoya lacunosa	Marsdenieae	0.060	737	44	tropical Asia
Hoya macgillivrayi	Marsdenieae	0.060	737	44	Oceania
Hoya manipurensis	Marsdenieae	0.060	737	44	tropical Asia
Hoya mariae	Marsdenieae	0.060	737	44	tropical Asia
Hoya meliflua	Marsdenieae	0.060	737	44	tropical Asia
Hoya mitrata	Marsdenieae	0.060	737	44	tropical Asia
Hoya multiflora	Marsdenieae	0.060	737	44	tropical Asia
Hoya pauciflora	Marsdenieae	0.060	737	44	tropical Asia (India)
Hoya pubicalyx	Marsdenieae	0.060	737	44	tropical Asia
Hoya retusa	Marsdenieae	0.060	737	44	tropical Asia
Hoya serpens	Marsdenieae	0.060	737	44	tropical Asia
Hoya sussuela	Marsdenieae	0.060	737	44	tropical Asia
Hoya telosmoides	Marsdenieae	0.060	737	44	tropical Asia
Hoya tsangii	Marsdenieae	0.060	737	44	tropical Asia
Huernia keniensis	Stapeliinae	0.138	705	97	Africa
Huernia kennedyana	Stapeliinae	0.138	705	97	Africa
Hunteria umbellata	Hunterieae	0.200	20	4	Africa
Ibatia rubra	MOG	0.173	1053	182	South America
Ichnocarpus frutescens	Apocyneae	0.287	115	33	tropical Asia, Oceania
Ischnolepis graminifolia	Periplocoideae	0.153	177	27	Africa (Madagascar)
Isonema smeathmannii	Nerieae	0.127	71	9	Africa
Jobinia formosa	MOG	0.173	1053	182	South America
Jobinia lindbergii	MOG	0.173	1053	182	South America
Jobinia streptantha	MOG	0.173	1053	182	South America
Jobinia tarmensis	MOG	0.173	1053	182	South America

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Kamettia chandeei	Vinceae	0.154	156	24	tropical Asia
Kanahia laniflora	Asclepiadinae	0.475	364	173	Africa
Kibatalia macrophylla	Malouetieae	0.189	95	18	tropical Asia
Kopsia fruticosa	Vinceae	0.154	156	24	tropical Asia
Kopsia pauciflora	Vinceae	0.154	156	24	tropical Asia
Lacmellea aculeata	Willughbeieae	0.042	144	6	South America
Larryleachia perlata	Stapeliinae	0.138	705	97	Africa
Laubertia contorta	EOM	0.217	479	104	North America
Lavrania haagnerae	Stapeliinae	0.138	705	97	Africa
Leichhardtia assimulata	Marsdenieae	0.060	737	44	Oceania
Leptadenia arborea	Leptadeniinae	0.190	21	4	Africa
Leptadenia hastata	Leptadeniinae	0.190	21	4	Africa
Macoubea guianensis	Tabernaemontaneae	0.542	168	91	South America
Macroditassa grandiflora	MOG	0.173	1053	182	South America
Macroditassa melantha	MOG	0.173	1053	182	South America
Macropharynx isthmica	EOM	0.217	479	104	North America, South America
Macropharynx peltata	EOM	0.217	479	104	South America
Macroscepis hirsuta	MOG	0.173	1053	182	North America, South America
Malouetia bequaertiana	Malouetieae	0.189	95	18	Africa
Malouetia tamaquarina	Malouetieae	0.189	95	18	South America
Mandevilla anceps	EOM	0.217	479	104	South America
Mandevilla atroviolacea	EOM	0.217	479	104	South America
Mandevilla boliviensis	EOM	0.217	479	104	North America, South America
Mandevilla brachysiphon	EOM	0.217	479	104	North America
Mandevilla callista	EOM	0.217	479	104	South America
Mandevilla cercophylla	EOM	0.217	479	104	South America
Mandevilla coccinea	EOM	0.217	479	104	South America
Mandevilla convolvulacea	EOM	0.217	479	104	North America
Mandevilla duartei	EOM	0.217	479	104	South America
Mandevilla emarginata	EOM	0.217	479	104	South America
Mandevilla foliosa	EOM	0.217	479	104	North America
Mandevilla fragrans	EOM	0.217	479	104	South America
Mandevilla funiformis	EOM	0.217	479	104	South America
Mandevilla glandulosa	EOM	0.217	479	104	South America
Mandevilla hirsuta	EOM	0.217	479	104	North America, South America
Mandevilla holosericea	EOM	0.217	479	104	North America
Mandevilla hypoleuca	EOM	0.217	479	104	North America
Mandevilla illustris	EOM	0.217	479	104	South America
Mandevilla jamesonii	EOM	0.217	479	104	South America
Mandevilla krukovii	EOM	0.217	479	104	South America
Mandevilla lancifolia	EOM	0.217	479	104	South America
Mandevilla laxa	EOM	0.217	479	104	South America
Mandevilla leptophylla	EOM	0.217	479	104	South America
Mandevilla ligustriflora	EOM	0.217	479	104	South America
Mandevilla longiflora	EOM	0.217	479	104	South America
Mandevilla martiana	EOM	0.217	479	104	South America
Mandevilla martii	EOM	0.217	479	104	South America
Mandevilla moricandiana	EOM	0.217	479	104	South America
Mandevilla myriophylla	EOM	0.217	479	104	South America
Mandevilla nacapulensis	EOM	0.217	479	104	North America
Mandevilla nerioides	EOM	0.217	479	104	South America
Mandevilla oaxacana	EOM	0.217	479	104	North America
Mandevilla pendula	EOM	0.217	479	104	South America
Mandevilla pentlandiana	EOM	0.217	479	104	South America
Mandevilla pohliana	EOM	0.217	479	104	South America
Mandevilla pycnantha	EOM	0.217	479	104	South America
Mandevilla rugellosa	EOM	0.217	479	104	South America
Mandevilla rugosa	EOM	0.217	479	104	South America
Mandevilla sagitarii	EOM	0.217	479	104	North America, South America
Mandevilla scabra	EOM	0.217	479	104	South America
Mandevilla sellowii	EOM	0.217	479	104	South America
Mandevilla spigeliiflora	EOM	0.217	479	104	South America
Mandevilla splendens	EOM	0.217	479	104	South America
Mandevilla subsagittata	EOM	0.217	479	104	North America, South America
Mandevilla tenuifolia	EOM	0.217	479	104	South America
Mandevilla torosa	EOM	0.217	479	104	North America
Mandevilla tricolor	EOM	0.217	479	104	South America
Mandevilla tubiflora	EOM	0.217	479	104	North America
Mandevilla urophylla	EOM	0.217	479	104	South America
Mandevilla velame	EOM	0.217	479	104	South America
Mandevilla venulosa	EOM	0.217	479	104	South America
Mandevilla veraguasensis	EOM	0.217	479	104	North America, South America
Marsdenia glabra	Marsdenieae	0.060	737	44	tropical Asia
Marsdenia tenacissima	Marsdenieae	0.060	737	44	tropical Asia
Mascarenhasia arborescens	Malouetieae	0.189	95	18	Africa (Madagascar)

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Mascarenhasia lisianthiflora	Malouetieae	0.189	95	18	Africa (Madagascar)
Matelea bicolor	MOG	0.173	1053	182	North America
Matelea cordata	MOG	0.173	1053	182	North America
Matelea cordifolia	MOG	0.173	1053	182	North America
Matelea correllii	MOG	0.173	1053	182	North America
Matelea ekmanii	MOG	0.173	1053	182	North America
Matelea gonoloboides	MOG	0.173	1053	182	North America
Matelea inconspicua	MOG	0.173	1053	182	North America
Matelea lanata	MOG	0.173	1053	182	North America
Matelea nipensis	MOG	0.173	1053	182	North America
Matelea pedalis	MOG	0.173	1053	182	South America
Matelea phainops	MOG	0.173	1053	182	North America
Matelea pubiflora	MOG	0.173	1053	182	North America
Matelea reticulata	MOG	0.173	1053	182	North America
Matelea sintenisii	MOG	0.173	1053	182	North America
Matelea trachyantha	MOG	0.173	1053	182	North America
Matelea variifolia	MOG	0.173	1053	182	North America
Melodinus australis	Melodineae1	0.133	30	3	Oceania
Melodinus cochinchinensis	Melodineae1	0.133	30	3	tropical Asia
Mesechites mansoanus	EOM	0.217	479	104	South America
Mesechites minimus	EOM	0.217	479	104	North America
Mesechites roseus	EOM	0.217	479	104	North America
Mesechites trifidus	EOM	0.217	479	104	North America, South America
Metastelma giuliettianum	MOG	0.173	1053	182	South America
Metastelma harleyi	MOG	0.173	1053	182	South America
Metastelma myrtifolium	MOG	0.173	1053	182	South America
Metastelma parviflorum	MOG	0.173	1053	182	North America, South America
Metastelma schaffneri	MOG	0.173	1053	182	North America
Micrechites polyanthus	Apocyneae	0.287	115	33	tropical Asia
Micrechites rhombifolius	Apocyneae	0.287	115	33	Oceania
Micrechites serpyllifolius	Apocyneae	0.287	115	33	tropical Asia
Microloma tenuifolium	Astephaninae	0.200	15	3	Africa
Minaria acerosa	MOG	0.173	1053	182	South America
Minaria cordata	MOG	0.173	1053	182	South America
Minaria decussata	MOG	0.173	1053	182	South America
Minaria ditassoides	MOG	0.173	1053	182	South America
Minaria grazielae	MOG	0.173	1053	182	South America
Minaria harleyi	MOG	0.173	1053	182	South America
Minaria magisteriana	MOG	0.173	1053	182	South America
Minaria micromeria	MOG	0.173	1053	182	South America
Minaria polygaloides	MOG	0.173	1053	182	South America
Minaria volubilis	MOG	0.173	1053	182	South America
Miraglossum verticillare	Asclepiadinae	0.475	364	173	Africa
Molongum laxum	Tabernaemontaneae	0.542	168	91	South America
Mondia ecornuta	Periplocoideae	0.153	177	27	Africa
Mondia whitei	Periplocoideae	0.153	177	27	Africa
Monolluma cicatricosa	Stapeliinae	0.138	705	97	Africa
Monolluma hexagona	Stapeliinae	0.138	705	97	Africa
Monolluma quadrangula	Stapeliinae	0.138	705	97	Africa
Monolluma socotrana	Stapeliinae	0.138	705	97	Africa
Monolluma solenophora	Stapeliinae	0.138	705	97	Africa
Monsanima morrenioides	MOG	0.173	1053	182	South America
Morilloa carassensis	MOG	0.173	1053	182	South America
Morilloa lutea	MOG	0.173	1053	182	South America
Motandra paniculata	Baisseeae	0.172	29	5	Africa
Mucoa duckei	Tabernaemontaneae	0.542	168	91	South America
Nautonia nummularia	MOG	0.173	1053	182	South America
Neobracea bahamensis	Malouetieae	0.189	95	18	North America
Neobracea ekmanii	Malouetieae	0.189	95	18	North America
Neobracea valenzuelana	Malouetieae	0.189	95	18	North America
Neocouma ternstroemiacea	Tabernaemontaneae	0.542	168	91	South America
Neoschumannia cardinea	Anisotominae	0.167	30	5	Africa
Neoschumannia kamerunensis	Anisotominae	0.167	30	5	Africa
Nephradenia acerosa	MOG	0.173	1053	182	South America
Nephradenia asparagoides	MOG	0.173	1053	182	South America
Nephradenia filipes	MOG	0.173	1053	182	South America
Nerium oleander	Nerieae	0.127	71	9	Eurasia
Notechidnopsis tessellata	Stapeliinae	0.138	705	97	Africa
Ochrosia coccinea	Vinceae	0.154	156	24	Oceania
Ochrosia elliptica	Vinceae	0.154	156	24	Oceania
Ochrosia oppositifolia	Vinceae	0.154	156	24	tropical Asia, Oceania
Ochrosia poweri	Vinceae	0.154	156	24	Oceania
Odontadenia lutea	EOM	0.217	479	104	South America
Odontadenia perrottetii	EOM	0.217	479	104	South America
Odontadenia puncticulosa	EOM	0.217	479	104	North America, South America

