Table S1: Sampled sequences, including species name of the source sample and its tribal/subfamily placement, the name of each sequence in the three alignments (initial, full dataset, and reduced dataset alignments), the amino acid motif (when the sequence contains exon 6, where the motif occurs), voucher information (Collector, collection number, herbarium code), and the Genbank or 1kp accession number. Repeat sequence names in the Full and Reduced datasets indicate that associated contigs in the Initial alignment have been concatenated. ⟂ in the sequence name indicates that it is a possible pseudogene (i.e. includes a non-terminal stop codon).

Subfamily/Tribe	Taxon name	Initial alignment sequence name	Full dataset sequence name	Reduced dataset sequence name	aa motif	Voucher info	Genbank/1kp Accession
Alyxieae	*Plectaneia thouarsii* Roem. & Schult.	Plectaneia_thouarsii	Plectaneia_thouarsii	Plectaneia_thouarsii	IXXXN	Livshultz et al. 2018	MG817707
Amsonieae	*Amsonia hubrichtii* Woodson	Amsonia_hubrichtii_1	Amsonia_hubrichtii_1	Amsonia_hubrichtii_1	IXXXN	Phytometasyn, https://bioinformatics.tugraz.at/phytometasyn/	MG805363
Amsonieae	*Amsonia hubrichtii* Woodson	Amsonia_hubrichtii_2	Amsonia_hubrichtii_2	Amsonia_hubrichtii_2	IXXXN	Phytometasyn, https://bioinformatics.tugraz.at/phytometasyn/	MG805364
Amsonieae	*Amsonia orientalis* Decne.	Amsonia_orientalis_PA97_contig0_dhs_exon1-4_⟂	Amsonia_orientalis_PA97_dhs_exon1-4_⟂			M. Endress s.n. (Z)	ON793188
Amsonieae	*Amsonia orientalis* Decne.	Amsonia_orientalis_PA97_contig1_dhs_exon5-7	Amsonia_orientalis_PA97_dhs_exon1-7	Amsonia_orientalis_PA97_dhs_exon1-7	IXXXN	M. Endress s.n. (Z)	ON793189
Amsonieae	*Amsonia orientalis* Decne.	Amsonia_orientalis_PA97_contig2_dhs_exon5-7	Amsonia_orientalis_PA97_dhs_exon1-7	Amsonia_orientalis_PA97_dhs_exon1-7	IXXXN	M. Endress s.n. (Z)	ON793190
Amsonieae	*Amsonia orientalis* Decne.	Amsonia_orientalis_PA97_contig3_dhs_exon1-4	Amsonia_orientalis_PA97_dhs_exon1-7	Amsonia_orientalis_PA97_dhs_exon1-7		M. Endress s.n. (Z)	ON793191
Apocyneae	*Aganosma cymosa* (Roxb.) G.Don	Aganosma_cymosa			IXXXN	Livshultz et al. 2018	MG817670
Apocyneae	*Aganosma schlechteriana* H.Lév.	Aganosma_schlechteriana_TLA24_contig0_dhs_exon1-7	Aganosma_schlechteriana_TLA24_dhs_exon1-7	Aganosma_schlechteriana_TLA24_dhs_exon1-7	IXXXN	Newman et al. 1069 (A)	ON793192
Apocyneae	*Aganosma schlechteriana* H.Lév.	Aganosma_schlechteriana_TLA24_contig1_hss_exon1-7	Aganosma_schlechteriana_TLA24_hss_exon1-7	Aganosma_schlechteriana_TLA24_hss_exon1-7	VXXXD	Newman et al. 1069 (A)	ON793193
Apocyneae	*Aganosma schlechteriana* H.Lév.	Aganosma_schlechteriana_TLA24_contig2_hss_exon1-4	Aganosma_schlechteriana_TLA24_hss_exon1-4			Newman et al. 1069 (A)	ON793194
Apocyneae	*Amalocalyx microlobus* Pierre ex Spire	Amalocalyx_microlobus	Amalocalyx_microlobus	Amalocalyx_microlobus	IXXXN	Livshultz et al. 2018	MG817680

Apocyneae	*Amalocalyx microlobus* Pierre ex Spire	Amalocalyx_microlobus_TLA272_contig0_hss_exon1-4	Amalocalyx_microlobus_TLA272_hss_exon1-6	Amalocalyx_microlobus_TLA272_hss_exon1-6		D. J. Middleton et al. 2618 (A)	ON793195
Apocyneae	*Amalocalyx microlobus* Pierre ex Spire	Amalocalyx_microlobus_TLA272_contig1_hss_exon5-6	Amalocalyx_microlobus_TLA272_hss_exon1-6	Amalocalyx_microlobus_TLA272_hss_exon1-6	VXXXD	D. J. Middleton et al. 2618 (A)	ON793196
Apocyneae	*Amalocalyx microlobus* Pierre ex Spire	Amalocalyx_microlobus_TLA272_contig2_dhs_exon1-7	Amalocalyx_microlobus_TLA272_dhs_exon1-7	Amalocalyx_microlobus_TLA272_dhs_exon1-7	IXXXN	D. J. Middleton et al. 2618 (A)	ON793197
Apocyneae	*Amphineurion marginatum* (Roxb.) D.J.Middleton	Amphineurion_marginatum_55_contig0_hss_exon2-7	Amphineurion_marginatum_55_hss_exon1-7	Amphineurion_marginatum_55_hss_exon1-7	VXXXD	D. J. Middleton et al. 2527 (A)	ON793198
Apocyneae	*Amphineurion marginatum* (Roxb.) D.J.Middleton	Amphineurion_marginatum_55_contig1_hss_exon1	Amphineurion_marginatum_55_hss_exon1-7	Amphineurion_marginatum_55_hss_exon1-7		D. J. Middleton et al. 2527 (A)	ON793199
Apocyneae	*Amphineurion marginatum* (Roxb.) D.J.Middleton	Amphineurion_marginatum_55_contig2_dhs_exon1-7	Amphineurion_marginatum_55_dhs_exon1-7	Amphineurion_marginatum_55_dhs_exon1-7	IXXXN	D. J. Middleton et al. 2527 (A)	ON793200
Apocyneae	*Anodendron affine* (Hook. & Arn.) Druce	Anodendron_affine_PA79_contig0_hss_exon1-7	Anodendron_affine_PA79_hss1_exon1-7	Anodendron_affine_PA79_hss1_exon1-7	VXXXD	T. Livshultz T2014-3 (PH)	ON793201
Apocyneae	*Anodendron affine* (Hook. & Arn.) Druce	Anodendron_affine_PA79_contig1_dhs_exon1-7	Anodendron_affine_PA79_dhs_exon1-7	Anodendron_affine_PA79_dhs_exon1-7	IXXXN	T. Livshultz T2014-3 (PH)	ON793202
Apocyneae	*Anodendron affine* (Hook. & Arn.) Druce	Anodendron_affine_PA79_contig2_hss_exon1-7	Anodendron_affine_PA79_hss2_exon1-7	Anodendron_affine_PA79_hss2_exon1-7	VXXXD	T. Livshultz T2014-3 (PH)	ON793203
Apocyneae	*Anodendron oblongifolium* Hemsl.	Anodendron_oblongifolium_1				Livshultz et al. 2018	MG817676
Apocyneae	*Anodendron oblongifolium* Hemsl.	Anodendron_oblongifolium_2				Livshultz et al. 2018	MG817675
Apocyneae	*Anodendron oblongifolium* Hemsl.	Anodendron_oblongifolium_PA100_contig0_hss_exon3-7_Ψ	Anodendron_oblongifolium_PA100_hss_exon3-7_Ψ		VXXXD	W. Takeuchi 14513 (A)	ON793204
Apocyneae	*Anodendron oblongifolium* Hemsl.	Anodendron_oblongifolium_PA100_contig1_hss_exon4-7	Anodendron_oblongifolium_PA100_hss_exon4-7		VXXXD	W. Takeuchi 14513 (A)	ON793205
Apocyneae	*Anodendron oblongifolium* Hemsl.	Anodendron_oblongifolium_PA100_contig2_hss_exon1-6	Anodendron_oblongifolium_PA100_hss1_exon1-6	Anodendron_oblongifolium_PA100_hss1_exon1-6	VXXXD	W. Takeuchi 14513 (A)	ON793206
Apocyneae	*Anodendron oblongifolium* Hemsl.	Anodendron_oblongifolium_PA100_contig3_hss_exon1-2	Anodendron_oblongifolium_PA100_hss_exon1-2			W. Takeuchi 14513 (A)	ON793207
Apocyneae	*Anodendron oblongifolium* Hemsl.	Anodendron_oblongifolium_PA100_contig4_hss_exon3-7	Anodendron_oblongifolium_PA100_hss2_exon3-7	Anodendron_oblongifolium_PA100_hss2_exon3-7	VXXXD	W. Takeuchi 14513 (A)	ON793208

Apocyneae	*Anodendron oblongifolium* Hemsl.	Anodendron_oblongifolium_PA100_contig5_dhs_exon1-7	Anodendron_oblongifolium_PA100_dhs_exon1-7	Anodendron_oblongifolium_PA100_dhs_exon1-7	IXXXN	W. Takeuchi 14513 (A)	ON793209
Apocyneae	*Anodendron parviflorum* (Roxb.) I.M.Turner	Anodendron_parviflorum_1				Livshultz et al. 2018	MG817667
Apocyneae	*Anodendron parviflorum* (Roxb.) I.M.Turner	Anodendron_parviflorum_2				Livshultz et al. 2018	MG817666
Apocyneae	*Anodendron parviflorum* (Roxb.) I.M.Turner	Anodendron_parviflorum_TLA135_contig0_dhs_exon1-7	Anodendron_parviflorum_TLA135_dhs_exon1-7	Anodendron_parviflorum_TLA135_dhs_exon1-7	IXXXN	D. J. Middleton et al. 3159 (A)	ON793210
Apocyneae	*Anodendron parviflorum* (Roxb.) I.M.Turner	Anodendron_parviflorum_TLA135_contig1_hss_exon1-7	Anodendron_parviflorum_TLA135_hss_exon1-7	Anodendron_parviflorum_TLA135_hss_exon1-7	VXXXD	D. J. Middleton et al. 3159 (A)	ON793211
Apocyneae	*Apocynum androsaemifolium* L.	Apocynum_androsaemifolium	Apocynum_androsaemifolium	Apocynum_androsaemifolium	IXXXN	1KP, www.onekp.com/public_data.html	scaffold-JCLQ-2009881-Apocynum_androsaemifolium-A
Apocyneae	*Apocynum androsaemifolium* L.	Apocynum_androsaemifolium_TLA35_contig0_dhs_exon1-3	Apocynum_androsaemifolium_TLA35_dhs_exon1-7	Apocynum_androsaemifolium_TLA35_dhs_exon1-7		T. Livshultz 03-32c (GH, BH)	ON793212
Apocyneae	*Apocynum androsaemifolium* L.	Apocynum_androsaemifolium_TLA35_contig1_hss_exon6_Ψ	Apocynum_androsaemifolium_TLA35_hss_exon6_Ψ			T. Livshultz 03-32c (GH, BH)	ON793213
Apocyneae	*Apocynum androsaemifolium* L.	Apocynum_androsaemifolium_TLA35_contig2_dhs_exon4-7	Apocynum_androsaemifolium_TLA35_dhs_exon1-7	Apocynum_androsaemifolium_TLA35_dhs_exon1-7	IXXXN	T. Livshultz 03-32c (GH, BH)	ON793214
Apocyneae	*Apocynum cannabinum* L.	Apocynum_cannabinum_44_contig0_hss_exon5-7_Ψ	Apocynum_cannabinum_44_hss_exon4-7_Ψ		VXXXD	T. Livshultz 03-28 (BH)	ON793215
Apocyneae	*Apocynum cannabinum* L.	Apocynum_cannabinum_44_contig1_hss_exon4-5_Ψ	Apocynum_cannabinum_44_hss_exon4-7_Ψ			T. Livshultz 03-28 (BH)	ON793216
Apocyneae	*Apocynum cannabinum* L.	Apocynum_cannabinum_44_contig2_dhs_exon1-7	Apocynum_cannabinum_44_dhs_exon1-7	Apocynum_cannabinum_44_dhs_exon1-7	IXXXN	T. Livshultz 03-28 (BH)	ON793217
Apocyneae	*Apocynum pictum* Schrenk	Apocynum_pictum_PA84_contig0_dhs_exon1-3	Apocynum_pictum_PA84_dhs_exon1-7	Apocynum_pictum_PA84_dhs_exon1-7		F. Konta & N. Abjusalik 35598 (NY)	ON793218
Apocyneae	*Apocynum pictum* Schrenk	Apocynum_pictum_PA84_contig1_hss_exon5-6_Ψ	Apocynum_pictum_PA84_hss_exon5-6_Ψ		VXXXD	F. Konta & N. Abjusalik 35598 (NY)	ON793219

Apocyneae	*Apocynum pictum* Schrenk	Apocynum_pictum_PA84_contig2_dhs_exon4-7	Apocynum_pictum_PA84_dhs_exon1-7	Apocynum_pictum_PA84_dhs_exon1-7	IXXXN	F. Konta & N. Abjusalik 35598 (NY)	ON793220
Apocyneae	*Apocynum venetum* L.	Apocynum_venetum_PA80_contig0_dhs_exon4-7	Apocynum_venetum_PA80_dhs_exon1-7	Apocynum_venetum_PA80_dhs_exon1-7	IXXXN	M. Oganesian et al. 08-0516 (NY)	ON793221
Apocyneae	*Apocynum venetum* L.	Apocynum_venetum_PA80_contig1_dhs_exon1-3	Apocynum_venetum_PA80_dhs_exon1-7	Apocynum_venetum_PA80_dhs_exon1-7		M. Oganesian et al. 08-0516 (NY)	ON793222
Apocyneae	*Apocynum venetum* L.	Apocynum_venetum_PA80_contig2_hss_exon5-6_Ψ	Apocynum_venetum_PA80_hss_exon5-6_Ψ		VXXXS	M. Oganesian et al. 08-0516 (NY)	ON793223
Apocyneae	*Apocynum venetum* L.	Apocynum_venetum_PA82_contig0_dhs_exon4-7	Apocynum_venetum_PA82_dhs_exon1-7	Apocynum_venetum_PA82_dhs_exon1-7	IXXXN	F. Konta & N. Abjusalik 35600 (NY)	ON793224
Apocyneae	*Apocynum venetum* L.	Apocynum_venetum_PA82_contig1_hss_exon5-7_Ψ	Apocynum_venetum_PA82_hss_exon5-7_Ψ		VXXXN	F. Konta & N. Abjusalik 35600 (NY)	ON793225
Apocyneae	*Apocynum venetum* L.	Apocynum_venetum_PA82_contig2_dhs_exon1-3	Apocynum_venetum_PA82_dhs_exon1-7	Apocynum_venetum_PA82_dhs_exon1-7		F. Konta & N. Abjusalik 35600 (NY)	ON793226
Apocyneae	*Beaumontia murtonii* Craib	Beaumontia_murtonii_53_contig0_hss_exon1-6	Beaumontia_murtonii_53_hss_exon1-6	Beaumontia_murtonii_53_hss_exon1-6	VXXXD	D. J. Middleton et al. 2195 (A)	ON793227
Apocyneae	*Beaumontia murtonii* Craib	Beaumontia_murtonii_53_contig1_dhs_exon1-4	Beaumontia_murtonii_53_dhs_exon1-7	Beaumontia_murtonii_53_dhs_exon1-7		D. J. Middleton et al. 2195 (A)	ON793228
Apocyneae	*Beaumontia murtonii* Craib	Beaumontia_murtonii_53_contig2_dhs_exon5-7	Beaumontia_murtonii_53_dhs_exon1-7	Beaumontia_murtonii_53_dhs_exon1-7	IXXXN	D. J. Middleton et al. 2195 (A)	ON793229
Apocyneae	*Beaumontia murtonii* Craib	Beaumontia_murtonii_53_contig3_hss_exon4	Beaumontia_murtonii_53_hss_exon4			D. J. Middleton et al. 2195 (A)	ON793230
Apocyneae	*Chonemorpha fragrans* (Moon) Alston	Chonemorpha_fragrans			IXXXN	Livshultz et al. 2018	MG817681
Apocyneae	*Chonemorpha fragrans* (Moon) Alston	Chonemorpha_fragrans_TLA37_contig0_dhs_exon1-7	Chonemorpha_fragrans_TLA37_dhs_exon1-7	Chonemorpha_fragrans_TLA37_dhs_exon1-7	IXXXN	D. J. Middleton et al. 220 (A)	ON793231