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Oncinema lineare	Astephaninae	0.200	15	3	Africa
Oncinotis tenuiloba	Baisseeae	0.172	29	5	Africa
Ophionella arcuata	Stapeliinae	0.138	705	97	Africa
Orbea carnosa	Stapeliinae	0.138	705	97	Africa
Orbea prognatha	Stapeliinae	0.138	705	97	Africa
Orbea semitubiflora	Stapeliinae	0.138	705	97	Africa
Orbea semota	Stapeliinae	0.138	705	97	Africa
Orbea variegata	Stapeliinae	0.138	705	97	Africa
Orbeanthus hardyi	Stapeliinae	0.138	705	97	Africa
Orthanthera albida	Leptadeniinae	0.190	21	4	Africa
Orthanthera jasminiflora	Leptadeniinae	0.190	21	4	Africa
Orthosia bonplandiana	MOG	0.173	1053	182	North America
Orthosia ellemannii	MOG	0.173	1053	182	South America
Orthosia scoparia	MOG	0.173	1053	182	North America
Orthosia urceolata	MOG	0.173	1053	182	South America
Oxypetalum appendiculatum	MOG	0.173	1053	182	South America
Oxypetalum balansae	MOG	0.173	1053	182	South America
Oxypetalum banksii	MOG	0.173	1053	182	South America
Oxypetalum brachystemma	MOG	0.173	1053	182	South America
Oxypetalum capitatum	MOG	0.173	1053	182	South America
Oxypetalum dactylostelma	MOG	0.173	1053	182	South America
Oxypetalum lanatum	MOG	0.173	1053	182	South America
Oxypetalum minarum	MOG	0.173	1053	182	South America
Oxypetalum pannosum	MOG	0.173	1053	182	South America
Oxypetalum pentasetum	MOG	0.173	1053	182	South America
Oxypetalum solanoides	MOG	0.173	1053	182	South America
Oxypetalum sublanatum	MOG	0.173	1053	182	South America
Oxypetalum sylvestre	MOG	0.173	1053	182	South America
Oxypetalum warmingii	MOG	0.173	1053	182	South America
Oxypetalum wightianum	MOG	0.173	1053	182	South America
Oxystelma esculentum	Asclepiadinae	0.475	364	173	Africa, Eurasia, tropical Asia, Oceania
Pachycarpus appendiculatus	Asclepiadinae	0.475	364	173	Africa
Pachycarpus concolor	Asclepiadinae	0.475	364	173	Africa
Pachycarpus coronarius	Asclepiadinae	0.475	364	173	Africa
Pachycarpus dealbatus	Asclepiadinae	0.475	364	173	Africa
Pachycarpus goetzei	Asclepiadinae	0.475	364	173	Africa
Pachycarpus lineolatus	Asclepiadinae	0.475	364	173	Africa
Pachycarpus natalensis	Asclepiadinae	0.475	364	173	Africa
Pachypodium baronii	Malouetieae	0.189	95	18	Africa (Madagascar)
Pachypodium geayi	Malouetieae	0.189	95	18	Africa (Madagascar)
Pachypodium lamerei	Malouetieae	0.189	95	18	Africa (Madagascar)
Pachypodium saundersii	Malouetieae	0.189	95	18	Africa
Papuechites aambe	Apocyneae	0.287	115	33	Oceania
Parahancornia fasciculata	Willughbeieae	0.042	144	6	South America
Parsonsia crebriflora	EOM	0.217	479	104	Oceania
Parsonsia eucalyptophylla	EOM	0.217	479	104	Oceania
Parsonsia ferruginea	EOM	0.217	479	104	Oceania
Parsonsia flexuosa	EOM	0.217	479	104	Oceania
Parsonsia lata	EOM	0.217	479	104	Oceania
Parsonsia longiflora	EOM	0.217	479	104	Oceania
Parsonsia oligantha	EOM	0.217	479	104	Oceania
Pattalias palustre	MOG	0.173	1053	182	North America
Pectinaria articulata	Stapeliinae	0.138	705	97	Africa
Pentacyphus andinus	MOG	0.173	1053	182	South America
Pentacyphus lehmannii	MOG	0.173	1053	182	South America
Pentalinon luteum	EOM	0.217	479	104	North America
Pentatropis madagascariensis	Tylophorinae	0.292	154	45	Africa (Madagascar)
Pentatropis nivalis	Tylophorinae	0.292	154	45	Africa, Eurasia, tropical Asia
Pentopetia grevei	Periplocoideae	0.153	177	27	Africa (Madagascar)
Peplonia adnata	MOG	0.173	1053	182	South America
Peplonia asteria	MOG	0.173	1053	182	South America
Peplonia macrophylla	MOG	0.173	1053	182	South America
Peplonia organensis	MOG	0.173	1053	182	South America
Peplonia organensis	MOG	0.173	1053	182	South America
Pergularia daemia	Asclepiadinae	0.475	364	173	Africa, Eurasia, tropical Asia
Periploca graeca	Periplocoideae	0.153	177	27	Africa, Eurasia
Periploca laevigata	Periplocoideae	0.153	177	27	Africa
Pervillaea decaryi	Secamonoideae	0.184	158	29	Africa (Madagascar)
Pervillaea phillipsonii	Secamonoideae	0.184	158	29	Africa (Madagascar)
Pervillaea tomentosa	Secamonoideae	0.184	158	29	Africa (Madagascar)
Pervillaea venenata	Secamonoideae	0.184	158	29	Africa (Madagascar)
Petalostelma martianum	MOG	0.173	1053	182	South America
Petalostelma sarcostemma	MOG	0.173	1053	182	South America
Petchia ceylanica	Vinceae	0.154	156	24	tropical Asia (India)
Petchia madagascariensis	Vinceae	0.154	156	24	Africa (Madagascar)

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Petopentia natalensis	Periplocoideae	0.153	177	27	Africa
Philibertia boliviana	MOG	0.173	1053	182	South America
Philibertia candolleana	MOG	0.173	1053	182	South America
Philibertia discolor	MOG	0.173	1053	182	South America
Philibertia fontellae	MOG	0.173	1053	182	South America
Philibertia gilliesii	MOG	0.173	1053	182	South America
Philibertia gilliesii	MOG	0.173	1053	182	South America
Philibertia globiflora	MOG	0.173	1053	182	South America
Philibertia lysimachioides	MOG	0.173	1053	182	South America
Philibertia multiflora	MOG	0.173	1053	182	South America
Philibertia parviflora	MOG	0.173	1053	182	South America
Philibertia picta	MOG	0.173	1053	182	South America
Phyllanthera grayi	Periplocoideae	0.153	177	27	Oceania
Piaranthus barrydalensis	Stapeliinae	0.138	705	97	Africa
Piaranthus comptus	Stapeliinae	0.138	705	97	Africa
Piaranthus decipiens	Stapeliinae	0.138	705	97	Africa
Picralima nitida	Hunterieae	0.200	20	4	Africa
Pinochia corymbosa	EOM	0.217	479	104	North America
Plectaneia thouarsii	Alyxieae	0.072	138	10	Africa (Madagascar)
Pleiocarpa mutica	Hunterieae	0.200	20	4	Africa
Pleioceras barteri	Wrightieae	0.258	31	8	Africa
Plumeria alba	Plumerieae	0.218	55	12	North America
Plumeria cubensis	Plumerieae	0.218	55	12	North America
Plumeria obtusa	Plumerieae	0.218	55	12	North America
Plumeria rubra	Plumerieae	0.218	55	12	North America, South America
Poicilla tamnifolia	MOG	0.173	1053	182	North America
Polystemma guatemalense	MOG	0.173	1053	182	North America
Polystemma viridiflorum	MOG	0.173	1053	182	North America
Pottsia laxiflora	Apocyneae	0.287	115	33	tropical Asia
Prestonia coalita	EOM	0.217	479	104	South America
Prestonia lagoensis	EOM	0.217	479	104	South America
Prestonia mexicana	EOM	0.217	479	104	North America, South America
Prestonia portobellensis	EOM	0.217	479	104	North America, South America
Prestonia quinquangularis	EOM	0.217	479	104	North America
Prestonia robusta	EOM	0.217	479	104	South America
Prestonia tomentosa	EOM	0.217	479	104	South America
Prosthecidiscus guatemalensis	MOG	0.173	1053	182	North America
Pseudolithos caput-viperae	Stapeliinae	0.138	705	97	Africa
Pseudolithos migiurtinus	Stapeliinae	0.138	705	97	Africa
Pteralyxia kauaiensis	Alyxieae	0.072	138	10	Oceania
Ptycanthera oblongata	MOG	0.173	1053	182	North America
Quaqua mammillaris	Stapeliinae	0.138	705	97	Africa
Raphionacme flanaganii	Periplocoideae	0.153	177	27	Africa
Raphionacme galpinii	Periplocoideae	0.153	177	27	Africa
Raphionacme welwitschii	Periplocoideae	0.153	177	27	Africa
Rauvolfia caffra	Vinceae	0.154	156	24	Africa
Rauvolfia ligustrina	Vinceae	0.154	156	24	North America, South America
Rauvolfia littoralis	Vinceae	0.154	156	24	North America, South America
Rauvolfia mannii	Vinceae	0.154	156	24	Africa
Rauvolfia sellowii	Vinceae	0.154	156	24	South America
Rauvolfia serpentina	Vinceae	0.154	156	24	tropical Asia
Rauvolfia sumatrana	Vinceae	0.154	156	24	tropical Asia
Rauvolfia tetraphylla	Vinceae	0.154	156	24	North America, South America
Rauvolfia verticillata	Vinceae	0.154	156	24	tropical Asia, Eurasia
Rauvolfia vomitoria	Vinceae	0.154	156	24	Africa
Rhabdadenia biflora	Rhabdadenieae	1.000	3	3	North America, South America
Rhabdadenia madida	Rhabdadenieae	1.000	3	3	South America
Rhabdadenia madida	Rhabdadenieae	1.000	3	3	South America
Rhazya stricta	Amsonieae	0.188	16	3	tropical Asia, Eurasia
Rhigospira quadrangularis	Tabernaemontaneae	0.542	168	91	South America
Rhodocalyx riedelii	EOM	0.217	479	104	South America
Rhodocalyx rotundifolius	EOM	0.217	479	104	South America
Rhyssolobium dumosum	Marsdenieae	0.060	737	44	Africa
Rhytidocaulon ciliatum	Stapeliinae	0.138	705	97	Africa
Rhytidocaulon fulleri	Stapeliinae	0.138	705	97	Africa
Riocreuxia torulosa	Anisotominae	0.167	30	5	Africa
Ruehssia carvalhoi	Marsdenieae	0.060	737	44	South America
Ruehssia coulteri	Marsdenieae	0.060	737	44	North America
Ruehssia suberosa	Marsdenieae	0.060	737	44	South America
Saba comorensis	Willughbeieae	0.042	144	6	Africa (Madagascar)
Salpinctes kalmiifolius	EOM	0.217	479	104	South America
Schizoglossum atropurpureum	Asclepiadinae	0.475	364	173	Africa
Schizoglossum cordifolium	Asclepiadinae	0.475	364	173	Africa
Schizoglossum eustegioides	Asclepiadinae	0.475	364	173	Africa
Schizoglossum filiforme	Asclepiadinae	0.475	364	173	Africa