Apocyneae	*Chonemorpha fragrans* (Moon) Alston	Chonemorpha_fragrans_TLA37_contig1_hss_exon5-7	Chonemorpha_fragrans_TLA37_hss_exon1-7	Chonemorpha_fragrans_TLA37_hss_exon1-7	VXXXD	D. J. Middleton et al. 220 (A)	ON793232
Apocyneae	*Chonemorpha fragrans* (Moon) Alston	Chonemorpha_fragrans_TLA37_contig2_hss_exon1-3	Chonemorpha_fragrans_TLA37_hss_exon1-7	Chonemorpha_fragrans_TLA37_hss_exon1-7		D. J. Middleton et al. 220 (A)	ON793233
Apocyneae	*Epigynum auritum* (C.K.Schneid.) Tsiang & P.T.Li	Epigynum_auritum	Epigynum_auritum	Epigynum_auritum	IXXXN	Livshultz et al. 2018	MG817671
Apocyneae	*Epigynum cochinchinensis* (Pierre) D.J. Middleton	Epigynum_cochinchinensis_TLA62_contig0_dhs_exon1-7	Epigynum_cochinchinensis_TLA62_dhs_exon1-7	Epigynum_cochinchinensis_TLA62_dhs_exon1-7	IXXXN	D. J. Middleton et al. 209 (A)	ON793234
Apocyneae	*Epigynum cochinchinensis* (Pierre) D.J. Middleton	Epigynum_cochinchinensis_TLA62_contig1_hss_exon1-4	Epigynum_cochinchinensis_TLA62_hss_exon1-6	Epigynum_cochinchinensis_TLA62_hss_exon1-6		D. J. Middleton et al. 209 (A)	ON793235
Apocyneae	*Epigynum cochinchinensis* (Pierre) D.J. Middleton	Epigynum_cochinchinensis_TLA62_contig2_hss_exon5-6	Epigynum_cochinchinensis_TLA62_hss_exon1-6	Epigynum_cochinchinensis_TLA62_hss_exon1-6	VXXXD	D. J. Middleton et al. 209 (A)	ON793236
Apocyneae	*Epigynum griffithianum* Wight	Epigynum_griffithianum_TLA195_contig0_hss_exon1-4	Epigynum_griffithianum_TLA195_hss_exon1-6	Epigynum_griffithianum_TLA195_hss_exon1-6		D. J. Middleton et al. 1934 (A)	ON793237
Apocyneae	*Epigynum griffithianum* Wight	Epigynum_griffithianum_TLA195_contig1_hss_exon5-6	Epigynum_griffithianum_TLA195_hss_exon1-6	Epigynum_griffithianum_TLA195_hss_exon1-6	VXXXD	D. J. Middleton et al. 1934 (A)	ON793238
Apocyneae	*Epigynum griffithianum* Wight	Epigynum_griffithianum_TLA195_contig2_hss_exon5-6	Epigynum_griffithianum_TLA195_hss_exon1-6	Epigynum_griffithianum_TLA195_hss_exon1-6	VXXXD	D. J. Middleton et al. 1934 (A)	ON793239
Apocyneae	*Epigynum griffithianum* Wight	Epigynum_griffithianum_TLA195_contig3_dhs_exon1-7	Epigynum_griffithianum_TLA195_dhs_exon1-7	Epigynum_griffithianum_TLA195_dhs_exon1-7	IXXXN	D. J. Middleton et al. 1934 (A)	ON793240
Apocyneae	*Ichnocarpus frutescens* (L.) W.T.Aiton	Ichnocarpus_frutescens_TL621_contig0_hss_exon1-4	Ichnocarpus_frutescens_TL621_hss_exon1-6	Ichnocarpus_frutescens_TL621_hss_exon1-6		D. J. Middleton et al. 5135 (E)	ON793241
Apocyneae	*Ichnocarpus frutescens* (L.) W.T.Aiton	Ichnocarpus_frutescens_TL621_contig1_hss_exon5-6	Ichnocarpus_frutescens_TL621_hss_exon1-6	Ichnocarpus_frutescens_TL621_hss_exon1-6	VXXXD	D. J. Middleton et al. 5135 (E)	ON793242
Apocyneae	*Ichnocarpus frutescens* (L.) W.T.Aiton	Ichnocarpus_frutescens_TL621_contig2_dhs_exon1-7	Ichnocarpus_frutescens_TL621_dhs_exon1-7	Ichnocarpus_frutescens_TL621_dhs_exon1-7	IXXXN	D. J. Middleton et al. 5135 (E)	ON793243
Apocyneae	*Papuechites aambe* (Warb.) Markgr.	Papuechites_aambe			VXXXD	Livshultz et al. 2018	MG817665
Apocyneae	*Papuechites aambe* (Warb.) Markgr.	Papuechites_aambe_TLA130_contig0_hss_exon1-7	Papuechites_aambe_TLA130_hss_exon1-7	Papuechites_aambe_TLA130_hss_exon1-7	VXXXD	W. Takeuchi & Ama 16124 (A)	ON793244
Apocyneae	*Papuechites aambe* (Warb.) Markgr.	Papuechites_aambe_TLA130_contig1_dhs_exon1-7	Papuechites_aambe_TLA130_dhs_exon1-7	Papuechites_aambe_TLA130_dhs_exon1-7	IXXXN	W. Takeuchi & Ama 16124 (A)	ON793245

Apocyneae	*Pottsia laxiflora* (Blume) Kuntze	Pottsia_laxiflora	Pottsia_laxiflora	Pottsia_laxiflora	IXXXN	Livshultz et al. 2018	MG817686
Apocyneae	*Streptoechites chinensis* (Merr.) D.J.Middleton & Livsh.	Streptoechites_chinensis			IXXXN	Livshultz et al. 2018	MG817692
Apocyneae	*Streptoechites chinensis* (Merr.) D.J.Middleton & Livsh.	Streptoechites_chinensis_54_contig0_hss_exon1-6	Streptoechites_chinensis_54_hss_exon1-6	Streptoechites_chinensis_54_hss_exon1-6	VXXXD	D. J. Middleton et al. 2301 (A)	ON793246
Apocyneae	*Streptoechites chinensis* (Merr.) D.J.Middleton & Livsh.	Streptoechites_chinensis_54_contig1_hss_exon6	Streptoechites_chinensis_54_hss_exon6			D. J. Middleton et al. 2301 (A)	ON793247
Apocyneae	*Streptoechites chinensis* (Merr.) D.J.Middleton & Livsh.	Streptoechites_chinensis_54_contig2_dhs_exon1-7	Streptoechites_chinensis_54_dhs_exon1-7	Streptoechites_chinensis_54_dhs_exon1-7	IXXXN	D. J. Middleton et al. 2301 (A)	ON793248
Apocyneae	*Trachelospermum asiaticum* (Siebold & Zucc.) Nakai	Trachelospermum_asiaticum_PA66B_contig0_hss_exon2-4	Trachelospermum_asiaticum_PA66B_hss_exon1-7	Trachelospermum_asiaticum_PA66B_hss_exon1-7		D. J. Middleton et al. 3355 (A)	ON793249
Apocyneae	*Trachelospermum asiaticum* (Siebold & Zucc.) Nakai	Trachelospermum_asiaticum_PA66B_contig1_hss_exon5-7	Trachelospermum_asiaticum_PA66B_hss_exon1-7	Trachelospermum_asiaticum_PA66B_hss_exon1-7	VXXXD	D. J. Middleton et al. 3355 (A)	ON793250
Apocyneae	*Trachelospermum asiaticum* (Siebold & Zucc.) Nakai	Trachelospermum_asiaticum_PA66B_contig2_hss_exon1	Trachelospermum_asiaticum_PA66B_hss_exon1-7	Trachelospermum_asiaticum_PA66B_hss_exon1-7		D. J. Middleton et al. 3355 (A)	ON793251
Apocyneae	*Trachelospermum asiaticum* (Siebold & Zucc.) Nakai	Trachelospermum_asiaticum_PA66B_contig3_hss_exon2-4	Trachelospermum_asiaticum_PA66B_hss_exon1-7	Trachelospermum_asiaticum_PA66B_hss_exon1-7		D. J. Middleton et al. 3355 (A)	ON793252
Apocyneae	*Trachelospermum asiaticum* (Siebold & Zucc.) Nakai	Trachelospermum_asiaticum_PA66B_contig4_hss_exon5-6	Trachelospermum_asiaticum_PA66B_hss_exon1-7	Trachelospermum_asiaticum_PA66B_hss_exon1-7	VXXXD	D. J. Middleton et al. 3355 (A)	ON793253
Apocyneae	*Trachelospermum asiaticum* (Siebold & Zucc.) Nakai	Trachelospermum_asiaticum_PA66B_contig5_dhs_exon1-7	Trachelospermum_asiaticum_PA66B_dhs_exon1-7	Trachelospermum_asiaticum_PA66B_dhs_exon1-7	IXXXN	D. J. Middleton et al. 3355 (A)	ON793254
Apocyneae	*Trachelospermum axillare* Hook.f.	Trachelospermum_axillare			IXXXN	Livshultz et al. 2018	MG817696
Apocyneae	*Trachelospermum axillare* Hook.f.	Trachelospermum_axillare_TLA84_contig0_dhs_exon1-4	Trachelospermum_axillare_TLA84_dhs_exon1-4			Suksathan & D. J. Middleton 1852 (A)	ON793255
Apocyneae	*Trachelospermum axillare* Hook.f.	Trachelospermum_axillare_TLA84_contig1_hss_exon2-4	Trachelospermum_axillare_TLA84_hss_exon2-7	Trachelospermum_axillare_TLA84_hss_exon2-7		Suksathan & D. J. Middleton 1852 (A)	ON793256
Apocyneae	*Trachelospermum axillare* Hook.f.	Trachelospermum_axillare_TLA84_contig2_hss_exon5-7	Trachelospermum_axillare_TLA84_hss_exon2-7	Trachelospermum_axillare_TLA84_hss_exon2-7	VXXXD	Suksathan & D. J. Middleton 1852 (A)	ON793257

Apocyneae	*Trachelospermum axillare* Hook.f.	Trachelospermum_axillare_TLA84_contig3_dhs_exon5-7_Ψ	Trachelospermum_axillare_TLA84_dhs_exon5-7_Ψ		IXXXN	Suksathan & D. J. Middleton 1852 (A)	ON793258
Apocyneae	*Trachelospermum axillare* Hook.f.	Trachelospermum_axillare_TLA84_contig4_dhs_exon1-7	Trachelospermum_axillare_TLA84_dhs_exon1-7	Trachelospermum_axillare_TLA84_dhs_exon1-7	IXXXN	Suksathan & D. J. Middleton 1852 (A)	ON793259
Apocyneae	*Vallaris solanacea* (Roth) Kuntze	Vallaris_solanacea_TLA90_contig0_hss_exon1-7	Vallaris_solanacea_TLA90_hss_exon1-7	Vallaris_solanacea_TLA90_hss_exon1-7	VXXXD	D. J. Middleton et al. 1704 (A)	ON793260
Apocyneae	*Vallaris solanacea* (Roth) Kuntze	Vallaris_solanacea_TLA90_contig1_dhs_exon1-4	Vallaris_solanacea_TLA90_dhs_exon1-7	Vallaris_solanacea_TLA90_dhs_exon1-7		D. J. Middleton et al. 1704 (A)	ON793261
Apocyneae	*Vallaris solanacea* (Roth) Kuntze	Vallaris_solanacea_TLA90_contig2_dhs_exon5-7	Vallaris_solanacea_TLA90_dhs_exon1-7	Vallaris_solanacea_TLA90_dhs_exon1-7	IXXXN	D. J. Middleton et al. 1704 (A)	ON793262
Asclepiadeae	*Asclepias curassavica* L.	Asclepias_curassavica	Asclepias_curassavica	Asclepias_curassavica	IXXXN	1KP, www.onekp.com/public_data.html	scaffold-DSUV-2056201-Asclepia_curassavica
Asclepiadeae	*Asclepias syriaca* L.	Asclepias_syriaca_1_Ψ	Asclepias_syriaca_1_Ψ		IXXXN	Milkweed Genome Project, http://milkweedgenome.org	MG817650
Asclepiadeae	*Asclepias syriaca* L.	Asclepias_syriaca_2	Asclepias_syriaca_2	Asclepias_syriaca_2	IXXXN	Milkweed Genome Project, http://milkweedgenome.org	MG817647
Asclepiadeae	*Calotropis gigantea* (L.) W.T.Aiton	Calotropis_gigantea_dhs	Calotropis_gigantea_dhs	Calotropis_gigantea_dhs	IXXXN	Hoopes et al. 2018	
Asclepiadeae	*Calotropis gigantea* (L.) W.T.Aiton	Calotropis_gigantea_hss	Calotropis_gigantea_hss	Calotropis_gigantea_hss	IXXXN	Hoopes et al. 2018	
Asclepiadeae	*Calotropis gigantea* (L.) W.T.Aiton	Calotropis_gigantea_hss_Ψ	Calotropis_gigantea_hss_Ψ		IXXXD	Hoopes et al. 2018	
Asclepiadeae	*Diplolepis geminiflora* (Decne.) Liede &Rapini	Diplolepis_geminiflora_36_contig0_dhs_exon1-4	Diplolepis_geminiflora_36_dhs_exon1-7	Diplolepis_geminiflora_36_dhs_exon1-7		Hansen 633 (OKLA)	ON793263

Asclepiadeae	*Diplolepis geminiflora* (Decne.) Liede &Rapini	Diplolepis_geminiflora_36_contig1_hss_exon3-7	Diplolepis_geminiflora_36_hss_exon1-7	Diplolepis_geminiflora_36_hss_exon1-7	IXXXN	Hansen 633 (OKLA)	ON793264
Asclepiadeae	*Diplolepis geminiflora* (Decne.) Liede &Rapini	Diplolepis_geminiflora_36_contig2_dhs_exon5-7	Diplolepis_geminiflora_36_dhs_exon1-7	Diplolepis_geminiflora_36_dhs_exon1-7	IXXXN	Hansen 633 (OKLA)	ON793265
Asclepiadeae	*Diplolepis geminiflora* (Decne.) Liede &Rapini	Diplolepis_geminiflora_36_contig3_hss_exon1-2	Diplolepis_geminiflora_36_hss_exon1-7	Diplolepis_geminiflora_36_hss_exon1-7		Hansen 633 (OKLA)	ON793266
Asclepiadeae	*Peplonia adnata* (E.Fourn.) U.C.S.Silva & Rapini	Peplonia_adnata_PA113_contig0_hss_exon1-7	Peplonia_adnata_PA113_hss_exon1-7	Peplonia_adnata_PA113_hss_exon1-7	IXXXN	C. Bitencourt 440 (HUEFS)	ON793267
Asclepiadeae	*Peplonia adnata* (E.Fourn.) U.C.S.Silva & Rapini	Peplonia_adnata_PA113_contig1_dhs_exon1-7	Peplonia_adnata_PA113_dhs_exon1-7	Peplonia_adnata_PA113_dhs_exon1-7		C. Bitencourt 440 (HUEFS)	ON793268
Asclepiadeae	*Peplonia adnata* (E.Fourn.) U.C.S.Silva & Rapini	Peplonia_adnata_PA113_contig2_dhs_exon5-7	Peplonia_adnata_PA113_dhs_exon1-7	Peplonia_adnata_PA113_dhs_exon1-7	IXXXN	C. Bitencourt 440 (HUEFS)	ON793269
Asclepiadeae	*Tassadia berteroanum* (Spreng.) W.D.Stevens	Tassadia_berteroanum_PA34_contig0_dhs_exon1-4	Tassadia_berteroanum_PA34_dhs_exon1-7	Tassadia_berteroanum_PA34_dhs_exon1-7		Fuentes 3904 (OKLA)	ON793270
Asclepiadeae	*Tassadia berteroanum* (Spreng.) W.D.Stevens	Tassadia_berteroanum_PA34_contig1_hss_exon1-7	Tassadia_berteroanum_PA34_hss_exon1-7	Tassadia_berteroanum_PA34_hss_exon1-7	IXXXN	Fuentes 3904 (OKLA)	ON793271
Asclepiadeae	*Tassadia berteroanum* (Spreng.) W.D.Stevens	Tassadia_berteroanum_PA34_contig2_dhs_exon5-7	Tassadia_berteroanum_PA34_dhs_exon1-7	Tassadia_berteroanum_PA34_dhs_exon1-7	IXXXN	Fuentes 3904 (OKLA)	ON793272
Asclepiadeae	*Tassadia propinqua* Decne.	Tassadia_propinqua_33_contig0_hss_exon1-7_Ψ	Tassadia_propinqua_33_hss_exon1-7_Ψ		IXXXN	Vieira et al. 71 (OKLA)	ON793273
Asclepiadeae	*Tassadia propinqua* Decne.	Tassadia_propinqua_33_contig1_dhs_exon5-7	Tassadia_propinqua_33_dhs_exon1-7	Tassadia_propinqua_33_dhs_exon1-7	IXXXN	Vieira et al. 71 (OKLA)	ON793274
Asclepiadeae	*Tassadia propinqua* Decne.	Tassadia_propinqua_33_contig2_hss_exon3-7	Tassadia_propinqua_33_hss_exon3-7	Tassadia_propinqua_33_hss_exon3-7	IXXXN	Vieira et al. 71 (OKLA)	ON793275
Asclepiadeae	*Tassadia propinqua* Decne.	Tassadia_propinqua_33_contig3_dhs_exon1-4	Tassadia_propinqua_33_dhs_exon1-7	Tassadia_propinqua_33_dhs_exon1-7		Vieira et al. 71 (OKLA)	ON793276
Aspidospermateae	*Haplophyton crooksii* (L.D.Benson) L.D.Benson	Haplophyton_crooksii	Haplophyton_crooksii	Haplophyton_crooksii	IXXXN	Livshultz et al. 2018	MG817713
Baisseeae	*Baissea myrtifolia* (Benth.) Pichon	Baissea_myrtifolia_TL638_contig0_hss_exon1-7	Baissea_myrtifolia_TL638_hss_exon1-7	Baissea_myrtifolia_TL638_hss_exon1-7	IXXXD	B. M. Musyoki & O. J. Hansen 1004 (BR)	ON793277
Baisseeae	*Baissea myrtifolia* (Benth.) Pichon	Baissea_myrtifolia_TL638_contig1_dhs_exon1-4_Ψ	Baissea_myrtifolia_TL638_dhs_exon1-4_Ψ			B. M. Musyoki & O. J. Hansen 1004 (BR)	ON793278

Baisseeae	*Baissea myrtifolia* (Benth.) Pichon	Baissea_myrtifolia_TL638_contig2_dhs_exon4-7	Baissea_myrtifolia_TL638_dhs_exon4-7		IXXXN	B. M. Musyoki & O. J. Hansen 1004 (BR)	ON793279
Baisseeae	*Baissea myrtifolia* (Benth.) Pichon	Baissea_myrtifolia_TL638_contig3_dhs_exon1-7	Baissea_myrtifolia_TL638_dhs_exon1-7	Baissea_myrtifolia_TL638_dhs_exon1-7	IXXXN	B. M. Musyoki & O. J. Hansen 1004 (BR)	ON793280
Baisseeae	*Baissea viridiflora* (Schumann) de Kruif	Baissea_viridiflora_TL622_contig0_hss_exon1-6	Baissea_viridiflora_TL622_hss_exon1-6	Baissea_viridiflora_TL622_hss_exon1-6	IXXXD	Mrs. H. M. Richards 16770 (BR)	ON793281
Baisseeae	*Baissea viridiflora* (Schumann) de Kruif	Baissea_viridiflora_TL622_contig1_dhs_exon1-7	Baissea_viridiflora_TL622_dhs_exon1-7	Baissea_viridiflora_TL622_dhs_exon1-7	IXXXN	Mrs. H. M. Richards 16770 (BR)	ON793282
Baisseeae	*Oncinotis glabrata* (Baill.) Stapf ex Hiern	Oncinotis_glabrata_TL417_contig0_dhs_exon1-7	Oncinotis_glabrata_TL417_dhs_exon1-7	Oncinotis_glabrata_TL417_dhs_exon1-7	IXXXN	C. C. H. Jongkind et al. 1350 (US)	ON793283
Baisseeae	*Oncinotis glabrata* (Baill.) Stapf ex Hiern	Oncinotis_glabrata_TL417_contig1_hss_exon1-7	Oncinotis_glabrata_TL417_hss_exon1-7	Oncinotis_glabrata_TL417_hss_exon1-7	IXXXD	C. C. H. Jongkind et al. 1350 (US)	ON793284
Carisseae	*Carissa spinarum* L.	Carissa_spinarum			IXXXN	Livshultz et al. 2018	MG817712
Ceropegieae	*Hoodia gordonii* Sweet ex Decne.	Hoodia_gordonii				Medicinal Plant Genomics Resource, http://medicinalplantgenomics.msu.edu/	MF597728
Echiteae	*Echites turriger* Woodson	Echites_turriger			IXXXN	Livshultz et al. 2018	MG817668
Echiteae	*Echites turriger* Woodson	Echites_turriger_TLA137_contig0_dhs_exon1-7	Echites_turriger_TLA137_dhs_exon1-7	Echites_turriger_TLA137_dhs_exon1-7	IXXXN	W. P. Spencer & J. K. Williams 2 (SHST)	ON793285

Echiteae	*Echites turriger* Woodson	Echites_turriger_TLA137_contig1_hss_exon1-7	Echites_turriger_TLA137_hss_exon1-7	Echites_turriger_TLA137_hss_exon1-7	VXXXD	W. P. Spencer & J. K. Williams 2 (SHST)	ON793286
Echiteae	*Echites turriger* Woodson	Echites_turriger_TLA137_contig2_hss_exon5-6_Ψ	Echites_turriger_TLA137_hss_exon5-6_Ψ		VXXXD	W. P. Spencer & J. K. Williams 2 (SHST)	ON793287
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_1	Echites_umbellatus_1	Echites_umbellatus_1	VXXXD	Livshultz et al. 2018	MG817655
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_2	Echites_umbellatus_2	Echites_umbellatus_2	VXXXD	Livshultz et al. 2018	MG817656
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_3	Echites_umbellatus_3	Echites_umbellatus_3	IXXXN	Livshultz et al. 2018	MG817677
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_4	Echites_umbellatus_4	Echites_umbellatus_4	IXXXN	Livshultz et al. 2018	MG817654
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA74_contig0_dhs_exon1-7	Echites_umbellatus_PA74_dhs_exon1-7	Echites_umbellatus_PA74_dhs_exon1-7	IXXXN	S. Koptur 1176 (PH)	ON793295
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA74_contig1_hss_exon1-7	Echites_umbellatus_PA74_hss_exon1-7	Echites_umbellatus_PA74_hss_exon1-7	VXXXD	S. Koptur 1176 (PH)	ON793296
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA74_contig2_hss_exon4-5_Ψ	Echites_umbellatus_PA74_hss_exon4-5_Ψ			S. Koptur 1176 (PH)	ON793297
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA76_contig0_dhs_exon1-7	Echites_umbellatus_PA76_dhs1_exon1-7	Echites_umbellatus_PA76_dhs1_exon1-7	IXXXN	S. Koptur 1176 (PH)	ON793290
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA76_contig1_hss_contig1-7	Echites_umbellatus_PA76_hss1_exon1-7	Echites_umbellatus_PA76_hss1_exon1-7	VXXXD	S. Koptur 1176 (PH)	ON793291
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA76_contig2_hss_contig4-5_Ψ	Echites_umbellatus_PA76_hss_exon4-5_Ψ			S. Koptur 1176 (PH)	ON793292
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA76_contig3_hss_contig1-7	Echites_umbellatus_PA76_hss2_exon1-7	Echites_umbellatus_PA76_hss2_exon1-7	VXXXD	S. Koptur 1176 (PH)	ON793293
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA76_contig4_dhs_exon1-7	Echites_umbellatus_PA76_dhs2_exon1-7	Echites_umbellatus_PA76_dhs2_exon1-7	IXXXN	S. Koptur 1176 (PH)	ON793294
Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA86_contig0_hss_exon1-7	Echites_umbellatus_PA86_hss_exon1-7	Echites_umbellatus_PA86_hss_exon1-7	VXXXD	S. Koptur 1176 (PH)	ON793288

Echiteae	*Echites umbellatus* Jacq.	Echites_umbellatus_PA86_contig1_dhs_exon1-7	Echites_umbellatus_PA86_dhs_exon1-7	Echites_umbellatus_PA86_dhs_exon1-7	IXXXN	S. Koptur 1176 (PH)	ON793289
Echiteae	*Echites woodsonianus* Monach.	Echites_woodsonianus			VXXXD	Livshultz et al. 2018	MG817658
Echiteae	*Echites woodsonianus* Monach.	Echites_woodsonianus_2	Echites_woodsonianus_2	Echites_woodsonianus_2	IXXXN	Livshultz et al. 2018	MG817657
Echiteae	*Laubertia boissieri* A.DC.	Laubertia_boissieri_TL220_contig0_dhs_exon1-7	Laubertia_boissieri_TL220_dhs_exon1-7	Laubertia_boissieri_TL220_dhs_exon1-7	IXXXN	R. Seidel & E. Vargas 1103 (MO)	ON793298
Echiteae	*Laubertia boissieri* A.DC.	Laubertia_boissieri_TL220_contig1_hss_exon1-7	Laubertia_boissieri_TL220_hss_exon1-7	Laubertia_boissieri_TL220_hss_exon1-7	VXXXD	R. Seidel & E. Vargas 1103 (MO)	ON793299
Echiteae	*Laubertia boissieri* A.DC.	Laubertia_boissieri_TL220_contig2_dhs_exon3_⟱	Laubertia_boissieri_TL220_dhs_exon3_⟱			R. Seidel & E. Vargas 1103 (MO)	ON793300
Echiteae	*Macropharynx peltata* (Vell.) J.F.Morales, M.E.Endress & Liede	Macropharynx_peltata_49_contig0_hss_exon1-7	Macropharynx_peltata_49_hss_exon1-7	Macropharynx_peltata_49_hss_exon1-7	VXXXD	F. Billiet S3526 (BR)	ON793301
Echiteae	*Macropharynx peltata* (Vell.) J.F.Morales, M.E.Endress & Liede	Macropharynx_peltata_49_contig1_dhs_exon1-7	Macropharynx_peltata_49_dhs_exon1-7	Macropharynx_peltata_49_dhs_exon1-7	IXXXN	F. Billiet S3526 (BR)	ON793302
Echiteae	*Macropharynx spectabilis* (Stadelm.) Woodson	Macropharynx_spectabilis_TL210_contig0_hss_exon1-7	Macropharynx_spectabilis_TL210_hss_exon1-7	Macropharynx_spectabilis_TL210_hss_exon1-7	VXXXD	M. Nee 46049 (NY)	ON793303
Echiteae	*Macropharynx spectabilis* (Stadelm.) Woodson	Macropharynx_spectabilis_TL210_contig1_dhs_exon1-4	Macropharynx_spectabilis_TL210_dhs_exon1-7	Macropharynx_spectabilis_TL210_dhs_exon1-7		M. Nee 46049 (NY)	ON793304
Echiteae	*Macropharynx spectabilis* (Stadelm.) Woodson	Macropharynx_spectabilis_TL210_contig2_dhs_exon5-7	Macropharynx_spectabilis_TL210_dhs_exon1-7	Macropharynx_spectabilis_TL210_dhs_exon1-7	IXXXN	M. Nee 46049 (NY)	ON793305
Echiteae	*Macropharynx spectabilis* (Stadelm.) Woodson	Macropharynx_spectabilis_TL210_contig3_hss_exon2-3	Macropharynx_spectabilis_TL210_hss_exon2-3			M. Nee 46049 (NY)	ON793306
Echiteae	*Parsonsia alboflavescens* (Dennst.) Mabb.	Parsonsia_alboflavescens_DHS			IXXXN	Livshultz et al. 2018	MG817648
Echiteae	*Parsonsia alboflavescens* (Dennst.) Mabb.	Parsonsia_alboflavescens_HSS			VXXXD	Livshultz et al. 2018	MG817649
Echiteae	*Parsonsia alboflavescens* (Dennst.) Mabb.	Parsonsia_alboflavescens_HSS_ORF			VXXXD	Livshultz et al. 2018	MG873186

Echiteae	*Parsonsia alboflavescens* (Dennst.) Mabb.	Parsonsia_alboflavescens_PA90_contig0_hss_exon1-7	Parsonsia_alboflavescens_PA90_hss_exon1-7	Parsonsia_alboflavescens_PA90_hss_exon1-7	VXXXD	T. Livshultz 2011-14 (PH)	ON793307
Echiteae	*Parsonsia alboflavescens* (Dennst.) Mabb.	Parsonsia_alboflavescens_PA90_contig1_dhs_exon1-4	Parsonsia_alboflavescens_PA90_dhs_exon1-7	Parsonsia_alboflavescens_PA90_dhs_exon1-7		T. Livshultz 2011-14 (PH)	ON793308
Echiteae	*Parsonsia alboflavescens* (Dennst.) Mabb.	Parsonsia_alboflavescens_PA90_contig2_dhs_exon5-7	Parsonsia_alboflavescens_PA90_dhs_exon1-7	Parsonsia_alboflavescens_PA90_dhs_exon1-7	IXXXN	T. Livshultz 2011-14 (PH)	ON793309
Echiteae	*Parsonsia alboflavescens* (Dennst.) Mabb.	Parsonsia_alboflavescens_PA90_contig3_hss_exon3_Ψ	Parsonsia_alboflavescens_PA90_hss_exon3_Ψ			T. Livshultz 2011-14 (PH)	ON793310
Echiteae	*Parsonsia eucalyptophylla* F.Muell.	Parsonsia_eucalyptophylla_1	Parsonsia_eucalyptophylla_1	Parsonsia_eucalyptophylla_1	VXXXD	Livshultz et al. 2018	MG817688
Echiteae	*Parsonsia eucalyptophylla* F.Muell.	Parsonsia_eucalyptophylla_2	Parsonsia_eucalyptophylla_2	Parsonsia_eucalyptophylla_2	VXXXD	Livshultz et al. 2018	MG817689
Echiteae	*Prestonia coalita* (Vell.) Woodson	Prestonia_coalita_1	Prestonia_coalita_1	Prestonia_coalita_1	VXXXD	Livshultz et al. 2018	MG817652
Echiteae	*Prestonia coalita* (Vell.) Woodson	Prestonia_coalita_2	Prestonia_coalita_2	Prestonia_coalita_2	VXXXD	Livshultz et al. 2018	MG817653
Echiteae	*Prestonia coalita* (Vell.) Woodson	Prestonia_coalita_3	Prestonia_coalita_3	Prestonia_coalita_3	IXXXN	Livshultz et al. 2018	MG817664
Echiteae	*Prestonia portobellensis* (Beurl.) Woodson	Prestonia_portobellensis_51_contig0_hss_exon4-7	Prestonia_portobellensis_51_hss_exon1-7	Prestonia_portobellensis_51_hss_exon1-7	VXXXD	F. Ventura 21262 (NY)	ON793311
Echiteae	*Prestonia portobellensis* (Beurl.) Woodson	Prestonia_portobellensis_51_contig1_hss_exon1-3	Prestonia_portobellensis_51_hss_exon1-7	Prestonia_portobellensis_51_hss_exon1-7		F. Ventura 21262 (NY)	ON793312
Echiteae	*Prestonia portobellensis* (Beurl.) Woodson	Prestonia_portobellensis_51_contig2_hss_exon6	Prestonia_portobellensis_51_hss_exon6			F. Ventura 21262 (NY)	ON793313
Echiteae	*Prestonia portobellensis* (Beurl.) Woodson	Prestonia_portobellensis_51_contig3_dhs_exon4-7	Prestonia_portobellensis_51_dhs_exon4-7		IXXXN	F. Ventura 21262 (NY)	ON793314
Echiteae	*Prestonia portobellensis* (Beurl.) Woodson	Prestonia_portobellensis_51_contig4_dhs_exon1-7	Prestonia_portobellensis_51_dhs_exon1-7	Prestonia_portobellensis_51_dhs_exon1-7	IXXXN	F. Ventura 21262 (NY)	ON793315
Echiteae	*Rhodocalyx riedelii* (Müll.Arg.) J.F.Morales & M.E.Endress	Rhodocalyx_riedelii_TL205_contig0_hss_exon1-7	Rhodocalyx_riedelii_TL205_hss_exon1-7	Rhodocalyx_riedelii_TL205_hss_exon1-7	VXXXD	Solomon & Escobar 12465 (NY)	ON793316