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Schizostephanus alatus	Cynanchinae	0.290	252	73	Africa
Schizozygia coffaeoides	Tabernaemontaneae	0.542	168	91	Africa
Schlechterella abyssinica	Periplocoideae	0.153	177	27	Africa
Schubertia grandiflora	MOG	0.173	1053	182	South America
Scyphostelma beckii	MOG	0.173	1053	182	South America
Scyphostelma harlingii	MOG	0.173	1053	182	South America
Scyphostelma microphyllum	MOG	0.173	1053	182	South America
Secamone alpini	Secamonoideae	0.184	158	29	Africa
Secamone bosseri	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone buxifolia	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone castanea	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone cloiselii	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone cristata	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone ecoronata	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone elliottii	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone elliptica	Secamonoideae	0.184	158	29	tropical Asia, Oceania
Secamone falcata	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone geayi	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone glaberrima	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone grandiflora	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone humbertii	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone ligustrifolia	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone minutifolia	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone oleifolia	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone sparsiflora	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone tenuifolia	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone uncinata	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone urceolata	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamone volubilis	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamonopsis madagascariensis	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secamonopsis microphylla	Secamonoideae	0.184	158	29	Africa (Madagascar)
Secondatia densiflora	EOM	0.217	479	104	South America
Sindechites henryi	Apocyneae	0.287	115	33	Eurasia
Sisyranthus trichostomus	Anisotominae	0.167	30	5	Africa
Skytanthus acutus	Plumerieae	0.218	55	12	South America
Solenostemma oleifolium	Asclepiadinae	0.475	364	173	Africa
Spirolobium cambodianum	Malouetieae	0.189	95	18	tropical Asia
Spongiosperma macrophyllum	Tabernaemontaneae	0.542	168	91	South America
Stapelia glanduliflora	Stapeliinae	0.138	705	97	Africa
Stapelia leendertziae	Stapeliinae	0.138	705	97	Africa
Stapelia rufa	Stapeliinae	0.138	705	97	Africa
Stapelianthus decaryi	Stapeliinae	0.138	705	97	Africa (Madagascar)
Stapeliopsis neronis	Stapeliinae	0.138	705	97	Africa
Stathmostelma diversifolium	Asclepiadinae	0.475	364	173	Africa
Stathmostelma gigantiflorum	Asclepiadinae	0.475	364	173	Africa
Stathmostelma pauciflorum	Asclepiadinae	0.475	364	173	Africa
Stenostelma corniculatum	Asclepiadinae	0.475	364	173	Africa
Stephanostema stenocarpum	Wrightieae	0.258	31	8	Africa
Stephanotis floribunda	Marsdenieae	0.060	737	44	Africa (Madagascar)
Stipecoma peltigera	EOM	0.217	479	104	South America
Stomatostemma monteiroae	Periplocoideae	0.153	177	27	Africa
Streptoechites chinensis	Apocyneae	0.287	115	33	tropical Asia
Strophanthus boivinii	Nerieae	0.127	71	9	Africa (Madagascar)
Strophanthus caudatus	Nerieae	0.127	71	9	tropical Asia
Strophanthus preussii	Nerieae	0.127	71	9	Africa
Suberogerens cyclophylla	MOG	0.173	1053	182	North America
Tabernaemontana africana	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana alba	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana alfaroi	Tabernaemontaneae	0.542	168	91	North America
Tabernaemontana alternifolia	Tabernaemontaneae	0.542	168	91	tropical Asia (India)
Tabernaemontana amygdalifolia	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana angulata	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana arborea	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana aurantiaca	Tabernaemontaneae	0.542	168	91	Oceania
Tabernaemontana brachyantha	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana bufalina	Tabernaemontaneae	0.542	168	91	tropical Asia
Tabernaemontana calcarea	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana capuronii	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana catharinensis	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana cerifera	Tabernaemontaneae	0.542	168	91	Oceania
Tabernaemontana ciliata	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana citrifolia	Tabernaemontaneae	0.542	168	91	North America
Tabernaemontana coffeoides	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana columbiensis	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana contorta	Tabernaemontaneae	0.542	168	91	Africa

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Tabernaemontana coriacea	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana crassa	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana crassifolia	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana cuspidata	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana cymosa	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana disticha	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana divaricata	Tabernaemontaneae	0.542	168	91	tropical Asia
Tabernaemontana donnell-smithii	Tabernaemontaneae	0.542	168	91	North America
Tabernaemontana eglandulosa	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana elegans	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana eusepala	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana flavicans	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana glabra	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana glandulosa	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana heterophylla	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana humblotii	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana hystrix	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana inconspicua	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana laeta	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana letestui	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana litoralis	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana litoralis	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana lorifera	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana macrocalyx	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana macrocarpa	Tabernaemontaneae	0.542	168	91	tropical Asia
Tabernaemontana markgrafiana	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana mocquerysi	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana muricata	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana odoratissima	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana pachysiphon	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana pandacaqui	Tabernaemontaneae	0.542	168	91	tropical Asia, Oceania
Tabernaemontana pauciflora	Tabernaemontaneae	0.542	168	91	tropical Asia
Tabernaemontana peduncularis	Tabernaemontaneae	0.542	168	91	tropical Asia
Tabernaemontana penduliflora	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana persicariifolia	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana phymata	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana psorocarpa	Tabernaemontaneae	0.542	168	91	Africa
Tabernaemontana retusa	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana rupicola	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana salzmannii	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana sambiranensis	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana sananho	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana sessilifolia	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana simulans	Tabernaemontaneae	0.542	168	91	North America
Tabernaemontana siphilitica	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana solanifolia	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana sphaerocarpa	Tabernaemontaneae	0.542	168	91	tropical Asia
Tabernaemontana stellata	Tabernaemontaneae	0.542	168	91	Africa (Madagascar)
Tabernaemontana undulata	Tabernaemontaneae	0.542	168	91	North America, South America
Tabernaemontana vanheurckii	Tabernaemontaneae	0.542	168	91	South America
Tabernaemontana ventricosa	Tabernaemontaneae	0.542	168	91	Africa
Tabernanthe iboga	Tabernaemontaneae	0.542	168	91	Africa
Tacazzea apiculata	Periplocoideae	0.153	177	27	Africa
Tassadia berteroana	MOG	0.173	1053	182	South America
Tassadia guianensis	MOG	0.173	1053	182	South America
Tassadia obovata	MOG	0.173	1053	182	North America, South America
Tavaresia barklyi	Stapeliinae	0.138	705	97	Africa
Telosma cordata	Marsdenieae	0.060	737	44	tropical Asia
Temnadenia odorifera	EOM	0.217	479	104	South America
Temnadenia violacea	EOM	0.217	479	104	South America
Thevetia ahouai	Plumerieae	0.218	55	12	North America, South America
Thyrsanthella difformis	EOM	0.217	479	104	North America
Tintinnabularia gratissima	EOM	0.217	479	104	North America
Tintinnabularia mortonii	EOM	0.217	479	104	North America
Tonduzia longifolia	Vinceae	0.154	156	24	North America
Toxocarpus villosus	Secamonoideae	0.184	158	29	tropical Asia, Eurasia
Trachelospermum asiaticum	Apocyneae	0.287	115	33	tropical Asia, Eurasia
Trachelospermum axillare	Apocyneae	0.287	115	33	Eurasia
Trachelospermum jasminoides	Apocyneae	0.287	115	33	Eurasia
Tridentea virescens	Stapeliinae	0.138	705	97	Africa
Tromotriche longipes	Stapeliinae	0.138	705	97	Africa
Tromotriche revoluta	Stapeliinae	0.138	705	97	Africa
Tweedia brunonis	MOG	0.173	1053	182	South America
Urceola laevigata	Apocyneae	0.287	115	33	tropical Asia
Urceola lucida	Apocyneae	0.287	115	33	tropical Asia