Echiteae	*Rhodocalyx riedelii* (Müll.Arg.) J.F.Morales & M.E.Endress	Rhodocalyx_riedelii_TL205_contig1_dhs_exon1-7	Rhodocalyx_riedelii_TL205_dhs_exon1-7	Rhodocalyx_riedelii_TL205_dhs_exon1-7	IXXXN	Solomon & Escobar 12465 (NY)	ON793317
Echiteae	*Rhodocalyx rotundifolius* Müll.Arg.	Rhodocalyx_rotundifolius_PA109b_contig0_dhs_exon1-7	Rhodocalyx_rotundifolius_PA109b_dhs_exon1-7	Rhodocalyx_rotundifolius_PA109b_dhs_exon1-7	IXXXN	C. O. Dourados 169 (HUEFS)	ON793318
Echiteae	*Rhodocalyx rotundifolius* Müll.Arg.	Rhodocalyx_rotundifolius_PA109b_contig1_hss_exon1-7	Rhodocalyx_rotundifolius_PA109b_hss_exon1-7	Rhodocalyx_rotundifolius_PA109b_hss_exon1-7	VXXXD	C. O. Dourados 169 (HUEFS)	ON793319
Echiteae	*Rhodocalyx rotundifolius* Müll.Arg.	Rhodocalyx_rotundifolius_PA109b_contig2_hss_exon1-5	Rhodocalyx_rotundifolius_PA109b_hss_exon1-5			C. O. Dourados 169 (HUEFS)	ON793320
Echiteae	*Temnadenia odorifera* (Vell.) J.F.Morales	Temnadenia_odorifera_TL213_contig0_hss_exon3-7	Temnadenia_odorifera_TL213_hss_exon3-7		VXXXD	A. O. Simões & R. B. Singer 1035 (UEC)	ON793321
Echiteae	*Temnadenia odorifera* (Vell.) J.F.Morales	Temnadenia_odorifera_TL213_contig1_hss_exon1-7	Temnadenia_odorifera_TL213_hss_exon1-7	Temnadenia_odorifera_TL213_hss_exon1-7	VXXXD	A. O. Simões & R. B. Singer 1035 (UEC)	ON793322
Echiteae	*Temnadenia odorifera* (Vell.) J.F.Morales	Temnadenia_odorifera_TL213_contig2_dhs_exon1-7	Temnadenia_odorifera_TL213_dhs_exon1-7	Temnadenia_odorifera_TL213_dhs_exon1-7	IXXXN	A. O. Simões & R. B. Singer 1035 (UEC)	ON793323
Fockeeae	*Fockea edulis* (Thunb.) K.Schum	Fockea_edulis			IXXXN	Livshultz et al. 2018	MG817697
Fockeeae	*Fockea edulis* (Thunb.) K.Schum	Fockea_edulis_TL184_contig0_dhs_exon1-4	Fockea_edulis_TL184_dhs_exon1-7	Fockea_edulis_TL184_dhs_exon1-7		T. Livshultz s.n. 31.III.1998 (BH)	ON793324
Fockeeae	*Fockea edulis* (Thunb.) K.Schum	Fockea_edulis_TL184_contig1_hss_exon1-5	Fockea_edulis_TL184_hss_exon1-7	Fockea_edulis_TL184_hss_exon1-7		T. Livshultz s.n. 31.III.1998 (BH)	ON793325
Fockeeae	*Fockea edulis* (Thunb.) K.Schum	Fockea_edulis_TL184_contig2_dhs_exon5-7	Fockea_edulis_TL184_dhs_exon1-7	Fockea_edulis_TL184_dhs_exon1-7	IXXXN	T. Livshultz s.n. 31.III.1998 (BH)	ON793326
Fockeeae	*Fockea edulis* (Thunb.) K.Schum	Fockea_edulis_TL184_contig3_hss_exon6-7	Fockea_edulis_TL184_hss_exon1-7	Fockea_edulis_TL184_hss_exon1-7	IXXXD	T. Livshultz s.n. 31.III.1998 (BH)	ON793327
Gelsemiaceae	*Gelsemium sempervirens* (L.) J.St.-Hil.	Gelsemium_sempervirens_32_contig0_dhs_exon4-7	Gelsemium_sempervirens_32_dhs_exon1-7	Gelsemium_sempervirens_32_dhs_exon1-7	IXXXN	M. Fishbein 7665 (OKLA)	ON793328
Gelsemiaceae	*Gelsemium sempervirens* (L.) J.St.-Hil.	Gelsemium_sempervirens_32_contig1_dhs_exon1-3	Gelsemium_sempervirens_32_dhs_exon1-7	Gelsemium_sempervirens_32_dhs_exon1-7		M. Fishbein 7665 (OKLA)	ON793329

Gelsemiaceae	*Gelsemium sempervirens* (L.) J.St.-Hil.	Gelsemium_sempervirens_32_contig2_dhs_exon1-3	Gelsemium_sempervirens_32_dhs_exon1-7	Gelsemium_sempervirens_32_dhs_exon1-7		M. Fishbein 7665 (OKLA)	ON793330
Hunterieae	*Hunteria zeylanica* (Retz.) Gardner ex Thwaites	Hunteria_zeylanica			IXXXN	Livshultz et al. 2018	MG817709
Hunterieae	*Hunteria zeylanica* (Retz.) Gardner ex Thwaites	Hunteria_zeylanica_67c_contig0_dhs_exon1-4	Hunteria_zeylanica_67c_dhs_exon1-7	Hunteria_zeylanica_67c_dhs_exon1-7		D. J. Middleton et al. 3816 (E)	ON793331
Hunterieae	*Hunteria zeylanica* (Retz.) Gardner ex Thwaites	Hunteria_zeylanica_67c_contig1_dhs_exon5-7	Hunteria_zeylanica_67c_dhs_exon1-7	Hunteria_zeylanica_67c_dhs_exon1-7	IXXXN	D. J. Middleton et al. 3816 (E)	ON793332
Malouetieae	*Eucorymbia alba* Stapf	Eucorymbia_alba_PA104_contig0_hss_exon1-6	Eucorymbia_alba_PA104_hss_exon1-6	Eucorymbia_alba_PA104_hss_exon1-6	VXXXD	P. Chai 38575 (L)	ON793333
Malouetieae	*Eucorymbia alba* Stapf	Eucorymbia_alba_PA104_contig1_dhs_exon1-7	Eucorymbia_alba_PA104_dhs_exon1-7	Eucorymbia_alba_PA104_dhs_exon1-7	IXXXN	P. Chai 38575 (L)	ON793334
Malouetieae	*Funtumia elastica* (Preuss) Stapf	Funtumia_elastica_TLA144_contig0_hss_exon1-7	Funtumia_elastica_TLA144_hss_exon1-7	Funtumia_elastica_TLA144_hss_exon1-7	VXXXD	V. Leyman S3927 (BR)	ON793335
Malouetieae	*Funtumia elastica* (Preuss) Stapf	Funtumia_elastica_TLA144_contig1_dhs_exon1	Funtumia_elastica_TLA144_dhs_exon1			V. Leyman S3927 (BR)	ON793336
Malouetieae	*Funtumia elastica* (Preuss) Stapf	Funtumia_elastica_TLA144_contig2_hss_exon2_Ψ	Funtumia_elastica_TLA144_hss_exon2_Ψ			V. Leyman S3927 (BR)	ON793337
Malouetieae	*Funtumia elastica* (Preuss) Stapf	Funtumia_elastica_TLA144_contig3_dhs_exon1-7	Funtumia_elastica_TLA144_dhs1_exon1-7	Funtumia_elastica_TLA144_dhs1_exon1-7	IXXXN	V. Leyman S3927 (BR)	ON793338
Malouetieae	*Funtumia elastica* (Preuss) Stapf	Funtumia_elastica_TLA144_contig4_dhs_exon1-7	Funtumia_elastica_TLA144_dhs2_exon1-7	Funtumia_elastica_TLA144_dhs2_exon1-7	IXXXN	V. Leyman S3927 (BR)	ON793339
Malouetieae	*Galactophora schomburgkiana* Woodson	Galactophora_schomburgkiana			VXXXD	Livshultz et al. 2018	MG817661
Malouetieae	*Galactophora schomburgkiana* Woodson	Galactophora_schomburgkiana_PA87_contig0_hss_exon1-7	Galactophora_schomburgkiana_PA87_hss_exon1-7	Galactophora_schomburgkiana_PA87_hss_exon1-7	VXXXD	F. Michelangeli 516 (VEN, PORT)	ON793340
Malouetieae	*Galactophora schomburgkiana* Woodson	Galactophora_schomburgkiana_PA87_contig1_dhs_exon1-3	Galactophora_schomburgkiana_PA87_dhs_exon1-7	Galactophora_schomburgkiana_PA87_dhs_exon1-7		F. Michelangeli 516 (VEN, PORT)	ON793341
Malouetieae	*Galactophora schomburgkiana* Woodson	Galactophora_schomburgkiana_PA87_contig2_dhs_exon5-7	Galactophora_schomburgkiana_PA87_dhs_exon1-7	Galactophora_schomburgkiana_PA87_dhs_exon1-7	IXXXN	F. Michelangeli 516 (VEN, PORT)	ON793342

Malouetieae	*Galactophora schomburgkiana* Woodson	Galactophora_schomburgkiana_PA87_contig3_dhs_exon4	Galactophora_schomburgkiana_PA87_dhs_exon1-7	Galactophora_schomburgkiana_PA87_dhs_exon1-7		F. Michelangeli 516 (VEN, PORT)	ON793343
Malouetieae	*Holarrhena curtisii* King & Gamble	Holarrhena_curtisii_1			VXXXD	Livshultz et al. 2018	MG817674
Malouetieae	*Holarrhena curtisii* King & Gamble	Holarrhena_curtisii_2			IXXXN	Livshultz et al. 2018	MG817673
Malouetieae	*Holarrhena curtisii* King & Gamble	Holarrhena_curtisii_TLA17_contig0_dhs_exon1-4	Holarrhena_curtisii_TLA17_dhs_exon1-7	Holarrhena_curtisii_TLA17_dhs_exon1-7		D. J. Middleton et al. 2042 (A)	ON793344
Malouetieae	*Holarrhena curtisii* King & Gamble	Holarrhena_curtisii_TLA17_contig1_dhs_exon5-7	Holarrhena_curtisii_TLA17_dhs_exon1-7	Holarrhena_curtisii_TLA17_dhs_exon1-7	IXXXN	D. J. Middleton et al. 2042 (A)	ON793345
Malouetieae	*Holarrhena curtisii* King & Gamble	Holarrhena_curtisii_TLA17_contig2_hss_exon1-3	Holarrhena_curtisii_TLA17_hss_exon1-7	Holarrhena_curtisii_TLA17_hss_exon1-7		D. J. Middleton et al. 2042 (A)	ON793346
Malouetieae	*Holarrhena curtisii* King & Gamble	Holarrhena_curtisii_TLA17_contig3_hss_exon4-7	Holarrhena_curtisii_TLA17_hss_exon1-7	Holarrhena_curtisii_TLA17_hss_exon1-7	VXXXD	D. J. Middleton et al. 2042 (A)	ON793347
Malouetieae	*Holarrhena pubescens* Wall. ex G.Don	Holarrhena_pubescens_1			IXXXN	Livshultz et al. 2018	MG817683
Malouetieae	*Holarrhena pubescens* Wall. ex G.Don	Holarrhena_pubescens_2	Holarrhena_pubescens_2	Holarrhena_pubescens_2	IXXXN	1KP, www.onekp.com/public_data.html	scaffold-JGYZ-2005525-Holarrhena_pubescens
Malouetieae	*Kibatalia macrophylla* (Pierre ex Hua) Woodson	Kibatalia_macrophylla_TLA18_contig0_dhs_exon1-7	Kibatalia_macrophylla_TLA18_dhs1_exon1-7	Kibatalia_macrophylla_TLA18_dhs1_exon1-7	IXXXN	D. J. Middleton et al. 1018 (A)	ON793348
Malouetieae	*Kibatalia macrophylla* (Pierre ex Hua) Woodson	Kibatalia_macrophylla_TLA18_contig1_hss_exon1-7	Kibatalia_macrophylla_TLA18_hss_exon1-7	Kibatalia_macrophylla_TLA18_hss_exon1-7	VXXXD	D. J. Middleton et al. 1018 (A)	ON793349
Malouetieae	*Kibatalia macrophylla* (Pierre ex Hua) Woodson	Kibatalia_macrophylla_TLA18_contig2_dhs_exon1-4	Kibatalia_macrophylla_TLA18_dhs2_exon1-7	Kibatalia_macrophylla_TLA18_dhs2_exon1-7		D. J. Middleton et al. 1018 (A)	ON793350
Malouetieae	*Kibatalia macrophylla* (Pierre ex Hua) Woodson	Kibatalia_macrophylla_TLA18_contig3_dhs_exon5-7	Kibatalia_macrophylla_TLA18_dhs2_exon1-7	Kibatalia_macrophylla_TLA18_dhs2_exon1-7	IXXXN	D. J. Middleton et al. 1018 (A)	ON793351
Malouetieae	*Malouetiella mildbraedii* (Gilg & Stapf) Pichon	Malouetiella_mildbraedii_TLA246_contig0_hss_exon1-7	Malouetiella_mildbraedii_TLA246_hss_exon1-7	Malouetiella_mildbraedii_TLA246_hss_exon1-7	VXXXD	van Meer 1785 (MO)	ON793352
Malouetieae	*Malouetiella mildbraedii* (Gilg & Stapf) Pichon	Malouetiella_mildbraedii_TLA246_contig1_dhs_exon5-7	Malouetiella_mildbraedii_TLA246_dhs_exon5-7		IXXXN	van Meer 1785 (MO)	ON793353

Malouetieae	*Malouetiella mildbraedii* (Gilg & Stapf) Pichon	Malouetiella_mildbraedii_TLA246_contig2_hss_exon2-3_Ψ	Malouetiella_mildbraedii_TLA246_hss_exon2-3_Ψ			van Meer 1785 (MO)	ON793354
Malouetieae	*Malouetiella mildbraedii* (Gilg & Stapf) Pichon	Malouetiella_mildbraedii_TLA246_contig3_dhs_exon3-4	Malouetiella_mildbraedii_TLA246_dhs_exon3-4			van Meer 1785 (MO)	ON793355
Malouetieae	*Malouetiella mildbraedii* (Gilg & Stapf) Pichon	Malouetiella_mildbraedii_TLA246_contig4_dhs_exon1-7	Malouetiella_mildbraedii_TLA246_dhs_exon1-7	Malouetiella_mildbraedii_TLA246_dhs_exon1-7	IXXXN	van Meer 1785 (MO)	ON793356
Malouetieae	*Mascarenhasia arborescens* A.DC.	Mascarenhasia_arborescens_TLA143_contig0_hss_exon1-7	Mascarenhasia_arborescens_TLA143_hss_exon1-7	Mascarenhasia_arborescens_TLA143_hss_exon1-7	VXXXD	F. Billiet S3053 (BR)	ON793357
Malouetieae	*Mascarenhasia arborescens* A.DC.	Mascarenhasia_arborescens_TLA143_contig1_dhs_exon1-4	Mascarenhasia_arborescens_TLA143_dhs_exon1-7	Mascarenhasia_arborescens_TLA143_dhs_exon1-7		F. Billiet S3053 (BR)	ON793358
Malouetieae	*Mascarenhasia arborescens* A.DC.	Mascarenhasia_arborescens_TLA143_contig2_dhs_exon5-7	Mascarenhasia_arborescens_TLA143_dhs_exon1-7	Mascarenhasia_arborescens_TLA143_dhs_exon1-7	IXXXN	F. Billiet S3053 (BR)	ON793359
Malouetieae	*Neobracea valenzuelana* (A.Rich.) Urb.	Neobracea_velenzuelana	Neobracea_velenzuelana	Neobracea_velenzuelana	IXXXN	Livshultz et al. 2018	MG817685
Malouetieae	*Pachypodium baronii* Costantin & Bois	Pachypodium_baronii			IXXXN	Livshultz et al. 2018	MG817695
Malouetieae	*Pachypodium baronii* Costantin & Bois	Pachypodium_baronii_47_contig0_hss_exon5-6_Ψ	Pachypodium_baronii_47_hss_exon5-6_Ψ		IXXXD	T. Livshultz 03_20 (BH)	ON793360
Malouetieae	*Pachypodium baronii* Costantin & Bois	Pachypodium_baronii_47_contig1_hss_exon1-2	Pachypodium_baronii_47_hss_exon1-2			T. Livshultz 03_20 (BH)	ON793361
Malouetieae	*Pachypodium baronii* Costantin & Bois	Pachypodium_baronii_47_contig2_hss_exon3	Pachypodium_baronii_47_hss_exon3			T. Livshultz 03_20 (BH)	ON793362
Malouetieae	*Pachypodium baronii* Costantin & Bois	Pachypodium_baronii_47_contig3_dhs_exon1-7	Pachypodium_baronii_47_dhs_exon1-7	Pachypodium_baronii_47_dhs_exon1-7	IXXXN	T. Livshultz 03_20 (BH)	ON793363
Marsdenieae	*Anisopus efulensis* (N.E.Br.) Goyder	Anisopus_efulensis_TL386_contig0_hss_exon1-7	Anisopus_efulensis_TL386_hss_exon1-7	Anisopus_efulensis_TL386_hss_exon1-7	IXXXD	J. J. Wheatley 65 (MO)	ON793364
Marsdenieae	*Anisopus efulensis* (N.E.Br.) Goyder	Anisopus_efulensis_TL386_contig1_dhs_exon5-7	Anisopus_efulensis_TL386_dhs_exon1-7	Anisopus_efulensis_TL386_dhs_exon1-7	IXXXN	J. J. Wheatley 65 (MO)	ON793365
Marsdenieae	*Anisopus efulensis* (N.E.Br.) Goyder	Anisopus_efulensis_TL386_contig2_dhs_exon5-7	Anisopus_efulensis_TL386_dhs_exon1-7	Anisopus_efulensis_TL386_dhs_exon1-7	IXXXN	J. J. Wheatley 65 (MO)	ON793366
Marsdenieae	*Anisopus efulensis* (N.E.Br.) Goyder	Anisopus_efulensis_TL386_contig3_dhs_exon4	Anisopus_efulensis_TL386_dhs_exon1-7	Anisopus_efulensis_TL386_dhs_exon1-7		J. J. Wheatley 65 (MO)	ON793367