Species	Clade	Sampling%	Richness	Spp. included	Distribution
Urceola micrantha	Apocyneae	0.287	115	33	tropical Asia, Eurasia
Urceola minutiflora	Apocyneae	0.287	115	33	tropical Asia
Urceola rosea	Apocyneae	0.287	115	33	tropical Asia, Eurasia
Vallaris solanacea	Apocyneae	0.287	115	33	tropical Asia
Vallesia antillana	Aspidospermateae	0.116	69	8	North America
Vinca difformis	Vinceae	0.154	156	24	Africa, Eurasia
Vinca major	Vinceae	0.154	156	24	Eurasia
Vinca minor	Vinceae	0.154	156	24	Eurasia
Vincetoxicum amplexicaule	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum anomalum	Tylophorinae	0.292	154	45	Africa
Vincetoxicum apiculatum	Tylophorinae	0.292	154	45	Africa
Vincetoxicum aristolochioides	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum ascyrifolium	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum atratum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum biglandulosum	Tylophorinae	0.292	154	45	Oceania
Vincetoxicum bracteatum	Tylophorinae	0.292	154	45	tropical Asia (Philippines)
Vincetoxicum brownii	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum carnosum	Tylophorinae	0.292	154	45	tropical Asia, Oceania
Vincetoxicum cernuum	Tylophorinae	0.292	154	45	Africa (Madagascar)
Vincetoxicum confusum	Tylophorinae	0.292	154	45	Africa (Madagascar)
Vincetoxicum conspicuum	Tylophorinae	0.292	154	45	Africa
Vincetoxicum diplostigma	Tylophorinae	0.292	154	45	Africa
Vincetoxicum flanaganii	Tylophorinae	0.292	154	45	Africa
Vincetoxicum flexuosum	Tylophorinae	0.292	154	45	tropical Asia, Eurasia, Oceania
Vincetoxicum flexuosum.var.tenuis	Tylophorinae	0.292	154	45	tropical Asia, Eurasia
Vincetoxicum floribundum	Tylophorinae	0.292	154	45	Oceania
Vincetoxicum fruticulosum	Tylophorinae	0.292	154	45	Africa
Vincetoxicum henryi	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum heterophyllum	Tylophorinae	0.292	154	45	Africa
Vincetoxicum hirsutum	Tylophorinae	0.292	154	45	tropical Asia
Vincetoxicum hirundinaria	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum inamoenum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum indicum	Tylophorinae	0.292	154	45	tropical Asia
Vincetoxicum japonicum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum katoi	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum macrophyllum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum magnificum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum mongolicum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum nigrum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum nipponicum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum oblongum	Tylophorinae	0.292	154	45	Africa
Vincetoxicum pycnostelma	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum rossicum	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum sieboldii	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum somaliense	Tylophorinae	0.292	154	45	Africa
Vincetoxicum stocksii	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum sylvaticum	Tylophorinae	0.292	154	45	Africa (Madagascar)
Vincetoxicum tanakae	Tylophorinae	0.292	154	45	Eurasia
Vincetoxicum tenuipedunculatum	Tylophorinae	0.292	154	45	Africa
Vincetoxicum villosum	Tylophorinae	0.292	154	45	tropical Asia
Vincetoxicum yamanakae	Tylophorinae	0.292	154	45	Eurasia
Voacanga africana	Tabernaemontaneae	0.542	168	91	Africa
Voacanga globosa	Tabernaemontaneae	0.542	168	91	tropical Asia
Voacanga grandifolia	Tabernaemontaneae	0.542	168	91	tropical Asia, Oceania
Voacanga psilocalyx	Tabernaemontaneae	0.542	168	91	Africa
Whitesloanea crassa	Stapeliinae	0.138	705	97	Africa
Willughbeia angustifolia	Willughbeieae	0.042	144	6	tropical Asia
Woodia mucronata	Asclepiadinae	0.475	364	173	Africa
Wrightia arborea	Wrightieae	0.258	31	8	tropical Asia
Wrightia coccinea	Wrightieae	0.258	31	8	tropical Asia
Wrightia dubia	Wrightieae	0.258	31	8	tropical Asia
Wrightia lanceolata	Wrightieae	0.258	31	8	tropical Asia
Wrightia religiosa	Wrightieae	0.258	31	8	tropical Asia
Wrightia sirikitiae	Wrightieae	0.258	31	8	tropical Asia
Xysmalobium fraternum	Asclepiadinae	0.475	364	173	Africa
Xysmalobium gerrardii	Asclepiadinae	0.475	364	173	Africa
Xysmalobium heudelotianum	Asclepiadinae	0.475	364	173	Africa
Xysmalobium involucratum	Asclepiadinae	0.475	364	173	Africa
Xysmalobium kaessneri	Asclepiadinae	0.475	364	173	Africa
Xysmalobium parviflorum	Asclepiadinae	0.475	364	173	Africa
Xysmalobium tysonianum	Asclepiadinae	0.475	364	173	Africa
Xysmalobium undulatum	Asclepiadinae	0.475	364	173	Africa
Zygostelma benthamii	Periplocoideae	0.153	177	27	tropical Asia

TABLE S2 (a). Fit of 72 biogeographic models of Apocynaceae. See text for model descriptions. Depicted is the log likelihood (lnL), Akaike information criterion (AIC), sample size corrected AIC (AICc), delta AICc (ΔAICc) values, and Akaike weights estimated using BioGeoBEARS. The table is sorted according to model fit.

Model	lnL	DF	AIC	AICc	ΔAICc	Akaike weights
M1s.dec	-1144.814	2	2293.63	2293.64	0.0	0.927
M1.dec	-1147.355	2	2298.71	2298.72	5.1	0.073
M1.diva	-1248.735	2	2501.47	2501.48	207.8	6.84e-46
M1s.diva	-1258.539	2	2521.08	2521.09	227.5	3.78e-50
M2.dec	-1460.719	2	2925.44	2925.45	631.8	5.91e-138
M12.dec	-1464.254	2	2932.51	2932.52	638.9	1.72e-139
M12s.dec	-1464.254	2	2932.51	2932.52	638.9	1.72e-139
M11.dec	-1464.428	2	2932.86	2932.87	639.2	1.45e-139
M11s.dec	-1464.428	2	2932.86	2932.87	639.2	1.45e-139
M2s.dec	-1465.720	2	2935.44	2935.45	641.8	3.98e-140
M10.dec	-1466.217	2	2936.43	2936.44	642.8	2.42e-140
M10s.dec	-1466.217	2	2936.43	2936.44	642.8	2.42e-140
M6.dec	-1468.329	2	2940.66	2940.67	647.0	2.93e-141
M6s.dec	-1468.329	2	2940.66	2940.67	647.0	2.93e-141
M5.dec	-1469.163	2	2942.33	2942.34	648.7	1.27e-141
M5s.dec	-1469.163	2	2942.33	2942.34	648.7	1.27e-141
M8.dec	-1471.892	2	2947.78	2947.80	654.2	8.30e-143
M8s.dec	-1471.892	2	2947.78	2947.80	654.2	8.30e-143
M9.dec	-1473.220	2	2950.44	2950.45	656.8	2.20e-143
M9s.dec	-1473.220	2	2950.44	2950.45	656.8	2.20e-143
M3.dec	-1473.312	2	2950.62	2950.64	657.0	2.01e-143
M3s.dec	-1473.312	2	2950.62	2950.64	657.0	2.01e-143
M7.dec	-1473.423	2	2950.85	2950.86	657.2	1.80e-143
M7s.dec	-1473.423	2	2950.85	2950.86	657.2	1.80e-143
M4.dec	-1473.993	2	2951.99	2952.00	658.4	1.02e-143
M4s.dec	-1473.993	2	2951.99	2952.00	658.4	1.02e-143
M2.bay	-1530.454	2	3064.91	3064.92	771.3	3.06e-168
M1s.bay	-1535.473	2	3074.95	3074.96	781.3	2.02e-170
M12.bay	-1540.832	2	3085.66	3085.68	792.0	9.52e-173
M12s.bay	-1540.832	2	3085.66	3085.68	792.0	9.52e-173
M11.bay	-1541.092	2	3086.18	3086.20	792.6	7.34e-173
M11s.bay	-1541.092	2	3086.18	3086.20	792.6	7.34e-173
M10.bay	-1543.377	2	3090.75	3090.76	797.1	7.48e-174
M10s.bay	-1543.377	2	3090.75	3090.76	797.1	7.48e-174
M6.bay	-1546.119	2	3096.24	3096.25	802.6	4.81e-175
M6s.bay	-1546.119	2	3096.24	3096.25	802.6	4.81e-175
M5.bay	-1546.676	2	3097.35	3097.36	803.7	2.76e-175
M5s.bay	-1546.676	2	3097.35	3097.36	803.7	2.76e-175
M9.bay	-1550.286	2	3104.57	3104.58	810.9	7.46e-177
M9s.bay	-1550.286	2	3104.57	3104.58	810.9	7.46e-177
M8.bay	-1552.451	2	3108.90	3108.91	815.3	8.56e-178
M8s.bay	-1552.451	2	3108.90	3108.91	815.3	8.56e-178
M3.bay	-1553.462	2	3110.92	3110.94	817.3	3.12e-178

Model	lnL	DF	AIC	AICc	ΔAICc	Akaike weights
M3s.bay	-1553.462	2	3110.92	3110.94	817.3	3.12e-178
M4.bay	-1553.994	2	3111.99	3112.00	818.4	1.83e-178
M4s.bay	-1553.994	2	3111.99	3112.00	818.4	1.83e-178
M7.bay	-1554.541	2	3113.08	3113.09	819.5	1.06e-178
M7s.bay	-1554.541	2	3113.08	3113.09	819.5	1.06e-178
M2s.bay	-1563.231	2	3130.46	3130.47	836.8	1.78e-182
M1.bay	-1619.090	2	3242.18	3242.19	948.6	9.81e-207
M2.diva	-1671.825	2	3347.65	3347.66	1054.0	1.23e-229
M12.diva	-1676.268	2	3356.54	3356.55	1062.9	1.45e-231
M12s.diva	-1676.268	2	3356.54	3356.55	1062.9	1.45e-231
M11.diva	-1676.525	2	3357.05	3357.06	1063.4	1.12e-231
M11s.diva	-1676.525	2	3357.05	3357.06	1063.4	1.12e-231
M10.diva	-1677.588	2	3359.18	3359.19	1065.6	3.86e-232
M10s.diva	-1677.588	2	3359.18	3359.19	1065.6	3.86e-232
M2s.diva	-1677.639	2	3359.28	3359.29	1065.7	3.67e-232
M6.diva	-1679.009	2	3362.02	3362.03	1068.4	9.31e-233
M6s.diva	-1679.009	2	3362.02	3362.03	1068.4	9.31e-233
M5.diva	-1680.033	2	3364.07	3364.08	1070.4	3.35e-233
M5s.diva	-1680.033	2	3364.07	3364.08	1070.4	3.35e-233
M8.diva	-1681.659	2	3367.32	3367.33	1073.7	6.59e-234
M8s.diva	-1681.659	2	3367.32	3367.33	1073.7	6.59e-234
M4.diva	-1683.335	2	3370.67	3370.68	1077.0	1.23e-234
M4s.diva	-1683.335	2	3370.67	3370.68	1077.0	1.23e-234
M7.diva	-1683.343	2	3370.69	3370.70	1077.1	1.22e-234
M7s.diva	-1683.343	2	3370.69	3370.70	1077.1	1.22e-234
M9.diva	-1683.725	2	3371.45	3371.46	1077.8	8.34e-235
M9s.diva	-1683.725	2	3371.45	3371.46	1077.8	8.34e-235
M3.diva	-1683.746	2	3371.49	3371.50	1077.9	8.17e-235
M3s.diva	-1683.746	2	3371.49	3371.50	1077.9	8.17e-235

TABLE S2 (b). Fit of 84 biogeographic models of Apocynaceae: 72 models considered in the results plus 12 models additionally including the +J parameter (M1+J, M1s+J, M2+J, M2s+J using DEC, BayArea-like, and DIVA-like models in BioGeoBEARS); see tables S3 (a) and text for descriptions. Models in bold font are given in Figs S2–S5.