Marsdenieae	*Anisopus efulensis* (N.E.Br.) Goyder	Anisopus_efulensis_TL386_contig4_dhs_exon3	Anisopus_efulensis_TL386_dhs_exon1-7	Anisopus_efulensis_TL386_dhs_exon1-7		J. J. Wheatley 65 (MO)	ON793368
Marsdenieae	*Anisopus efulensis* (N.E.Br.) Goyder	Anisopus_efulensis_TL386_contig5_dhs_exon4	Anisopus_efulensis_TL386_dhs_exon1-7	Anisopus_efulensis_TL386_dhs_exon1-7		J. J. Wheatley 65 (MO)	ON793369
Marsdenieae	*Anisopus efulensis* (N.E.Br.) Goyder	Anisopus_efulensis_TL386_contig6_dhs_exon1-2	Anisopus_efulensis_TL386_dhs_exon1-7	Anisopus_efulensis_TL386_dhs_exon1-7		J. J. Wheatley 65 (MO)	ON793370
Marsdenieae	*Anisopus efulensis* (N.E.Br.) Goyder	Anisopus_efulensis_TL386_contig7_dhs_exon1-3	Anisopus_efulensis_TL386_dhs_exon1-7	Anisopus_efulensis_TL386_dhs_exon1-7		J. J. Wheatley 65 (MO)	ON793371
Marsdenieae	*Campestigma purpurea* Pierre ex Costantin	Campestigma_purpureum_TL94_contig0_dhs_exon1-4	Campestigma_purpureum_TL94_dhs_exon1-7	Campestigma_purpureum_TL94_dhs_exon1-7		D. J. Middleton et al. 221 (A)	ON793372
Marsdenieae	*Campestigma purpurea* Pierre ex Costantin	Campestigma_purpureum_TL94_contig1_hss_exon1-6	Campestigma_purpureum_TL94_hss1_exon1-6	Campestigma_purpureum_TL94_hss1_exon1-6	IXXXD	D. J. Middleton et al. 221 (A)	ON793373
Marsdenieae	*Campestigma purpurea* Pierre ex Costantin	Campestigma_purpureum_TL94_contig2_hss_exon1-6	Campestigma_purpureum_TL94_hss2_exon1-6	Campestigma_purpureum_TL94_hss2_exon1-6	IXXXN	D. J. Middleton et al. 221 (A)	ON793374
Marsdenieae	*Campestigma purpurea* Pierre ex Costantin	Campestigma_purpureum_TL94_contig3_dhs_exon5-7	Campestigma_purpureum_TL94_dhs_exon1-7	Campestigma_purpureum_TL94_dhs_exon1-7	IXXXN	D. J. Middleton et al. 221 (A)	ON793375
Marsdenieae	*Dischidia albida* Griff.	Dischidia_albida_PA67bB_contig0_hss_exon1-6	Dischidia_albida_PA67bB_hss_exon1-6	Dischidia_albida_PA67bB_hss_exon1-6	MXXXT	D. J. Middleton et al. 3050 (A)	ON793376
Marsdenieae	*Dischidia albida* Griff.	Dischidia_albida_PA67bB_contig1_dhs_exon4				D. J. Middleton et al. 3050 (A)	ON793377
Marsdenieae	*Dischidia albida* Griff.	Dischidia_albida_PA67bB_contig2_dhs_exon5-7			IXXXN	D. J. Middleton et al. 3050 (A)	ON793378
Marsdenieae	*Dischidia albida* Griff.	Dischidia_albida_PA67bB_contig3_dhs_exon1-7	Dischidia_albida_PA67bB_dhs_exon1-7	Dischidia_albida_PA67bB_dhs_exon1-7	IXXXN	D. J. Middleton et al. 3050 (A)	ON793379
Marsdenieae	*Dischidia cleistantha* Livsh.	Dischidia_cleistantha_TLAsc401_contig0_dhs_exon1-4	Dischidia_cleistantha_TLAsc401_dhs_exon1-7	Dischidia_cleistantha_TLAsc401_dhs_exon1-7		T. Livshultz TL98-6 (PH)	ON793380
Marsdenieae	*Dischidia cleistantha* Livsh.	Dischidia_cleistantha_TLAsc401_contig1_hss_exon1-7	Dischidia_cleistantha_TLAsc401_hss_exon1-7	Dischidia_cleistantha_TLAsc401_hss_exon1-7	IXXXN	T. Livshultz TL98-6 (PH)	ON793381
Marsdenieae	*Dischidia cleistantha* Livsh.	Dischidia_cleistantha_TLAsc401_contig2_dhs_exon5-7	Dischidia_cleistantha_TLAsc401_dhs_exon1-7	Dischidia_cleistantha_TLAsc401_dhs_exon1-7	IXXXN	T. Livshultz TL98-6 (PH)	ON793382
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig0_hss_exon1-6	Gongronema_angolense_TL383_hss1_exon1-6	Gongronemopsis_angolense_TL383_hss1_exon1-6	IXXXN	R. E. Gereau et al. 5793 (MO)	ON793383

Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig1_hss_exon1-6	Gongronema_angolense_TL383_hss2_exon1-6	Gongronemopsis_angolense_TL383_hss2_exon1-6	IXXXN	R. E. Gereau et al. 5793 (MO)	ON793384
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig2_dhs_exon5-7	Gongronema_angolense_TL383_dhs_exon1-7	Gongronemopsis_angolense_TL383_dhs_exon1-7	IXXXN	R. E. Gereau et al. 5793 (MO)	ON793385
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig3_dhs_exon5-7	Gongronema_angolense_TL383_dhs_exon1-7	Gongronemopsis_angolense_TL383_dhs_exon1-7	IXXXN	R. E. Gereau et al. 5793 (MO)	ON793386
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig4_dhs_exon4	Gongronema_angolense_TL383_dhs_exon1-7	Gongronemopsis_angolense_TL383_dhs_exon1-7		R. E. Gereau et al. 5793 (MO)	ON793387
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig5_dhs_exon2-3	Gongronema_angolense_TL383_dhs_exon1-7	Gongronemopsis_angolense_TL383_dhs_exon1-7		R. E. Gereau et al. 5793 (MO)	ON793388
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig6_hss_exon2-6	Gongronema_angolense_TL383_hss3_exon2-6	Gongronemopsis_angolense_TL383_hss3_exon2-6	IXXXD	R. E. Gereau et al. 5793 (MO)	ON793389
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig7_dhs_exon1-4	Gongronema_angolense_TL383_dhs_exon1-7	Gongronemopsis_angolense_TL383_dhs_exon1-7		R. E. Gereau et al. 5793 (MO)	ON793390
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig8_hss_exon1-6	Gongronema_angolense_TL383_hss4_exon1-6	Gongronemopsis_angolense_TL383_hss4_exon1-6	IXXXD	R. E. Gereau et al. 5793 (MO)	ON793391
Marsdenieae	*Gongronemopsis angolensis* (N.E.Br.) S.Reuss, Liede & Meve	Gongronema_angolense_TL383_contig9_hss_exon2-6	Gongronema_angolense_TL383_hss5_exon2-6	Gongronemopsis_angolense_TL383_hss5_exon2-6	IXXXD	R. E. Gereau et al. 5793 (MO)	ON793392
Marsdenieae	*Gongronemopsis latifolium* (Benth.) S.Reuss, Liede & Meve	Gongronema_latifolium_TL381_contig0_dhs_exon1-4	Gongronema_latifolium_TL381_dhs_exon1-7	Gongronemopsis_latifolium_TL381_dhs_exon1-7		M. Merello et al. 1452 (MO)	ON793393
Marsdenieae	*Gongronemopsis latifolium* (Benth.) S.Reuss, Liede & Meve	Gongronema_latifolium_TL381_contig1_hss_exon1-7	Gongronema_latifolium_TL381_hss1_exon1-7	Gongronemopsis_latifolium_TL381_hss1_exon1-7	IXXXD	M. Merello et al. 1452 (MO)	ON793394
Marsdenieae	*Gongronemopsis latifolium* (Benth.) S.Reuss, Liede & Meve	Gongronema_latifolium_TL381_contig2_dhs_exon5-7	Gongronema_latifolium_TL381_dhs_exon1-7	Gongronemopsis_latifolium_TL381_dhs_exon1-7	IXXXN	M. Merello et al. 1452 (MO)	ON793395
Marsdenieae	*Gongronemopsis latifolium* (Benth.) S.Reuss, Liede & Meve	Gongronema_latifolium_TL381_contig3_hss_exon1-6	Gongronema_latifolium_TL381_hss2_exon1-6	Gongronemopsis_latifolium_TL381_hss2_exon1-6	IXXXN	M. Merello et al. 1452 (MO)	ON793396
Marsdenieae	*Gongronema taylorii* (Schltr. & Rendle) Bullock	Gongronema_taylorii_TL377_contig0_dhs_exon1-4	Gongronema_taylorii_TL377_dhs_exon1-7	Gongronema_taylorii_TL377_dhs_exon1-7		L. Festo et al. 2256 (MO)	ON793397
Marsdenieae	*Gongronema taylorii* (Schltr. & Rendle) Bullock	Gongronema_taylorii_TL377_contig1_hss_exon1-6	Gongronema_taylorii_TL377_hss_exon1-6	Gongronema_taylorii_TL377_hss_exon1-6	IXXXN	L. Festo et al. 2256 (MO)	ON793398
Marsdenieae	*Gongronema taylorii* (Schltr. & Rendle) Bullock	Gongronema_taylorii_TL377_contig2_dhs_exon5-7	Gongronema_taylorii_TL377_dhs_exon1-7	Gongronema_taylorii_TL377_dhs_exon1-7	IXXXN	L. Festo et al. 2256 (MO)	ON793399

Marsdenieae	*Gymnema sylvestre* (Retz.) R.Br. ex Sm.	Gymnema_sylvestre_TL615_contig0_hss_exon1-6	Gymnema_sylvestre_TL615_hss_exon1-6	Gymnema_sylvestre_TL615_hss_exon1-6	IXXXN	I. Friis et al. 7979 (BR)	ON793400
Marsdenieae	*Gymnema sylvestre* (Retz.) R.Br. ex Sm.	Gymnema_sylvestre_TL615_contig1_hss_exon1-6_Ψ	Gymnema_sylvestre_TL615_hss_exon1-6_Ψ		IXXXD	I. Friis et al. 7979 (BR)	ON793401
Marsdenieae	*Gymnema sylvestre* (Retz.) R.Br. ex Sm.	Gymnema_sylvestre_TL615_contig2_dhs_exon1-3	Gymnema_sylvestre_TL615_dhs_exon1-7	Gymnema_sylvestre_TL615_dhs_exon1-7		I. Friis et al. 7979 (BR)	ON793402
Marsdenieae	*Gymnema sylvestre* (Retz.) R.Br. ex Sm.	Gymnema_sylvestre_TL615_contig3_dhs_exon5-7	Gymnema_sylvestre_TL615_dhs_exon1-7	Gymnema_sylvestre_TL615_dhs_exon1-7	IXXXN	I. Friis et al. 7979 (BR)	ON793403
Marsdenieae	*Gymnema sylvestre* (Retz.) R.Br. ex Sm.	Gymnema_sylvestre_TL615_contig4_dhs_exon4	Gymnema_sylvestre_TL615_dhs_exon1-7	Gymnema_sylvestre_TL615_dhs_exon1-7		I. Friis et al. 7979 (BR)	ON793404
Marsdenieae	*Hoya yuennanensis* Hand.-Mazz.	Hoya_yuennanensis_TL238_contig0_dhs_exon1-4	Hoya_yuennanensis_TL238_dhs_exon1-7	Hoya_yuennanensis_TL238_dhs_exon1-7		R. van Donkelaar IPPS4561 (L)	ON793405
Marsdenieae	*Hoya yuennanensis* Hand.-Mazz.	Hoya_yuennanensis_TL238_contig1_hss_exon1-6	Hoya_yuennanensis_TL238_hss_exon1-6	Hoya_yuennanensis_TL238_hss_exon1-6	IXXXN	R. van Donkelaar IPPS4561 (L)	ON793406
Marsdenieae	*Hoya yuennanensis* Hand.-Mazz.	Hoya_yuennanensis_TL238_contig2_dhs_exon5-7	Hoya_yuennanensis_TL238_dhs_exon1-7	Hoya_yuennanensis_TL238_dhs_exon1-7	IXXXN	R. van Donkelaar IPPS4561 (L)	ON793407
Marsdenieae	*Gymnema maingayi* Hook.f.	Jasminanthes_maingayi_PA85_contig0_dhs_exon1-4	Jasminanthes_maingayi_PA85_dhs_exon1-7	Gymnema_maingayi_PA85_dhs_exon1-7		Low et al. LYW523 (SING)	ON793408
Marsdenieae	*Gymnema maingayi* Hook.f.	Jasminanthes_maingayi_PA85_contig1_hss_exon1-7	Jasminanthes_maingayi_PA85_hss1_exon1-7	Gymnema_maingayi_PA85_hss1_exon1-7	IXXXD	Low et al. LYW523 (SING)	ON793409
Marsdenieae	*Gymnema maingayi* Hook.f.	Jasminanthes_maingayi_PA85_contig2_dhs_exon5-7	Jasminanthes_maingayi_PA85_dhs_exon1-7	Gymnema_maingayi_PA85_dhs_exon1-7	IXXXN	Low et al. LYW523 (SING)	ON793410
Marsdenieae	*Gymnema maingayi* Hook.f.	Jasminanthes_maingayi_PA85_contig3_hss_exon1-6	Jasminanthes_maingayi_PA85_hss2_exon1-6	Gymnema_maingayi_PA85_hss2_exon1-6	IXXXN	Low et al. LYW523 (SING)	ON793411
Marsdenieae	*Gymnema maingayi* Hook.f.	Jasminanthes_maingayi_PA85_contig4_hss_exon1-6	Jasminanthes_maingayi_PA85_hss3_exon1-6	Gymnema_maingayi_PA85_hss3_exon1-6	IXXXD	Low et al. LYW523 (SING)	ON793412
Marsdenieae	*Lygisma angustifolia* (Wight) Hook.f.	Lygisma_angustifolia_TL98_contig0_hss_exon1-7	Lygisma_angustifolia_TL98_hss_exon1-7	Lygisma_angustifolia_TL98_hss_exon1-7	IXXXN	D. J. Middleton et al. 1161 (A)	ON793413