Model	lnL	DF	AIC	AICc	ΔAICc	Akaike weights
M1s.dec.j	-1043.774	3	2093.55	2093.57	0.0	1
M1.dec.j	-1081.966	3	2169.93	2169.96	76.4	2.59E-17
M1s.diva.j	-1086.715	3	2179.43	2179.45	85.9	2.24E-19
M1s.bay.j	-1118.094	3	2242.19	2242.21	148.6	5.29E-33
M1.diva.j	-1129.984	3	2265.97	2265.99	172.4	3.63E-38
M1s.dec	-1144.814	2	2293.63	2293.64	200.1	3.59E-44
M1.dec	-1147.355	2	2298.71	2298.72	205.2	2.83E-45
M1.bay.j	-1148.903	3	2303.81	2303.83	210.3	2.20E-46
M1.diva	-1248.735	2	2501.47	2501.48	407.9	2.65E-89
M1s.diva	-1258.539	2	2521.08	2521.09	427.5	1.46E-93
M2.bay.j	-1413.965	3	2833.93	2833.95	740.4	1.69E-161
M2.dec.j	-1418.486	3	2842.97	2843.00	749.4	1.84E-163

Model	lnL	DF	AIC	AICc	ΔAICc	Akaike weights
M2s.dec.j	-1421.664	3	2849.33	2849.35	755.8	7.66E-165
M2s.bay.j	-1436.139	3	2878.28	2878.30	784.7	3.96E-171
M2.dec	-1460.719	2	2925.44	2925.45	831.9	2.29E-181
M12.dec	-1464.254	2	2932.51	2932.52	839.0	6.68E-183
M12s.dec	-1464.254	2	2932.51	2932.52	839.0	6.68E-183
M11.dec	-1464.428	2	2932.86	2932.87	839.3	5.61E-183
M11s.dec	-1464.428	2	2932.86	2932.87	839.3	5.61E-183
M2s.dec	-1465.720	2	2935.44	2935.45	841.9	1.54E-183
M10.dec	-1466.217	2	2936.43	2936.44	842.9	9.38E-184
M10s.dec	-1466.217	2	2936.43	2936.44	842.9	9.38E-184
M6.dec	-1468.329	2	2940.66	2940.67	847.1	1.13E-184
M6s.dec	-1468.329	2	2940.66	2940.67	847.1	1.13E-184
M5.dec	-1469.163	2	2942.33	2942.34	848.8	4.93E-185
M5s.dec	-1469.163	2	2942.33	2942.34	848.8	4.93E-185
M8.dec	-1471.892	2	2947.78	2947.80	854.2	3.22E-186
M8s.dec	-1471.892	2	2947.78	2947.80	854.2	3.22E-186
M9.dec	-1473.220	2	2950.44	2950.45	856.9	8.52E-187
M9s.dec	-1473.220	2	2950.44	2950.45	856.9	8.52E-187
M3.dec	-1473.312	2	2950.62	2950.64	857.1	7.77E-187
M3s.dec	-1473.312	2	2950.62	2950.64	857.1	7.77E-187
M7.dec	-1473.423	2	2950.85	2950.86	857.3	6.96E-187
M7s.dec	-1473.423	2	2950.85	2950.86	857.3	6.96E-187
M4.dec	-1473.993	2	2951.99	2952.00	858.4	3.93E-187
M4s.dec	-1473.993	2	2951.99	2952.00	858.4	3.93E-187
M2.bay	-1530.454	2	3064.91	3064.92	971.4	1.19E-211
M1s.bay	-1535.473	2	3074.95	3074.96	981.4	7.85E-214
M12.bay	-1540.832	2	3085.66	3085.68	992.1	3.69E-216
M12s.bay	-1540.832	2	3085.66	3085.68	992.1	3.69E-216
M11.bay	-1541.092	2	3086.18	3086.20	992.6	2.85E-216
M11s.bay	-1541.092	2	3086.18	3086.20	992.6	2.85E-216
M10.bay	-1543.377	2	3090.75	3090.76	997.2	2.90E-217
M10s.bay	-1543.377	2	3090.75	3090.76	997.2	2.90E-217
M6.bay	-1546.119	2	3096.24	3096.25	1002.7	1.87E-218
M6s.bay	-1546.119	2	3096.24	3096.25	1002.7	1.87E-218
M5.bay	-1546.676	2	3097.35	3097.36	1003.8	1.07E-218
M5s.bay	-1546.676	2	3097.35	3097.36	1003.8	1.07E-218
M9.bay	-1550.286	2	3104.57	3104.58	1011.0	2.89E-220
M9s.bay	-1550.286	2	3104.57	3104.58	1011.0	2.89E-220
M8.bay	-1552.451	2	3108.90	3108.91	1015.3	3.32E-221
M8s.bay	-1552.451	2	3108.90	3108.91	1015.3	3.32E-221
M3.bay	-1553.462	2	3110.92	3110.94	1017.4	1.21E-221
M3s.bay	-1553.462	2	3110.92	3110.94	1017.4	1.21E-221
M4.bay	-1553.994	2	3111.99	3112.00	1018.4	7.10E-222
M4s.bay	-1553.994	2	3111.99	3112.00	1018.4	7.10E-222
M2.diva.j	-1553.309	3	3112.62	3112.64	1019.1	5.15E-222
M7.bay	-1554.541	2	3113.08	3113.09	1019.5	4.10E-222
M7s.bay	-1554.541	2	3113.08	3113.09	1019.5	4.10E-222
M2s.diva.j	-1558.317	3	3122.63	3122.66	1029.1	3.44E-224
M2s.bay	-1563.231	2	3130.46	3130.47	1036.9	6.91E-226
M1.bay	-1619.090	2	3242.18	3242.19	1148.6	3.80E-250
M2.diva	-1671.825	2	3347.65	3347.66	1254.1	4.76E-273
M12.diva	-1676.268	2	3356.54	3356.55	1263.0	5.60E-275
M12s.diva	-1676.268	2	3356.54	3356.55	1263.0	5.60E-275
M11.diva	-1676.525	2	3357.05	3357.06	1263.5	4.33E-275
M11s.diva	-1676.525	2	3357.05	3357.06	1263.5	4.33E-275
M10.diva	-1677.588	2	3359.18	3359.19	1265.6	1.50E-275

Model	lnL	DF	AIC	AICc	ΔAICc	Akaike weights
M10s.diva	-1677.588	2	3359.18	3359.19	1265.6	1.50E-275
M2s.diva	-1677.639	2	3359.28	3359.29	1265.7	1.42E-275
M6.diva	-1679.009	2	3362.02	3362.03	1268.5	3.61E-276
M6s.diva	-1679.009	2	3362.02	3362.03	1268.5	3.61E-276
M5.diva	-1680.033	2	3364.07	3364.08	1270.5	1.30E-276
M5s.diva	-1680.033	2	3364.07	3364.08	1270.5	1.30E-276
M8.diva	-1681.659	2	3367.32	3367.33	1273.8	2.55E-277
M8s.diva	-1681.659	2	3367.32	3367.33	1273.8	2.55E-277
M4.diva	-1683.335	2	3370.67	3370.68	1277.1	4.77E-278
M4s.diva	-1683.335	2	3370.67	3370.68	1277.1	4.77E-278
M7.diva	-1683.343	2	3370.69	3370.70	1277.1	4.74E-278
M7s.diva	-1683.343	2	3370.69	3370.70	1277.1	4.74E-278
M9.diva	-1683.725	2	3371.45	3371.46	1277.9	3.23E-278
M9s.diva	-1683.725	2	3371.45	3371.46	1277.9	3.23E-278
M3.diva	-1683.746	2	3371.49	3371.50	1277.9	3.17E-278
M3s.diva	-1683.746	2	3371.49	3371.50	1277.9	3.17E-278

TABLE S3 Models incorporating Apocynaceae ancestral area constraints, showing model number, the hypothesized area of origin, and the constrained geographic range (state space at the root node; Geographic range).

Model No	Hypothesis of origin	Geographic range
M3	South America	S
M4	Africa	A
M5	West-Gondwana	S+A
M6	Gondwana	S+A+O
M7	tropical Asia	T
M8	East-Gondwana	T+O
M9	Palaearctic	N+E
M10	Laurasia	N+E+T
M11	Pantropical 1	S+A+T
M12	Pantropical 2	S+A+O+T

TABLE S4 Numbers of dispersal events between the six biogeographic areas estimated by biogeographical stochastic mapping (BSM) using the **M1s.DEC+J** model in BioGeoBEARS. Given is the sum of all dispersals [d] and range switching [a] events. Dispersals from an area (source) in rows to an area (sink) in columns.

Area	N	S	A	T	O	E	source
N		16.4	5.7	0.3	0.2	0.5	23.0
S	39.0		1.9	1.5	1.6	0.4	44.4
A	6.2	7.6		29.3	8.9	16.4	68.3
T	2.4	1.9	7.6		17.2	10.6	39.7
O	0.0	0.2	1.2	6.6		1.0	8.9
E	1.0	0.6	2.1	9.2	3.0		15.9
sink	48.6	26.6	18.4	46.8	30.8	28.9	

TABLE S5 Fit of 10 constrained biogeographic models of Apocynaceae: tests for the area of origin of the family (M3–M12; see Table S2 for model definition) using DEC, BayArea-like, or DIVA-like models in BioGeoBEARS. Depicted is the log likelihood (lnL) and the degree of freedom (DF), sample size corrected Akaike information criterion (AICc), delta AICc (ΔAICc), and Akaike weights. The table is sorted according to model fit per DEC, BayArea-like, and DIVA-like.

Model	Hypothesis	Range	lnL	DF	AICc	ΔAICc	Akaike weights
DEC							
M12.dec	Pantropical 2	S+A+O+T	-1464.25	2	2933	0	0.49844
M11.dec	Pantropical 1	S+A+T	-1464.43	2	2933	0	0.41895
M10.dec	Laurasia	N+E+T	-1466.22	2	2936	4	0.07002
M6.dec	Gondwana	S+A+O	-1468.33	2	2941	8	0.00847
M5.dec	West-Gondwana	S+A	-1469.16	2	2942	10	3.68e-03
M8.dec	East-Gondwana	T+O	-1471.89	2	2948	15	2.40e-04
M3.dec	South America	S	-1473.31	2	2951	18	5.80e-05
M7.dec	tropical Asia	T	-1473.42	2	2951	18	5.20e-05
M9.dec	Palaearctic	N+E	-1473.22	2	2950	18	6.36e-05
M4.dec	Africa	A	-1473.99	2	2952	19	2.94e-05
BayArea-like							
M12.bay	Pantropical 2	S+A+O+T	-1540.83	2	3086	0	0.53831
M11.bay	Pantropical 1	S+A+T	-1541.09	2	3086	1	0.41508
M10.bay	Laurasia	N+E+T	-1543.38	2	3091	5	0.04227
M6.bay	Gondwana	S+A+O	-1546.12	2	3096	11	0.00272
M5.bay	West-Gondwana	S+A	-1546.68	2	3097	12	0.00156
M9.bay	Palaearctic	N+E	-1550.29	2	3105	19	4.22e-05
M8.bay	East-Gondwana	T+O	-1552.45	2	3109	23	4.84e-06
M3.bay	South America	S	-1553.46	2	3111	25	1.76e-06
M4.bay	Africa	A	-1553.99	2	3112	26	1.04e-06
M7.bay	tropical Asia	T	-1554.54	2	3113	27	5.99e-07
DIVA-like							
M12.diva	Pantropical 2	S+A+O+T	-1676.27	2	3357	0	0.46831
M11.diva	Pantropical 1	S+A+T	-1676.52	2	3357	1	0.36212
M10.diva	Laurasia	N+E+T	-1677.59	2	3359	3	0.12508
M6.diva	Gondwana	S+A+O	-1679.01	2	3362	5	0.03018
M5.diva	West-Gondwana	S+A	-1680.03	2	3364	8	0.01084
M8.diva	East-Gondwana	T+O	-1681.66	2	3367	11	0.00213
M4.diva	Africa	A	-1683.34	2	3371	14	3.99e-04
M7.diva	tropical Asia	T	-1683.34	2	3371	14	3.96e-04
M9.diva	Palaearctic	N+E	-1683.72	2	3371	15	2.70e-04
M3.diva	South America	S	-1683.75	2	3372	15	2.65e-04

TABLE S6. Fit of 52 missing state speciation and extinction (MiSSE) models of Apocynaceae. Depicted is the model number, the number of diversification processes given as degrees of freedom (DF = number of hidden states in parameter *turnover*), the value of the extinction fraction (eps), model's log likelihood (lnL), sample size corrected Akaike information criterion (AICc), delta AICc (ΔAICc), and Akaike weights. The table is sorted according to model fit.

Model Nº	DF	eps	lnL	AICc	ΔAICc	Akaike weight
36	18	0.9	-3078.334	6195.41	0	0.1308
34	17	0.9	-3079.407	6195.48	0.1	0.1263
38	19	0.9	-3077.366	6195.55	0.1	0.1218
32	16	0.9	-3080.590	6195.78	0.4	0.1090
40	20	0.9	-3076.481	6195.87	0.5	0.1041
42	21	0.9	-3075.678	6196.35	0.9	0.0818
30	15	0.9	-3081.912	6196.36	0.9	0.0817
44	22	0.9	-3074.937	6196.96	1.5	0.0603
28	14	0.9	-3083.403	6197.27	1.9	0.0516
46	23	0.9	-3074.259	6197.70	2.3	0.0417
48	24	0.9	-3073.643	6198.57	3.2	0.0270
26	13	0.9	-3085.123	6198.66	3.2	0.0258
50	25	0.9	-3073.069	6199.52	4.1	0.0168
52	26	0.9	-3072.520	6200.53	5.1	0.0101
24	12	0.9	-3087.209	6200.77	5.4	0.0090
22	11	0.9	-3089.760	6203.82	8.4	0.0020
20	10	0.9	-3092.919	6208.09	13	0.0002
18	9	0.9	-3096.890	6213.99	19	1.21e-05
16	8	0.9	-3101.977	6222.13	27	2.07e-07
14	7	0.9	-3108.638	6233.42	38	7.32e-10
12	6	0.9	-3117.630	6249.37	54	2.51e-13
47	24	0	-3130.762	6312.80	117	4.22e-27
43	22	0	-3135.216	6317.52	122	4.00e-28
39	20	0	-3140.125	6323.16	128	2.39e-29
35	18	0	-3147.306	6333.36	138	1.45e-31
17	9	0	-3186.356	6392.93	198	1.69e-44
25	13	0	-3182.720	6393.85	198	1.06e-44
23	12	0	-3184.471	6395.30	200	5.16e-45
21	11	0	-3185.860	6396.02	201	3.59e-45
29	15	0	-3182.433	6397.40	202	1.80e-45
15	8	0	-3190.315	6398.80	203	8.93e-46
19	10	0	-3188.423	6399.10	204	7.69e-46
37	19	0	-3180.156	6401.14	206	2.78e-46
41	21	0	-3179.795	6404.58	209	4.96e-47
31	16	0	-3185.375	6405.35	210	3.39e-47
27	14	0	-3187.676	6405.82	210	2.67e-47
45	23	0	-3179.567	6408.31	213	7.68e-48
11	6	0	-3197.873	6409.85	214	3.56e-48

Model №	DF	eps	lnL	AICc	ΔAICc	Akaike weight
13	7	0	-3196.875	6409.89	214	3.49e-48
9	5	0	-3199.082	6410.25	215	2.93e-48
49	25	0	-3178.928	6411.24	216	1.78e-48
51	26	0	-3178.743	6412.98	218	7.46e-49
7	4	0	-3201.682	6413.42	218	5.98e-49
33	17	0	-3193.076	6422.82	227	5.44e-51
5	3	0	-3211.514	6431.07	236	8.82e-53
3	2	0	-3308.692	6623.41	428	1.51e-94
8	4	0.9	-3346.027	6702.11	507	1.23e-111
10	5	0.9	-3345.028	6702.14	507	1.21e-111
4	2	0.9	-3367.501	6741.02	546	4.35e-120
6	3	0.9	-3367.899	6743.84	548	1.07e-120
2	1	0.9	-3484.761	6971.53	776	3.85e-170
1	1	0	-3759.563	7521.13	1326	1.74e-289

Methods S1: Biogeographic Analysis

S1.1 *Delimitation of biogeographic regions*

We divided the world into six operational areas covering the distribution of Apocynaceae: Africa including Arabia and Madagascar (A), temperate Eurasia (E), North America (N), Oceania including Australasia (O), South America (S), and topical Asia (T). Our delimitation is based on patterns of shared distribution of Apocynaceae species and mainly on the tectonic history of continents (paleogeography; e.g., McLoughlin, 2001; Briggs, 2003; Graham, 2018). Several areas coincide with the floristic regions of Takhtajan (1986; floral kingdoms: global broad-scale phytogeographic regions; e.g., Cox, 2001), and are so assumed to reflect both historical connectivity of land masses and macroecological conditions (e.g., climate). The Indian subcontinent was included in tropical Asia, although it was geologically isolated after its breakup from Gondwana in the Cretaceous and subsequent northward drift until collation with Asia in the Eocene (Briggs, 2003). However, in preliminary analysis, in which India was set as an area on its own, no evidence for a dispersal via the grafting continent was present. Instead, India appeared to be colonized by Apocynaceae only from the Miocene onwards (results not shown). Also, because the limits between Eurasian and Australian-Pacific floras are not obvious (Hall, 2013), we treated the region known as Wallacea in the Malesian area, where the biota of tropical Asia and Australian-Pacific mix, as a neutral area. So, topical Asia and Australian-Pacific species reaching Wallacea were considered as exclusive to one of these regions. That is, species predominantly distributed in Australian-Pacific area but also occurring between Wallace's and Lydekker's Line were coded as Australian-Pacific area, while those species distributed in topical Asia that reach the region between both lines were coded as topical Asia (Hall 2013). *Tabernaemontana sphaerocarpa* Blume, endemic to the Wallacea region, was coded as tropical Asia. Similarly, *Pteralyxia kauaiensis* Caum, a species endemic to the Hawaiian Islands that is nested within a clade of species form the Australian-Pacific area, was coded as Oceania.

S1.2 Paleogeographic stratification

Our biogeographic analyses are based on two principally different models. Model 1 (M1), the default model uses only present data from current distributions of species. It is designed as

maximally naïve data exploration model, with relative probability of dispersal between all areas set to one (the default in the 'dispersal multiplier matrix' in BiogeoBEARS) and no constraints on possible ancestral area combinations (in the 'allowed area matrix' in BiogeoBEARS). The number of possible geographic ranges (the amount of possible area combinations) is constraint by setting the maximum of areas to four (using maxareas = 4 in BiogeoBEARS), equaling the maximum number of areas, in which a species is currently distributed. Model 2 (M2; the 'stratified' analysis) uses present occurrences but also incorporates a palaeogeographic model to reflect changes in continental connectivity over time (Figure S1). To incorporate palaeogeographic information into our analyses, we stratified the phylogeny of Apocynaceae into four time slices (TS): **TS-1** (100 to 80 Ma) covers the first half of Late Cretaceous, a period that is characterized by the geographic proximity of southern landmasses stemming from the breakup of Gondwana (starting at ca. 180–160 Ma with the division of Gondwana into east and west components, followed by the rifting of India-Madagascar from Antarctica ca. 130 Ma, and the breakup of India from Madagascar ca. 88 Ma; McLoughlin 2001; Briggs 2003, and references therein). A makeable drop in sea level in the Late Cretaceous, however, exposed continental shelves and decreased the distances among the landmasses (Briggs 2003). This period ends with the separation of the terranes known as Tasmania at ca. 84 Ma, a "mostly submerged, continental block incorporating New Zealand, the Campbell Plateau, Chatham Rise, Lord Howe Rise, Norfolk Ridge and New Caledonia" (McLoughlin 2001, p. 280). **TS-2** (80 to 60 Ma) covers the second halve of the Late Cretaceous, the K-T boundary at ca. 65.5 Ma, and the beginning of the Paleocene. It is characterized by the existence of the Magellan Land Bridge connecting southern South America, Antarctica, Australasia and adjacent regions (Graham 2018), but also by an increasing separation of Australasia from India. **TS-3** (60 to 30 Ma) covers a period of global warming starting at ca. 60 Ma in the Paleocene peaking in the Eocene Climatic Optimum (Zachos et al. 2001). It is characterized by the geographical proximity of northern landmasses and warm climates at northern latitudes, allowing the spread of megathermal plants across the Holarctic (Wolfe 1975, Davis et al. 2002). During this period, India began collision with Eurasia permitting biotic exchange (Briggs 2003). This period ends with the global climate cooling in the Oligocene and the opening of the Antarctic-Tasmania passage (ca. 33 Ma; Zachos et al. 2001), as well as the large-scale glaciation

of Antarctica (ca. 35 Ma; Zachos et al. 2008). **TS-4** (30 to 0 Ma) covers a complex paleoclimatic trajectory – global cooling during the Oligocene, Mid-Miocene Climatic Optimum warming, with subsequent global cooling until Plio-Pleistocene glaciation (Zachos et al. 2001). It is characterized by continuous or stepping stone connections between North America and Eurasia via Beringia (the Bering Land Bridge, more or less continuously till ca. 3.5 Ma; Graham 2018) and the North Atlantic Land Bridges (continuous probably until ca. 55 Ma, but sweepstake dispersal or island hopping was possible till the Pliocene; Tiffney & Manchester 2001).