Marsdenieae	*Lygisma angustifolia* (Wight) Hook.f.	Lygisma_angustifolia_TL98_contig1_dhs_exon1-4	Lygisma_angustifolia_TL98_dhs_exon1-7	Lygisma_angustifolia_TL98_dhs_exon1-7		D. J. Middleton et al. 1161 (A)	ON793414
Marsdenieae	*Lygisma angustifolia* (Wight) Hook.f.	Lygisma_angustifolia_TL98_contig2_dhs_exon5-7	Lygisma_angustifolia_TL98_dhs_exon1-7	Lygisma_angustifolia_TL98_dhs_exon1-7	IXXXN	D. J. Middleton et al. 1161 (A)	ON793415
Marsdenieae	*Leichhardtia coronata (Benth.) P.I.Forst.*	Marsdenia_coronata_TLAsc118_contig0_dhs_exon1-4	Marsdenia_coronata_TLAsc118_dhs_exon1-7	Leichhardtia_coronata_TLAsc118_dhs_exon1-7		P. I. Forster 28695 (BRI)	ON793416
Marsdenieae	*Leichhardtia coronata (Benth.) P.I.Forst.*	Marsdenia_coronata_TLAsc118_contig1_dhs_exon5-7	Marsdenia_coronata_TLAsc118_dhs_exon1-7	Leichhardtia_coronata_TLAsc118_dhs_exon1-7	IXXXN	P. I. Forster 28695 (BRI)	ON793417
Marsdenieae	*Leichhardtia coronata (Benth.) P.I.Forst.*	Marsdenia_coronata_TLAsc118_contig2_hss_exon1-6_⟂	Marsdenia_coronata_TLAsc118_hss_exon1-6_⟂		IXXXD	P. I. Forster 28695 (BRI)	ON793418
Marsdenieae	*Leichhardtia coronata (Benth.) P.I.Forst.*	Marsdenia_coronata_TLAsc118_contig3_hss_exon1-4	Marsdenia_coronata_TLAsc118_hss_exon1-4			P. I. Forster 28695 (BRI)	ON793419
Marsdenieae	*Leichhardtia coronata (Benth.) P.I.Forst.*	Marsdenia_coronata_TLAsc118_contig4_hss_exon1-7	Marsdenia_coronata_TLAsc118_hss_exon1-7	Leichhardtia_coronata_TLAsc118_hss_exon1-7	IXXXN	P. I. Forster 28695 (BRI)	ON793420
Marsdenieae	*Leichhardtia flavescens (A.Cunn. ex Hook.) P.I.Forst.*	Marsdenia_flavescens_TLAsc126_contig0_dhs_exon1-4	Marsdenia_flavescens_TLAsc126_dhs_exon1-7	Leichhardtia_flavescens_TLAsc126_dhs_exon1-7		P. I. Forster 28686 (BRI)	ON793421
Marsdenieae	*Leichhardtia flavescens (A.Cunn. ex Hook.) P.I.Forst.*	Marsdenia_flavescens_TLAsc126_contig1_hss_exon1-7	Marsdenia_flavescens_TLAsc126_hss1_exon1-7	Leichhardtia_flavescens_TLAsc126_hss1_exon1-7	IXXXN	P. I. Forster 28686 (BRI)	ON793422
Marsdenieae	*Leichhardtia flavescens (A.Cunn. ex Hook.) P.I.Forst.*	Marsdenia_flavescens_TLAsc126_contig2_dhs_exon5-7	Marsdenia_flavescens_TLAsc126_dhs_exon1-7	Leichhardtia_flavescens_TLAsc126_dhs_exon1-7	IXXXN	P. I. Forster 28686 (BRI)	ON793423
Marsdenieae	*Leichhardtia flavescens (A.Cunn. ex Hook.) P.I.Forst.*	Marsdenia_flavescens_TLAsc126_contig3_hss_exon3-6	Marsdenia_flavescens_TLAsc126_hss_exon3-6		IXXXN	P. I. Forster 28686 (BRI)	ON793424
Marsdenieae	*Leichhardtia flavescens (A.Cunn. ex Hook.) P.I.Forst.*	Marsdenia_flavescens_TLAsc126_contig4_hss_exon2-6	Marsdenia_flavescens_TLAsc126_hss2_exon2-6	Leichhardtia_flavescens_TLAsc126_hss2_exon2-6	IXXXD	P. I. Forster 28686 (BRI)	ON793425
Marsdenieae	*Marsdenia glabra* Costantin	Marsdenia_glabra			IXXXN	Livshultz et al. 2018	MG817698
Marsdenieae	*Marsdenia glabra* Costantin	Marsdenia_glabra_TL99_contig0_dhs_exon1-4	Marsdenia_glabra_TL99_dhs_exon1-7	Marsdenia_glabra_TL99_dhs_exon1-7		D. J. Middleton et al. 1123 (A)	ON793426
Marsdenieae	*Marsdenia glabra* Costantin	Marsdenia_glabra_TL99_contig1_hss_exon1-7	Marsdenia_glabra_TL99_hss_exon1-7	Marsdenia_glabra_TL99_hss_exon1-7	IXXXN	D. J. Middleton et al. 1123 (A)	ON793427
Marsdenieae	*Marsdenia glabra* Costantin	Marsdenia_glabra_TL99_contig2_dhs_exon5-7	Marsdenia_glabra_TL99_dhs_exon1-7	Marsdenia_glabra_TL99_dhs_exon1-7	IXXXN	D. J. Middleton et al. 1123 (A)	ON793428

Marsdenieae	*Gymnema longipedicellatum (P.I.Forst.) P.I.Forst.*	Marsdenia_longipedicellata_TL262_contig0_dhs_exon1-4	Marsdenia_longipedicellata_TL262_dhs_exon1-7	Gymnema_longipedicellatum_TL262_dhs_exon1-7		P. I. Forster 26894 (BRI)	ON793429
Marsdenieae	*Gymnema longipedicellatum (P.I.Forst.) P.I.Forst.*	Marsdenia_longipedicellata_TL262_contig1_hss_exon1-7	Marsdenia_longipedicellata_TL262_hss1_exon1-7	Gymnema_longipedicellatum_TL262_hss1_exon1-7	IXXXN	P. I. Forster 26894 (BRI)	ON793430
Marsdenieae	*Gymnema longipedicellatum (P.I.Forst.) P.I.Forst.*	Marsdenia_longipedicellata_TL262_contig2_dhs_exon5-7	Marsdenia_longipedicellata_TL262_dhs_exon1-7	Gymnema_longipedicellatum_TL262_dhs_exon1-7	IXXXN	P. I. Forster 26894 (BRI)	ON793431
Marsdenieae	*Gymnema longipedicellatum (P.I.Forst.) P.I.Forst.*	Marsdenia_longipedicellata_TL262_contig3_dhs_exon6-7	Marsdenia_longipedicellata_TL262_dhs_exon1-7	Gymnema_longipedicellatum_TL262_dhs_exon1-7		P. I. Forster 26894 (BRI)	ON793432
Marsdenieae	*Gymnema longipedicellatum (P.I.Forst.) P.I.Forst.*	Marsdenia_longipedicellata_TL262_contig4_hss_exon1-6	Marsdenia_longipedicellata_TL262_hss2_exon1-6	Gymnema_longipedicellatum_TL262_hss2_exon1-6	IXXXD	P. I. Forster 26894 (BRI)	ON793433
Marsdenieae	*Marsdenia tinctoria* R.Br.	Marsdenia_tinctoria_TL376_contig0_hss_exon1-7	Marsdenia_tinctoria_TL376_hss_exon1-7	Marsdenia_tinctoria_TL376_hss_exon1-7	IXXXD	Li Heng et al. 24896 (MO)	ON793434
Marsdenieae	*Marsdenia tinctoria* R.Br.	Marsdenia_tinctoria_TL376_contig1_dhs_exon1-4	Marsdenia_tinctoria_TL376_dhs_exon1-7	Marsdenia_tinctoria_TL376_dhs_exon1-7		Li Heng et al. 24896 (MO)	ON793435
Marsdenieae	*Marsdenia tinctoria* R.Br.	Marsdenia_tinctoria_TL376_contig2_hss_exon1-5	Marsdenia_tinctoria_TL376_hss_exon1-5			Li Heng et al. 24896 (MO)	ON793436
Marsdenieae	*Marsdenia tinctoria* R.Br.	Marsdenia_tinctoria_TL376_contig3_dhs_exon5-7	Marsdenia_tinctoria_TL376_dhs_exon1-7	Marsdenia_tinctoria_TL376_dhs_exon1-7	IXXXN	Li Heng et al. 24896 (MO)	ON793437
Marsdenieae	*Gongronemopsis truncata* (Jum. & H. Perrier) S. Reuss, Liede & Meve	Marsdenia_truncata_TL397_contig0_dhs_exon1-4	Marsdenia_truncata_TL397_dhs_exon1-7	Gongronemopsis_truncata_TL397_dhs_exon1-7		J. N. Labat & T. Devoin 2321 (MO)	ON793438
Marsdenieae	*Gongronemopsis truncata* (Jum. & H. Perrier) S. Reuss, Liede & Meve	Marsdenia_truncata_TL397_contig1_hss_exon1-7	Marsdenia_truncata_TL397_hss1_exon1-7	Gongronemopsis_truncata_TL397_hss1_exon1-7	IXXXN	J. N. Labat & T. Devoin 2321 (MO)	ON793439
Marsdenieae	*Gongronemopsis truncata* (Jum. & H. Perrier) S. Reuss, Liede & Meve	Marsdenia_truncata_TL397_contig2_hss_exon1-7_Ψ	Marsdenia_truncata_TL397_hss_exon1-7_Ψ		IXXXD	J. N. Labat & T. Devoin 2321 (MO)	ON793440
Marsdenieae	*Gongronemopsis truncata* (Jum. & H. Perrier) S. Reuss, Liede & Meve	Marsdenia_truncata_TL397_contig3_dhs_exon5-7	Marsdenia_truncata_TL397_dhs_exon1-7	Gongronemopsis_truncata_TL397_dhs_exon1-7	IXXXN	J. N. Labat & T. Devoin 2321 (MO)	ON793441

Marsdenieae	*Gongronemopsis truncata* (Jum. & H. Perrier) S. Reuss, Liede & Meve	Marsdenia_truncata_TL397_contig4_hss_exon1-6	Marsdenia_truncata_TL397_hss2_exon1-6	Gongronemopsis_truncata_TL397_hss2_exon1-6	IXXXN	J. N. Labat & T. Devoin 2321 (MO)	ON793442
Marsdenieae	*RueHSSia caatingae* (Morillo) F.Esp.Santo & Rapini	Ruehssia_caatingae_PA111_contig0_dhs_exon1-4	Ruehssia_caatingae_PA111_dhs_exon1-7	Ruehssia_caatingae_PA111_dhs_exon1-7		C. Bitencourt 418 (HUEFS)	ON793443
Marsdenieae	*RueHSSia caatingae* (Morillo) F.Esp.Santo & Rapini	Ruehssia_caatingae_PA111_contig1_hss_exon1-6	Ruehssia_caatingae_PA111_hss1_exon1-6	Ruehssia_caatingae_PA111_hss1_exon1-6	IXXXD	C. Bitencourt 418 (HUEFS)	ON793444
Marsdenieae	*RueHSSia caatingae* (Morillo) F.Esp.Santo & Rapini	Ruehssia_caatingae_PA111_contig2_hss_exon1-6	Ruehssia_caatingae_PA111_hss2_exon1-6	Ruehssia_caatingae_PA111_hss2_exon1-6	IXXXN	C. Bitencourt 418 (HUEFS)	ON793445
Marsdenieae	*RueHSSia caatingae* (Morillo) F.Esp.Santo & Rapini	Ruehssia_caatingae_PA111_contig3_dhs_exon5-7	Ruehssia_caatingae_PA111_dhs_exon1-7	Ruehssia_caatingae_PA111_dhs_exon1-7	IXXXN	C. Bitencourt 418 (HUEFS)	ON793446
Marsdenieae	*RueHSSia guaranitica* (Malme) Liede & H.A.Keller	Ruehssia_guaranitica_TLAsc227_contig0_dhs_exon1-4	Ruehssia_guaranitica_TLAsc227_dhs_exon1-7	Ruehssia_guaranitica_TLAsc227_dhs_exon1-7		Zardini 46813 (MO)	ON793447
Marsdenieae	*RueHSSia guaranitica* (Malme) Liede & H.A.Keller	Ruehssia_guaranitica_TLAsc227_contig1_dhs_exon5-7	Ruehssia_guaranitica_TLAsc227_dhs_exon1-7	Ruehssia_guaranitica_TLAsc227_dhs_exon1-7	IXXXN	Zardini 46813 (MO)	ON793448
Marsdenieae	*RueHSSia guaranitica* (Malme) Liede & H.A.Keller	Ruehssia_guaranitica_TLAsc227_contig2_hss_exon1	Ruehssia_guaranitica_TLAsc227_hss_exon1			Zardini 46813 (MO)	ON793449
Marsdenieae	*RueHSSia guaranitica* (Malme) Liede & H.A.Keller	Ruehssia_guaranitica_TLAsc227_contig3_hss_exon1-7	Ruehssia_guaranitica_TLAsc227_hss_exon1-7	Ruehssia_guaranitica_TLAsc227_hss_exon1-7	IXXXN	Zardini 46813 (MO)	ON793450
Marsdenieae	*RueHSSia guaranitica* (Malme) Liede & H.A.Keller	Ruehssia_guaranitica_TLAsc227_contig4_hss_exon1-6_Ψ	Ruehssia_guaranitica_TLAsc227_hss_exon1-6_Ψ		IXXXD	Zardini 46813 (MO)	ON793451
Marsdenieae	*RueHSSia laxiflora* (Donn.Sm.) Gonz.-Martínez & Lozada-Pérez	Ruehssia_laxiflora_TLAsc225_contig0_dhs_exon1-4	Ruehssia_laxiflora_TLAsc225_dhs_exon1-7	Ruehssia_laxiflora_TLAsc225_dhs_exon1-7		Martinez 23675 (MO)	ON793452
Marsdenieae	*RueHSSia laxiflora* (Donn.Sm.) Gonz.-Martínez & Lozada-Pérez	Ruehssia_laxiflora_TLAsc225_contig1_hss_exon1-6	Ruehssia_laxiflora_TLAsc225_hss_exon1-6	Ruehssia_laxiflora_TLAsc225_hss_exon1-6	IXXXN	Martinez 23675 (MO)	ON793453
Marsdenieae	*RueHSSia laxiflora* (Donn.Sm.) Gonz.-Martínez & Lozada-Pérez	Ruehssia_laxiflora_TLAsc225_contig2_dhs_exon5-7	Ruehssia_laxiflora_TLAsc225_dhs_exon1-7	Ruehssia_laxiflora_TLAsc225_dhs_exon1-7	IXXXN	Martinez 23675 (MO)	ON793454
Marsdenieae	*RueHSSia laxiflora* (Donn.Sm.) Gonz.-Martínez & Lozada-Pérez	Ruehssia_laxiflora_TLAsc225_contig3_hss_exon3-6	Ruehssia_laxiflora_TLAsc225_hss_exon3-6		IXXXD	Martinez 23675 (MO)	ON793455
Marsdenieae	*RueHSSia macrophylla* (Humb. & Bonpl. ex Schult.) H.Karst.	Ruehssia_macrophylla_TL226_contig0_dhs_exon1-4	Ruehssia_macrophylla_TL226_dhs_exon1-7	Ruehssia_macrophylla_TL226_dhs_exon1-7		Stevens 26072 (MO)	ON793456