S1.3 References

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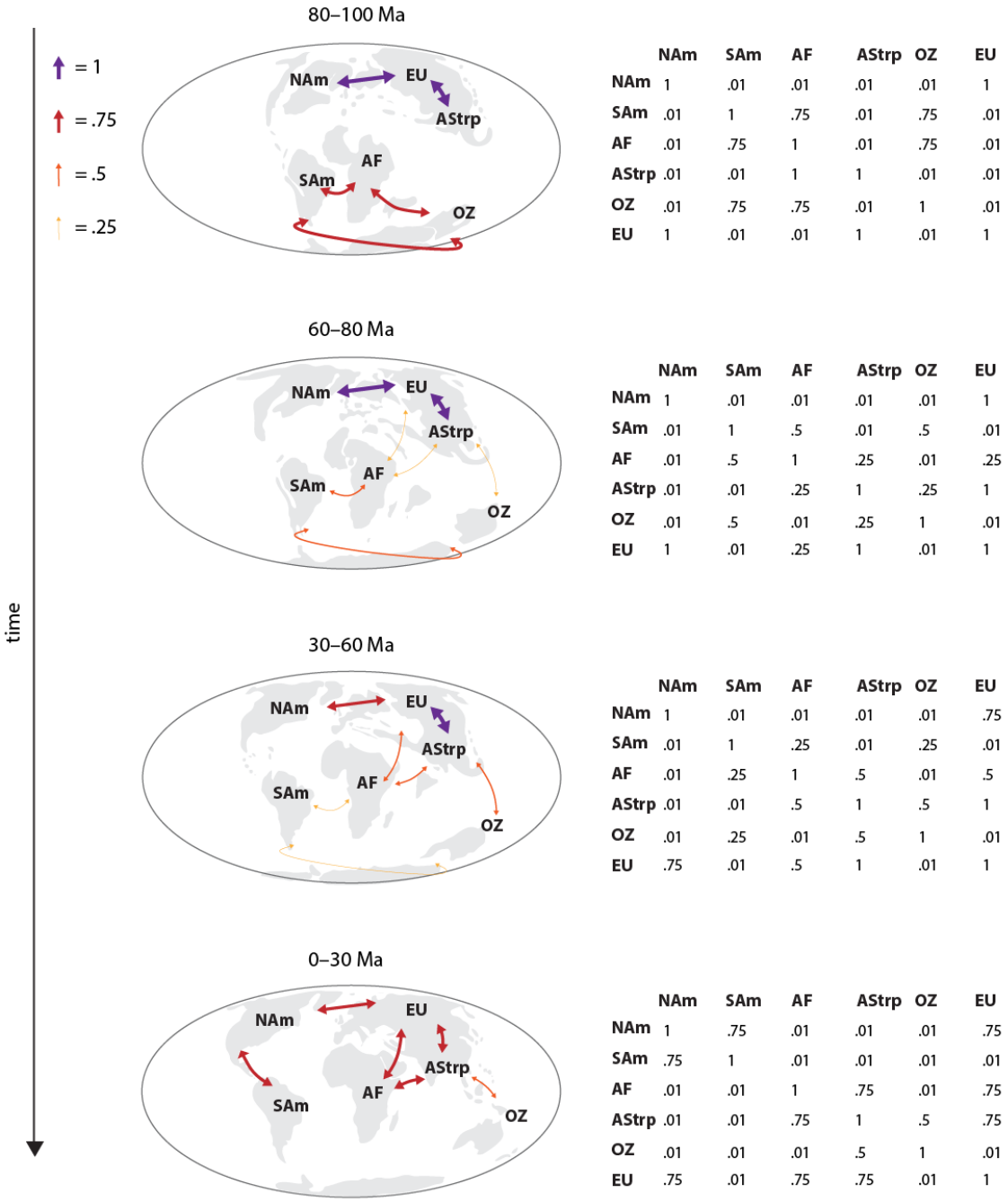


	NAm	SAm	AF	AStrp	OZ	EU
NAm	1	.01	.01	.01	.01	1
SAm	.01	1	.75	.01	.75	.01
AF	.01	.75	1	.01	.75	.01
AStrp	.01	.01	1	1	.01	.01
OZ	.01	.75	.75	.01	1	.01
EU	1	.01	.01	1	.01	1

	NAm	SAm	AF	AStrp	OZ	EU
NAm	1	.01	.01	.01	.01	1
SAm	.01	1	.5	.01	.5	.01
AF	.01	.5	1	.25	.01	.25
AStrp	.01	.01	.25	1	.25	1
OZ	.01	.5	.01	.25	1	.01
EU	1	.01	.25	1	.01	1

	NAm	SAm	AF	AStrp	OZ	EU
NAm	1	.01	.01	.01	.01	.75
SAm	.01	1	.25	.01	.25	.01
AF	.01	.25	1	.5	.01	.5
AStrp	.01	.01	.5	1	.5	1
OZ	.01	.25	.01	.5	1	.01
EU	.75	.01	.5	1	.01	1

	NAm	SAm	AF	AStrp	OZ	EU
NAm	1	.75	.01	.01	.01	.75
SAm	.75	1	.01	.01	.01	.01
AF	.01	.01	1	.75	.01	.75
AStrp	.01	.01	.75	1	.5	.75
OZ	.01	.01	.01	.5	1	.01
EU	.75	.01	.75	.75	.01	1

FIGURE S1. Paleogeographic model used in the time-stratified biogeographic analysis (M2 and M2s models). NAm, North America; SAm, South America; AF, Africa; AStrp, tropical Asia; OZ Oceania incl Australasia, EU, Eurasia (temperate).

FIGURE S2.A


DEC on Apocynaceae M1a_unconstrained_selectedRanges
ancstates: global optim, 4 areas max. d=0.0047; e=0.0022; j=0; LnL=-1144.81
80
60
40
20
0
Millions of years ago

FIGURE S2.B

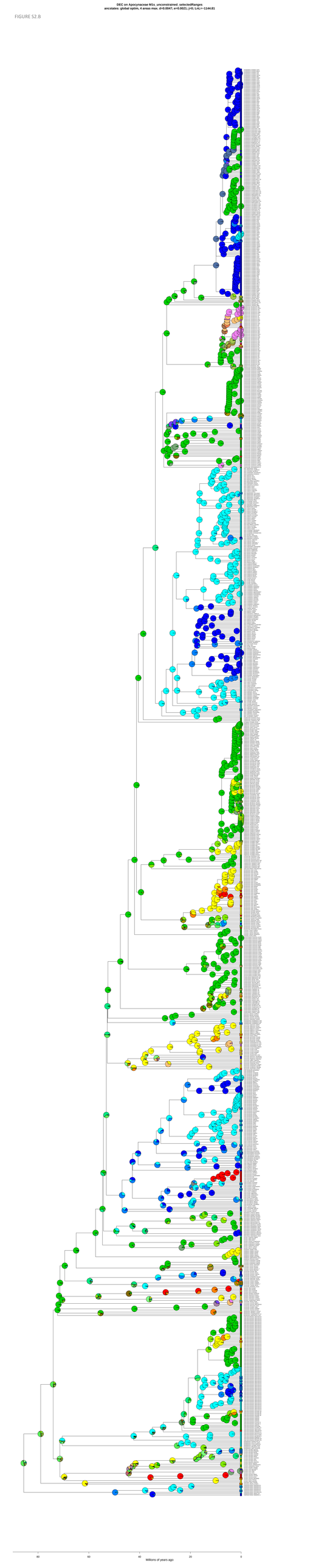

DEC on Apocynaceae M1a_unconstrained_selectedRanges
ancstates: global optim, 4 areas max. d=0.0047; e=0.0021; j=0; LnL=-1144.81
80
60
40
20
0
Millions of years ago

FIGURE S3.A

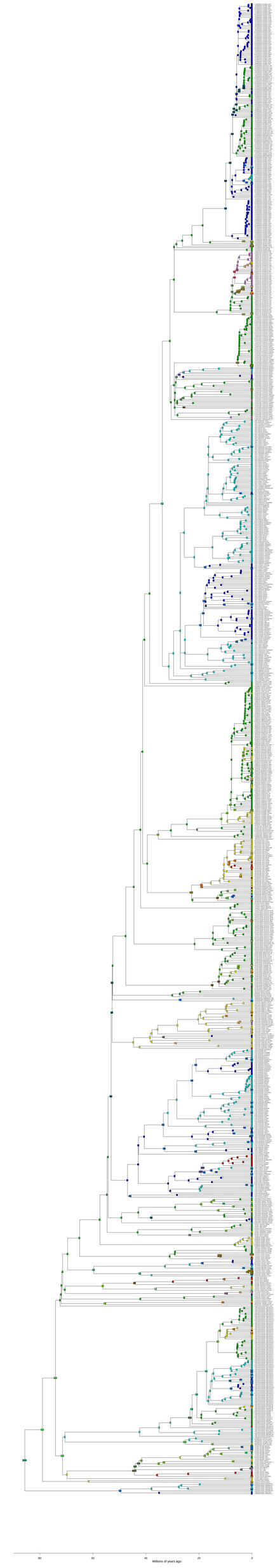

DEC on Apocynaceae M1, unconstrained
ancstates: global optim, 4 areas max. d=0.0003; e=0.0011; j=0; LnL=-1147.36
80
60
40
20
0
Millions of years ago

FIGURE S3.B

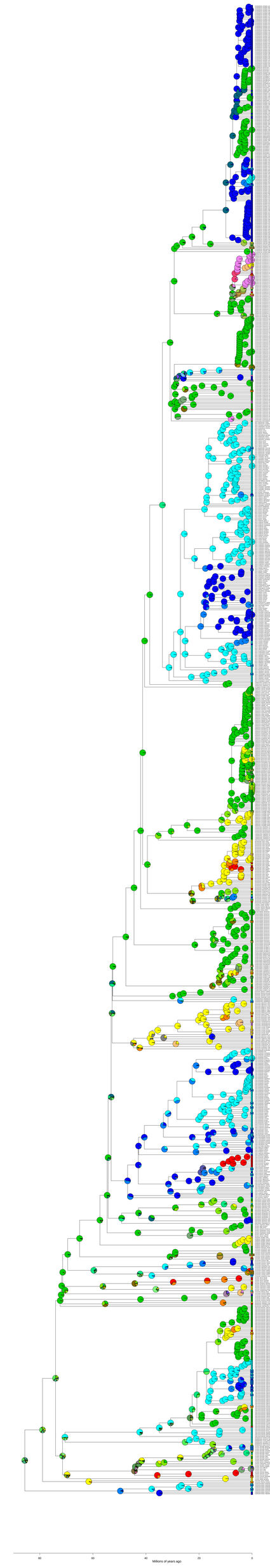

DEC on Apocynaceae M1, unconstrained
ancstates: global optim, 4 areas max. d=0.003; e=0.0011; j=0; LnL=-1147.36
80
60
40
20
0
Millions of years ago