Marsdenieae	*RueHSSia macrophylla* (Humb. & Bonpl. ex Schult.) H.Karst.	Ruehssia_macrophylla_TL226_contig1_hss_exon1-6	Ruehssia_macrophylla_TL226_hss1_exon1-6	Ruehssia_macrophylla_TL226_hss1_exon1-6	IXXXD	Stevens 26072 (MO)	ON793457
Marsdenieae	*RueHSSia macrophylla* (Humb. & Bonpl. ex Schult.) H.Karst.	Ruehssia_macrophylla_TL226_contig2_dhs_exon5-7	Ruehssia_macrophylla_TL226_dhs_exon1-7	Ruehssia_macrophylla_TL226_dhs_exon1-7	IXXXN	Stevens 26072 (MO)	ON793458
Marsdenieae	*RueHSSia macrophylla* (Humb. & Bonpl. ex Schult.) H.Karst.	Ruehssia_macrophylla_TL226_contig3_hss_exon1-7	Ruehssia_macrophylla_TL226_hss2_exon1-7	Ruehssia_macrophylla_TL226_hss2_exon1-7	IXXXN	Stevens 26072 (MO)	ON793459
Marsdenieae	*Sarcolobus cambogensis* McHone & Livsh.	Sarcolobus_cambogensis_TL628_contig0_hss_exon1-7	Sarcolobus_cambogensis_TL628_hss1_exon1-7	Sarcolobus_cambogensis_TL628_hss1_exon1-7	IXXXD	C. Long et al. CL546 (P)	ON793460
Marsdenieae	*Sarcolobus cambogensis* McHone & Livsh.	Sarcolobus_cambogensis_TL628_contig1_hss_exon1-6	Sarcolobus_cambogensis_TL628_hss2_exon1-6	Sarcolobus_cambogensis_TL628_hss2_exon1-6	IXXXN	C. Long et al. CL546 (P)	ON793461
Marsdenieae	*Sarcolobus cambogensis* McHone & Livsh.	Sarcolobus_cambogensis_TL628_contig2_dhs_exon1-3	Sarcolobus_cambogensis_TL628_dhs_exon1-7	Sarcolobus_cambogensis_TL628_dhs_exon1-7		C. Long et al. CL546 (P)	ON793462
Marsdenieae	*Sarcolobus cambogensis* McHone & Livsh.	Sarcolobus_cambogensis_TL628_contig3_dhs_exon5-7	Sarcolobus_cambogensis_TL628_dhs_exon1-7	Sarcolobus_cambogensis_TL628_dhs_exon1-7	IXXXN	C. Long et al. CL546 (P)	ON793463
Marsdenieae	*Stigmatorhynchus umbellifer* (K.Schum.) Schltr.	Stigmatorhynchus_umbellifer_TL394_contig0_hss_exon1-6	Stigmatorhynchus_umbellifer_TL394_hss1_exon1-6	Stigmatorhynchus_umbellifer_TL394_hss1_exon1-6	IXXXN	R. K. Brummitt et al. 18074 (MO)	ON793464
Marsdenieae	*Stigmatorhynchus umbellifer* (K.Schum.) Schltr.	Stigmatorhynchus_umbellifer_TL394_contig1_hss_exon1-6	Stigmatorhynchus_umbellifer_TL394_hss2_exon1-6	Stigmatorhynchus_umbellifer_TL394_hss2_exon1-6	IXXXD	R. K. Brummitt et al. 18074 (MO)	ON793465
Marsdenieae	*Stigmatorhynchus umbellifer* (K.Schum.) Schltr.	Stigmatorhynchus_umbellifer_TL394_contig2_dhs_exon1-3	Stigmatorhynchus_umbellifer_TL394_dhs_exon1-7	Stigmatorhynchus_umbellifer_TL394_dhs_exon1-7		R. K. Brummitt et al. 18074 (MO)	ON793466
Marsdenieae	*Stigmatorhynchus umbellifer* (K.Schum.) Schltr.	Stigmatorhynchus_umbellifer_TL394_contig3_dhs_exon5-7	Stigmatorhynchus_umbellifer_TL394_dhs_exon1-7	Stigmatorhynchus_umbellifer_TL394_dhs_exon1-7	IXXXN	R. K. Brummitt et al. 18074 (MO)	ON793467
Marsdenieae	*Stigmatorhynchus umbellifer* (K.Schum.) Schltr.	Stigmatorhynchus_umbellifer_TL394_contig4_dhs_exon4	Stigmatorhynchus_umbellifer_TL394_dhs_exon1-7	Stigmatorhynchus_umbellifer_TL394_dhs_exon1-7		R. K. Brummitt et al. 18074 (MO)	ON793468
Melodineae	*Craspidospermum verticillatum* Bojer ex Decne.	Craspidospermum_verticillatum_58_contig0_dhs_exon5-7	Craspidospermum_verticillatum_58_dhs_exon1-7	Craspidospermum_verticillatum_58_dhs_exon1-7	IXXXN	L. A. Nilsson et al. D36 (UPS)	ON793469

Melodineae	*Craspidospermum verticillatum* Bojer ex Decne.	Craspidospermum_verticillatum_58_contig1_dhs_exon1-4	Craspidospermum_verticillatum_58_dhs_exon1-7	Craspidospermum_verticillatum_58_dhs_exon1-7		L. A. Nilsson et al. D36 (UPS)	ON793470
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig0_dhs_exon1-4	Diplorhynchus_condylocarpon_70_dhs_exon1-7	Diplorhynchus_condylocarpon_70_dhs_exon1-7		E. Schmidt s.n. (UPS)	ON793471
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig1_dhs_exon5-7	Diplorhynchus_condylocarpon_70_dhs_exon1-7	Diplorhynchus_condylocarpon_70_dhs_exon1-7	IXXXN	E. Schmidt s.n. (UPS)	ON793472
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig2_dhs_exon6_Ψ1	Diplorhynchus_condylocarpon_70_dhs_exon6_Ψ1		LXXXH	E. Schmidt s.n. (UPS)	ON793473
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig3_dhs_exon6_Ψ2	Diplorhynchus_condylocarpon_70_dhs_exon6_Ψ2		IXXXN	E. Schmidt s.n. (UPS)	ON793474
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig4_dhs_exon6_Ψ3	Diplorhynchus_condylocarpon_70_dhs_exon6_Ψ3		IXXXN	E. Schmidt s.n. (UPS)	ON793475
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig5_dhs_exon6_Ψ4	Diplorhynchus_condylocarpon_70_dhs_exon6_Ψ4		IXXXN	E. Schmidt s.n. (UPS)	ON793476
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig6_dhs_exon6_Ψ5	Diplorhynchus_condylocarpon_70_dhs_exon6_Ψ5		IXXXN	E. Schmidt s.n. (UPS)	ON793477
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig7_dhs_exon6_Ψ6	Diplorhynchus_condylocarpon_70_dhs_exon6_Ψ6		IXXXN	E. Schmidt s.n. (UPS)	ON793478
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig8_dhs_exon6	Diplorhynchus_condylocarpon_70_dhs_exon6		IXXXN	E. Schmidt s.n. (UPS)	ON793479
Melodineae	*Diplorhynchus condylocarpon* (Müll.Arg.) Pichon	Diplorhynchus_condylocarpon_70_contig9_dhs_exon6_Ψ7	Diplorhynchus_condylocarpon_70_dhs_exon6_Ψ7		IXXXN	E. Schmidt s.n. (UPS)	ON793480
Melodineae	*Melodinus cambodiensis* Pierre	Melodinus_cambodiensis	Melodinus_cambodiensis		IXXXN	Livshultz et al. 2018	MG817710
Melodineae	*Pycnobotrya nitida* Benth.	Pycnobotrya_nitida_59_contig0_dhs_exon5-7	Pycnobotrya_nitida_59_dhs_exon1-7	Pycnobotrya_nitida_59_dhs_exon1-7	IXXXN	F. J. Breteler et al. 14782 (PH)	ON793481
Melodineae	*Pycnobotrya nitida* Benth.	Pycnobotrya_nitida_59_contig1_dhs_exon2-3	Pycnobotrya_nitida_59_dhs_exon1-7	Pycnobotrya_nitida_59_dhs_exon1-7		F. J. Breteler et al. 14782 (PH)	ON793482
Melodineae	*Pycnobotrya nitida* Benth.	Pycnobotrya_nitida_59_contig2_dhs_exon4	Pycnobotrya_nitida_59_dhs_exon1-7	Pycnobotrya_nitida_59_dhs_exon1-7		F. J. Breteler et al. 14782 (PH)	ON793483
Melodineae	*Pycnobotrya nitida* Benth.	Pycnobotrya_nitida_59_contig3_dhs_exon1	Pycnobotrya_nitida_59_dhs_exon1-7	Pycnobotrya_nitida_59_dhs_exon1-7		F. J. Breteler et al. 14782 (PH)	ON793484

Mesechiteae	*Allomarkgrafia brenesiana* Woodson	Allomarkgrafia_brenesiana_PA98_contig0_hss_exon1-7	Allomarkgrafia_brenesiana_PA98_hss_exon1-7	Allomarkgrafia_brenesiana_PA98_hss_exon1-7	VXXXD	J. F. Morales s.n. (INB)	ON793485
Mesechiteae	*Allomarkgrafia brenesiana* Woodson	Allomarkgrafia_brenesiana_PA98_contig1_dhs_exon1-4	Allomarkgrafia_brenesiana_PA98_dhs_exon1-7	Allomarkgrafia_brenesiana_PA98_dhs_exon1-7		J. F. Morales s.n. (INB)	ON793486
Mesechiteae	*Allomarkgrafia brenesiana* Woodson	Allomarkgrafia_brenesiana_PA98_contig2_dhs_exon5-7	Allomarkgrafia_brenesiana_PA98_dhs_exon1-7	Allomarkgrafia_brenesiana_PA98_dhs_exon1-7	IXXXN	J. F. Morales s.n. (INB)	ON793487
Mesechiteae	*Forsteronia guyanensis* Müll.Arg.	Forsteronia_guyanensis			VXXXD	Livshultz et al. 2018	MG817682
Mesechiteae	*Forsteronia guyanensis* Müll.Arg.	Forsteronia_guyanensis_TLA39_contig0_hss_exon1-7	Forsteronia_guyanensis_TLA39_hss_exon1-7	Forsteronia_guyanensis_TLA39_hss_exon1-7	VXXXD	Prévost & Feuillet 3970 (CAY)	ON793488
Mesechiteae	*Forsteronia guyanensis* Müll.Arg.	Forsteronia_guyanensis_TLA39_contig1_hss_exon6-7_Ψ	Forsteronia_guyanensis_TLA39_hss_exon6-7_Ψ1		VXXXD	Prévost & Feuillet 3970 (CAY)	ON793489
Mesechiteae	*Forsteronia guyanensis* Müll.Arg.	Forsteronia_guyanensis_TLA39_contig2_hss_exon6_Ψ	Forsteronia_guyanensis_TLA39_hss_exon6_Ψ2			Prévost & Feuillet 3970 (CAY)	ON793490
Mesechiteae	*Forsteronia guyanensis* Müll.Arg.	Forsteronia_guyanensis_TLA39_contig3_hss_exon6_Ψ	Forsteronia_guyanensis_TLA39_hss_exon6_Ψ3			Prévost & Feuillet 3970 (CAY)	ON793491
Mesechiteae	*Forsteronia guyanensis* Müll.Arg.	Forsteronia_guyanensis_TLA39_contig4_dhs_exon1-6	Forsteronia_guyanensis_TLA39_dhs_exon1-6	Forsteronia_guyanensis_TLA39_dhs_exon1-6	IXXXN	Prévost & Feuillet 3970 (CAY)	ON793492
Mesechiteae	*Mandevilla boliviensis* (J.J.Veitch) Woodson	Mandevilla_boliviensis			VXXXD	Livshultz et al. 2018	MG817694
Mesechiteae	*Mandevilla boliviensis* (J.J.Veitch) Woodson	Mandevilla_boliviensis_TLA76_contig0_hss_exon1-7	Mandevilla_boliviensis_TLA76_hss_exon1-7	Mandevilla_boliviensis_TLA76_hss_exon1-7	VXXXD	T. Livshultz 03-35 (GH)	ON793493
Mesechiteae	*Mandevilla boliviensis* (J.J.Veitch) Woodson	Mandevilla_boliviensis_TLA76_contig1_dhs_exon1-4	Mandevilla_boliviensis_TLA76_dhs_exon1-7	Mandevilla_boliviensis_TLA76_dhs_exon1-7		T. Livshultz 03-35 (GH)	ON793494
Mesechiteae	*Mandevilla boliviensis* (J.J.Veitch) Woodson	Mandevilla_boliviensis_TLA76_contig2_dhs_exon5-7	Mandevilla_boliviensis_TLA76_dhs_exon1-7	Mandevilla_boliviensis_TLA76_dhs_exon1-7	IXXXN	T. Livshultz 03-35 (GH)	ON793495
Mesechiteae	*Mandevilla longiflora* (Desf.) Pichon	Mandevilla_longiflora	Mandevilla_longiflora	Mandevilla_longiflora	VXXXD	Livshultz et al. 2018	MG817672

Mesechiteae	*Mesechites trifidus* (Jacq.) Müll.Arg.	Mesechites_trifidus			VXXXD	Livshultz et al. 2018	MG817684
Mesechiteae	*Mesechites trifidus* (Jacq.) Müll.Arg.	Mesechites_trifidus_45_contig0_hss_exon1-7	Mesechites_trifidus_45_hss_exon1-7	Mesechites_trifidus_45_hss_exon1-7	VXXXD	S. Liede & U. Meve 3471 (UBT)	ON793496
Mesechiteae	*Mesechites trifidus* (Jacq.) Müll.Arg.	Mesechites_trifidus_45_contig1_dhs_exon5-7	Mesechites_trifidus_45_dhs_exon1-7	Mesechites_trifidus_45_dhs_exon1-7	IXXXN	S. Liede & U. Meve 3471 (UBT)	ON793497
Mesechiteae	*Mesechites trifidus* (Jacq.) Müll.Arg.	Mesechites_trifidus_45_contig2_dhs_exon1-4	Mesechites_trifidus_45_dhs_exon1-7	Mesechites_trifidus_45_dhs_exon1-7		S. Liede & U. Meve 3471 (UBT)	ON793498
Nerieae	*Adenium obesum* (Forssk.) Roem. & Schult.	Adenium_obesum	Adenium_obesum	Adenium_obesum	IXXXN	Livshultz et al. 2018	MG817693
Nerieae	*Alafia barteri* Oliv.	Alafia_barteri_1			IXXXD	Livshultz et al. 2018	MG817679
Nerieae	*Alafia barteri* Oliv.	Alafia_barteri_2			IXXXN	Livshultz et al. 2018	MG817678
Nerieae	*Alafia barteri* Oliv.	Alafia_barteri_52_contig0_hss_exon3-7	Alafia_barteri_52_hss_exon1-7	Alafia_barteri_52_hss_exon1-7	IXXXD	H. H. Schmidt et al. 2037 (MO)	ON793499
Nerieae	*Alafia barteri* Oliv.	Alafia_barteri_52_contig1_hss_exon1-2	Alafia_barteri_52_hss_exon1-7	Alafia_barteri_52_hss_exon1-7		H. H. Schmidt et al. 2037 (MO)	ON793500
Nerieae	*Alafia barteri* Oliv.	Alafia_barteri_52_contig2_dhs_exon1-7	Alafia_barteri_52_dhs_exon1-7	Alafia_barteri_52_dhs_exon1-7	IXXXN	H. H. Schmidt et al. 2037 (MO)	ON793501
Nerieae	*Alafia thouarsii* Roem. & Schult.	Alafia_thouarsii_TL216_contig0_dhs_exon1-7	Alafia_thouarsii_TL216_dhs_exon1-7	Alafia_thouarsii_TL216_dhs_exon1-7	IXXXN	G. McPherson et al. 17584 (MO)	ON793502
Nerieae	*Alafia thouarsii* Roem. & Schult.	Alafia_thouarsii_TL216_contig1_hss_exon1	Alafia_thouarsii_TL216_hss_exon1-7	Alafia_thouarsii_TL216_hss_exon1-7		G. McPherson et al. 17584 (MO)	ON793503
Nerieae	*Alafia thouarsii* Roem. & Schult.	Alafia_thouarsii_TL216_contig2_hss_exon5-6_Ψ	Alafia_thouarsii_TL216_hss_exon5-6_Ψ		IXXXD	G. McPherson et al. 17584 (MO)	ON793504