FIGURE S4.A

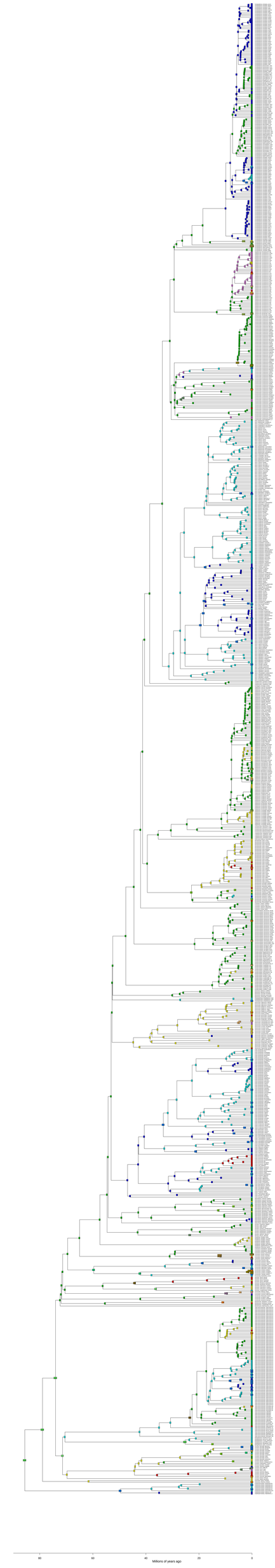

DEC+j on Apocynaceae M1s, unconstrained, selectedRanges
ancstates: global optim, 4 areas max. d=0.0031; e=0; j=0.0088; LnL=-1043.77
80
60
40
20
0
Millions of years ago

FIGURE S4.B

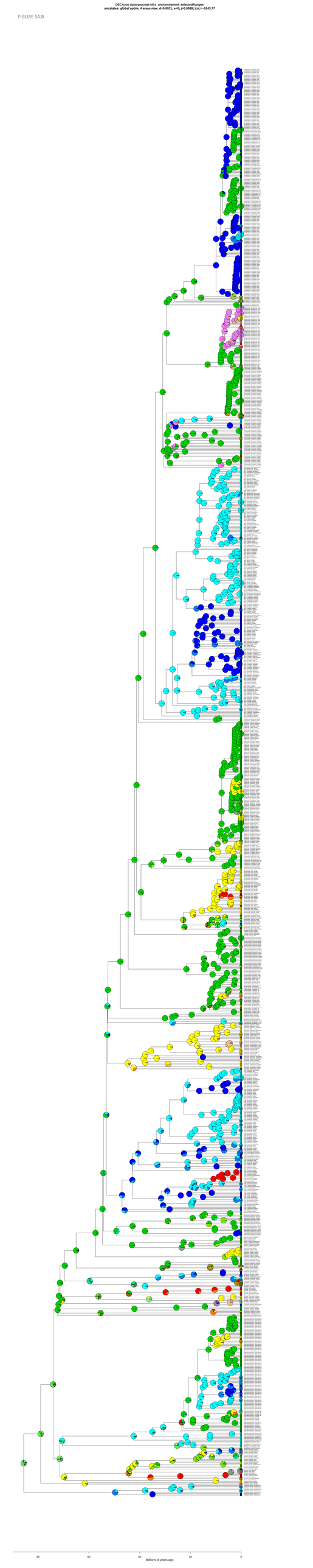

DEC+j on Apocynaceae M1s, unconstrained, selectedRanges
ancstates: global optim, 4 areas max. d=0.0031; e=0; j=0.0088; LnL=-1043.77
80
60
40
20
0
Millions of years ago

FIGURE S5.A

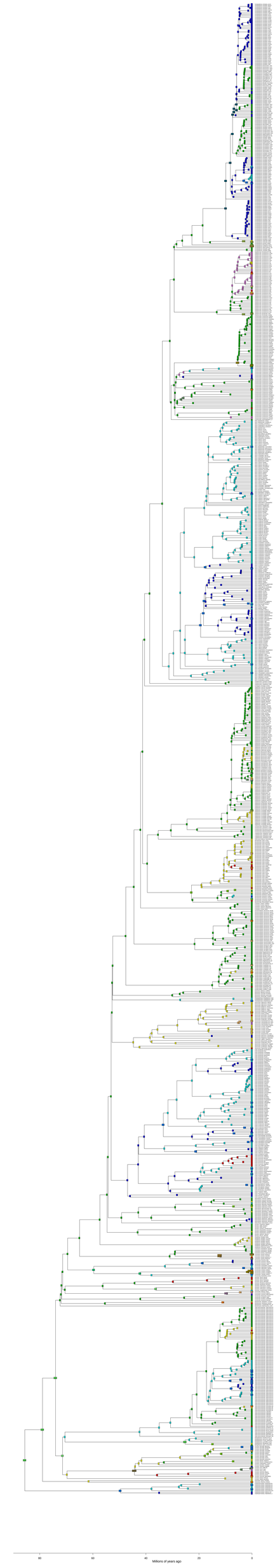
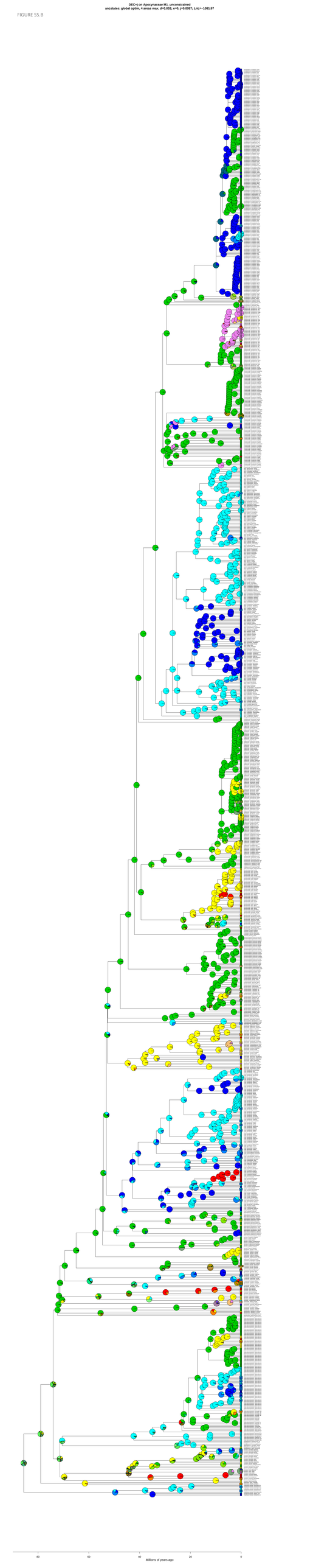

DEC+J on Apocynaceae M1_unconstrained
ancstates: global optim, 4 areas max. d=0.002; e=0; j=0.0087; LnL=-1081.97
80
60
40
20
0
Millions of years ago

FIGURE S5.B


DEC+J on Apocynaceae M1_unconstrained
ancstates: global optim, 4 areas max. d=0.002; e=0; j=0.0087; LnL=-1081.97
80
60
40
20
0
Millions of years ago

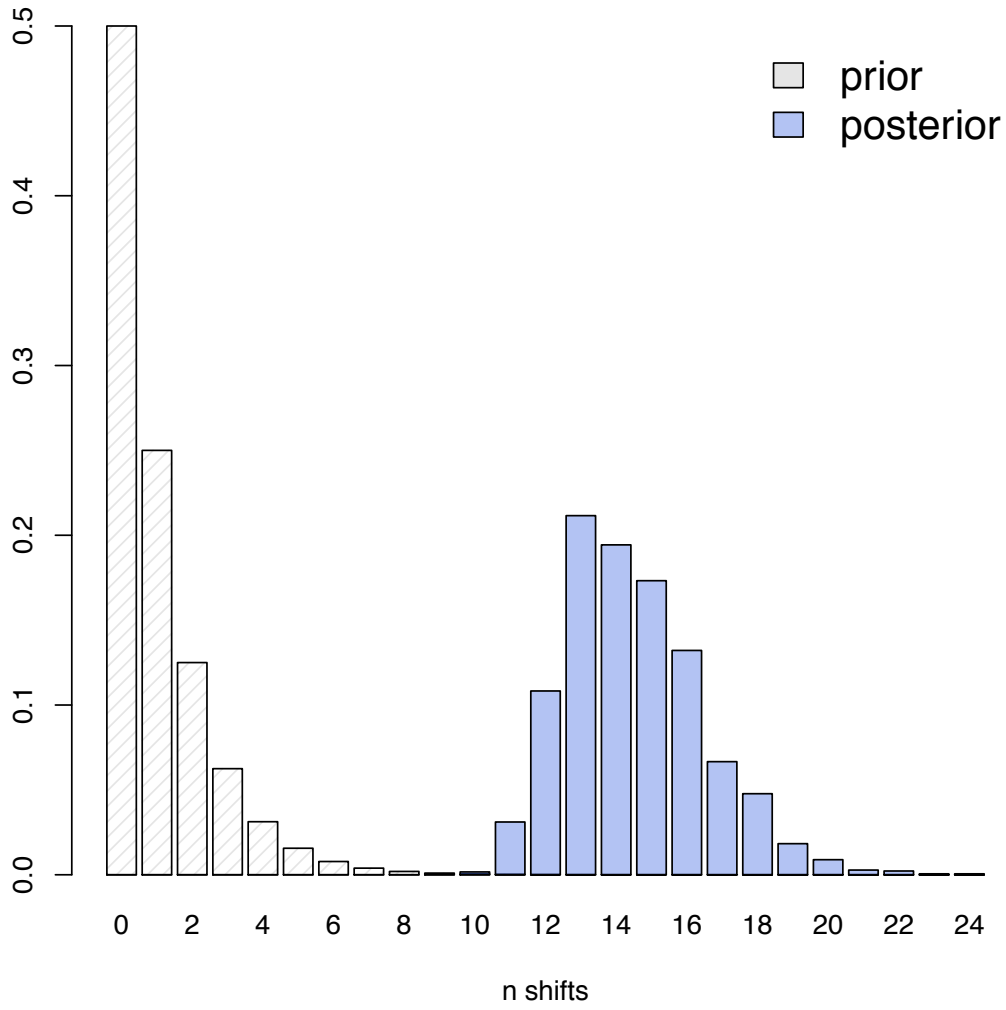


FIGURE S6. Histogram of the prior and posterior distributions of number of shifts among diversification processes sampled by BAMM (using a shift prior of 1)