Nerieae	*Alafia thouarsii* Roem. & Schult.	Alafia_thouarsii_TL216_contig3_hss_exon2-7	Alafia_thouarsii_TL216_hss_exon1-7	Alafia_thouarsii_TL216_hss_exon1-7	IXXXD	G. McPherson et al. 17584 (MO)	ON793505
Nerieae	*Isonema smeathmannii* Roem. & Schult.	Isonema_smeathmannii			VXXX	Livshultz et al. 2018	MG817669
Nerieae	*Isonema smeathmannii* Roem. & Schult.	Isonema_smeathmannii_TLA142_contig0_hss_exon1-6	Isonema_smeathmannii_TLA142_hss_exon1-6	Isonema_smeathmannii_TLA142_hss_exon1-6	VXXXD	F. Billiet S1964 (BR)	ON793506
Nerieae	*Isonema smeathmannii* Roem. & Schult.	Isonema_smeathmannii_TLA142_contig1_dhs_exon1-7	Isonema_smeathmannii_TLA142_dhs_exon1-7	Isonema_smeathmannii_TLA142_dhs_exon1-7	IXXXN	F. Billiet S1964 (BR)	ON793507
Nerieae	*Nerium oleander* L.	Nerium_oleander_TLA109_contig0_dhs_exon1-7	Nerium_oleander_TLA109_dhs_exon1-7	Nerium_oleander_TLA109_dhs_exon1-7	IXXXN	G. Ionta 416 (FLAS)	ON793508
Nerieae	*Nerium oleander* L.	Nerium_oleander_TLA109_contig1_hss_exon4-7_Ψ	Nerium_oleander_TLA109_hss_exon4-7_Ψ		IXXXD	G. Ionta 416 (FLAS)	ON793509
Nerieae	*Nerium oleander* L.	Nerium_oleander_TLA109_contig2_hss_exon5-6	Nerium_oleander_TLA109_hss_exon5-6		IXXXD	G. Ionta 416 (FLAS)	ON793510
Nerieae	*Nerium oleander* L.	Nerium_oleander_TLA109_contig3_dhs_exon1-3	Nerium_oleander_TLA109_dhs_exon1-3			G. Ionta 416 (FLAS)	ON793511
Nerieae	*Strophanthus boivinii* Baill.	Strophanthus_boivinii_TLA133_contig0_dhs_exon1-4_Ψ	Strophanthus_boivinii_TLA133_dhs_exon1-4_Ψ			M. E. Endress s.n. 2.XII.03 (Z)	ON793512
Nerieae	*Strophanthus boivinii* Baill.	Strophanthus_boivinii_TLA133_contig1_hss_exon4-7	Strophanthus_boivinii_TLA133_hss_exon1-7	Strophanthus_boivinii_TLA133_hss_exon1-7	VXXXD	M. E. Endress s.n. 2.XII.03 (Z)	ON793513
Nerieae	*Strophanthus boivinii* Baill.	Strophanthus_boivinii_TLA133_contig2_hss_exon2-3	Strophanthus_boivinii_TLA133_hss_exon1-7	Strophanthus_boivinii_TLA133_hss_exon1-7		M. E. Endress s.n. 2.XII.03 (Z)	ON793514
Nerieae	*Strophanthus boivinii* Baill.	Strophanthus_boivinii_TLA133_contig3_hss_exon1	Strophanthus_boivinii_TLA133_hss_exon1-7	Strophanthus_boivinii_TLA133_hss_exon1-7		M. E. Endress s.n. 2.XII.03 (Z)	ON793515
Nerieae	*Strophanthus boivinii* Baill.	Strophanthus_boivinii_TLA133_contig4_dhs_exon1-2	Strophanthus_boivinii_TLA133_dhs_exon1-2			M. E. Endress s.n. 2.XII.03 (Z)	ON793516
Nerieae	*Strophanthus boivinii* Baill.	Strophanthus_boivinii_TLA133_contig5_dhs_exon1-7	Strophanthus_boivinii_TLA133_dhs1_exon1-7	Strophanthus_boivinii_TLA133_dhs1_exon1-7	MXXXN	M. E. Endress s.n. 2.XII.03 (Z)	ON793517
Nerieae	*Strophanthus boivinii* Baill.	Strophanthus_boivinii_TLA133_contig6_dhs_exon1-7	Strophanthus_boivinii_TLA133_dhs2_exon1-7	Strophanthus_boivinii_TLA133_dhs2_exon1-7	MXXXN	M. E. Endress s.n. 2.XII.03 (Z)	ON793518

Nerieae	*Strophanthus boivinii* Baill.	Strophanthus_boivinii_TLA133_contig7_dhs_exon1-7	Strophanthus_boivinii_TLA133_dhs3_exon1-7	Strophanthus_boivinii_TLA133_dhs3_exon1-7	MXXXN	M. E. Endress s.n. 2.XII.03 (Z)	ON793519
Nerieae	*Strophanthus preussii* Engl. & Pax	Strophanthus_preussii			IXX	Livshultz et al. 2018	MG817651
Nerieae	*Strophanthus preussii* Engl. & Pax	Strophanthus_preussii_TLA10_contig0_dhs_exon1-7	Strophanthus_preussii_TLA10_dhs_exon1-7	Strophanthus_preussii_TLA10_dhs_exon1-7	IXXXN	T. Livshultz 03_24 (BH)	ON793520
Nerieae	*Strophanthus preussii* Engl. & Pax	Strophanthus_preussii_TLA10_contig1_hss_exon2-3_Ψ	Strophanthus_preussii_TLA10_hss_exon2-3_Ψ1			T. Livshultz 03_24 (BH)	ON793521
Nerieae	*Strophanthus preussii* Engl. & Pax	Strophanthus_preussii_TLA10_contig2_hss_exon2-3_Ψ	Strophanthus_preussii_TLA10_hss_exon2-3_Ψ2			T. Livshultz 03_24 (BH)	ON793522
Nerieae	*Strophanthus preussii* Engl. & Pax	Strophanthus_preussii_TLA10_contig3_hss_exon2-6_Ψ	Strophanthus_preussii_TLA10_hss_exon2-6_Ψ3		VXXXD	T. Livshultz 03_24 (BH)	ON793523
Nerieae	*Strophanthus preussii* Engl. & Pax	Strophanthus_preussii_TLA10_contig4_hss_exon2-6_Ψ	Strophanthus_preussii_TLA10_hss_exon2-6_Ψ4		VXXXD	T. Livshultz 03_24 (BH)	ON793524
Odontadenieae	*Elytropus chilensis* (A.DC.) Müll.Arg.	Elytropus_chilensis_dhs			IXXXN	Livshultz et al. 2018	MG817662
Odontadenieae	*Elytropus chilensis* (A.DC.) Müll.Arg.	Elytropus_chilensis_hss			VXXXD	Livshultz et al. 2018	MG817663
Odontadenieae	*Elytropus chilensis* (A.DC.) Müll.Arg.	Elytropus_chilensis_TL208_contig0_hss_exon1-6	Elytropus_chilensis_TL208_hss_exon1-6	Elytropus_chilensis_TL208_hss_exon1-6	VXXXD	Sobel & Strudwick 2740 (NY)	ON793525
Odontadenieae	*Elytropus chilensis* (A.DC.) Müll.Arg.	Elytropus_chilensis_TL208_contig1_dhs_exon1-7	Elytropus_chilensis_TL208_dhs_exon1-7	Elytropus_chilensis_TL208_dhs_exon1-7	IXXXN	Sobel & Strudwick 2740 (NY)	ON793526
Odontadenieae	*Elytropus chilensis* (A.DC.) Müll.Arg.	Elytropus_chilensis_TLA257_contig0_hss_exon1-7	Elytropus_chilensis_TLA257_hss_exon1-7	Elytropus_chilensis_TLA257_hss_exon1-7	VXXXN	M. Mihoc et al. 156934 (CONC)	ON793527
Odontadenieae	*Elytropus chilensis* (A.DC.) Müll.Arg.	Elytropus_chilensis_TLA257_contig1_dhs_exon1-7	Elytropus_chilensis_TLA257_dhs_exon1-7	Elytropus_chilensis_TLA257_dhs_exon1-7	IXXXN	M. Mihoc et al. 156934 (CONC)	ON793528
Odontadenieae	*Odontadenia perrottetii* (A.DC.) Woodson	Odontadenia_perrottetii_PA60B_contig0_hss_exon1-7	Odontadenia_perrottetii_PA60B_hss_exon1-7	Odontadenia_perrottetii_PA60B_hss_exon1-7	VXXXD	Prévost & Feuillet 3973 (CAY)	ON793529

Odontadenieae	*Odontadenia perrottetii* (A.DC.) Woodson	Odontadenia_perrottetii_PA60B_contig1_hss_exon4-5	Odontadenia_perrottetii_PA60B_hss_exon4-5			Prévost & Feuillet 3973 (CAY)	ON793530
Odontadenieae	*Odontadenia perrottetii* (A.DC.) Woodson	Odontadenia_perrottetii_PA60B_contig2_dhs_exon1-7	Odontadenia_perrottetii_PA60B_dhs_exon1-7	Odontadenia_perrottetii_PA60B_dhs_exon1-7	IXXXN	Prévost & Feuillet 3973 (CAY)	ON793531
Odontadenieae	*Odontadenia perrottetii* (A.DC.) Woodson	Odontodenia_perrottetii			VXXXD	Livshultz et al. 2018	MG817687
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig0_hss_exon1-7	Pinochia_corymbosa_TL96_hss_exon1-7	Pinochia_corymbosa_TL96_hss_exon1-7	VXXXD	E. Santiago 97-6 (Z)	ON793532
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig1_dhs_exon1-4	Pinochia_corymbosa_TL96_dhs_exon1-7	Pinochia_corymbosa_TL96_dhs_exon1-7		E. Santiago 97-6 (Z)	ON793533
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig10_hss_exon2-3_Ψ	Pinochia_corymbosa_TL96_hss_exon2-3_Ψ5			E. Santiago 97-6 (Z)	ON793542
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig11_hss_exon6-7_Ψ	Pinochia_corymbosa_TL96_hss_exon6-7_Ψ6		IXXXXD	E. Santiago 97-6 (Z)	ON793543
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig2_dhs_exon1-4	Pinochia_corymbosa_TL96_dhs_exon1-7	Pinochia_corymbosa_TL96_dhs_exon1-7		E. Santiago 97-6 (Z)	ON793534
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig3_hss_exon1-4_Ψ	Pinochia_corymbosa_TL96_hss_exon1-4_Ψ1			E. Santiago 97-6 (Z)	ON793535
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig4_dhs_exon5-7	Pinochia_corymbosa_TL96_dhs_exon1-7	Pinochia_corymbosa_TL96_dhs_exon1-7	IXXXN	E. Santiago 97-6 (Z)	ON793536
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig5_hss_exon1-3	Pinochia_corymbosa_TL96_hss_exon1-3			E. Santiago 97-6 (Z)	ON793537
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig6_hss_exon6_Ψ	Pinochia_corymbosa_TL96_hss_exon6_Ψ2		IXXXXD	E. Santiago 97-6 (Z)	ON793538
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig7_dhs_exon6-7	Pinochia_corymbosa_TL96_dhs_exon1-7	Pinochia_corymbosa_TL96_dhs_exon1-7	IXXXN	E. Santiago 97-6 (Z)	ON793539
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig8_hss_exon2-3_Ψ	Pinochia_corymbosa_TL96_hss_exon2-3_Ψ3			E. Santiago 97-6 (Z)	ON793540
Odontadenieae	*Pinochia corymbosa* (Jacq.) M.E.Endress & B.F.Hansen	Pinochia_corymbosa_TL96_contig9_hss_exon2_Ψ	Pinochia_corymbosa_TL96_hss_exon2_Ψ4			E. Santiago 97-6 (Z)	ON793541

Odontadenieae	*Secondatia densiflora* A.DC.	Secondatia_densiflora			VXXXD	Livshultz et al. 2018	MG817660
Odontadenieae	*Secondatia densiflora* A.DC.	Secondatia_densiflora_dhs			IXXXN	Livshultz et al. 2018	MG817659
Odontadenieae	*Secondatia densiflora* A.DC.	Secondatia_densiflora_PA62B_contig0_hss_exon1-7	Secondatia_densiflora_PA62B_hss_exon1-7	Secondatia_densiflora_PA62B_hss_exon1-7	VXXXD	A. Simões et al. 1218 (UEC)	ON793544
Odontadenieae	*Secondatia densiflora* A.DC.	Secondatia_densiflora_PA62B_contig1_dhs_exon1-4	Secondatia_densiflora_PA62B_dhs_exon1-4			A. Simões et al. 1218 (UEC)	ON793545
Odontadenieae	*Secondatia densiflora* A.DC.	Secondatia_densiflora_PA62B_contig2_dhs_exon1-7	Secondatia_densiflora_PA62B_dhs_exon1-7	Secondatia_densiflora_PA62B_dhs_exon1-7	IXXXN	A. Simões et al. 1218 (UEC)	ON793546
Odontadenieae	*Stipecoma peltigera* (Stadelm.) Müll.Arg.	Stipecoma_peltigera_TLA134_contig0_hss_exon1-6	Stipecoma_peltigera_TLA134_hss_exon1-6	Stipecoma_peltigera_TLA134_hss_exon1-6	VXXXD	L. S. Kinoshita s.n. (UEC)	ON793547
Odontadenieae	*Stipecoma peltigera* (Stadelm.) Müll.Arg.	Stipecoma_peltigera_TLA134_contig1_dhs_exon1-4	Stipecoma_peltigera_TLA134_dhs_exon1-7	Stipecoma_peltigera_TLA134_dhs_exon1-7		L. S. Kinoshita s.n. (UEC)	ON793548
Odontadenieae	*Stipecoma peltigera* (Stadelm.) Müll.Arg.	Stipecoma_peltigera_TLA134_contig2_dhs_exon5-7	Stipecoma_peltigera_TLA134_dhs_exon1-7	Stipecoma_peltigera_TLA134_dhs_exon1-7	IXXXN	L. S. Kinoshita s.n. (UEC)	ON793549
Periplocoideae	*Finlaysonia insularum* (King & Gamble) Venter	Finlaysonia_insularum			IXXXD	Livshultz et al. 2018	MG817700
Periplocoideae	*Finlaysonia insularum* (King & Gamble) Venter	Finlaysonia_insularum_TL63_contig0_dhs_exon1-7	Finlaysonia_insularum_TL63_dhs1_exon1-7	Finlaysonia_insularum_TL63_dhs1_exon1-7	IXXXN	D. J. Middleton et al. 1164 (A)	ON793550
Periplocoideae	*Finlaysonia insularum* (King & Gamble) Venter	Finlaysonia_insularum_TL63_contig1_hss_exon1-6	Finlaysonia_insularum_TL63_hss_exon1-6	Finlaysonia_insularum_TL63_hss_exon1-6	IXXXD	D. J. Middleton et al. 1164 (A)	ON793551
Periplocoideae	*Finlaysonia insularum* (King & Gamble) Venter	Finlaysonia_insularum_TL63_contig2_dhs_exon1-7	Finlaysonia_insularum_TL63_dhs2_exon1-7	Finlaysonia_insularum_TL63_dhs2_exon1-7	IXXXN	D. J. Middleton et al. 1164 (A)	ON793552
Periplocoideae	*Finlaysonia lanuginosa* (Ridl.) Venter	Finlaysonia_lanuginosa_TLP286_contig0_dhs_exon1-7	Finlaysonia_lanuginosa_TLP286_dhs_exon1-7	Finlaysonia_lanuginosa_TLP286_dhs_exon1-7	IXXXN	D. J. Middleton et al. 4069 (E)	ON793553
Periplocoideae	*Finlaysonia lanuginosa* (Ridl.) Venter	Finlaysonia_lanuginosa_TLP286_contig1_hss_exon1-7	Finlaysonia_lanuginosa_TLP286_hss_exon1-7	Finlaysonia_lanuginosa_TLP286_hss_exon1-7	IXXXD	D. J. Middleton et al. 4069 (E)	ON793554
Periplocoideae	*Gymnanthera oblonga* (Burm.f.) P.S.Green	Gymnanthera_oblonga			IXXXN	Livshultz et al. 2018	MG817701
Periplocoideae	*Gymnanthera oblonga* (Burm.f.) P.S.Green	Gymnanthera_oblonga_TLP274_contig0_hss_exon3-4	Gymnanthera_oblonga_TLP274_hss_exon2-6	Gymnanthera_oblonga_TLP274_hss_exon2-6		A. Ford 2607 (BRI)	ON793555

Periplocoideae	*Gymnanthera oblonga* (Burm.f.) P.S.Green	Gymnanthera_oblonga_TLP274_contig1_hss_exon5-6	Gymnanthera_oblonga_TLP274_hss_exon2-6	Gymnanthera_oblonga_TLP274_hss_exon2-6	IXXXD	A. Ford 2607 (BRI)	ON793556
Periplocoideae	*Gymnanthera oblonga* (Burm.f.) P.S.Green	Gymnanthera_oblonga_TLP274_contig2_hss_exon2	Gymnanthera_oblonga_TLP274_hss_exon2-6	Gymnanthera_oblonga_TLP274_hss_exon2-6		A. Ford 2607 (BRI)	ON793557
Periplocoideae	*Gymnanthera oblonga* (Burm.f.) P.S.Green	Gymnanthera_oblonga_TLP274_contig3_dhs_exon1-6	Gymnanthera_oblonga_TLP274_dhs_exon1-6	Gymnanthera_oblonga_TLP274_dhs_exon1-6	IXXXN	A. Ford 2607 (BRI)	ON793558
Periplocoideae	*Petopentia natalensis* (Schltr.) Bullock	Petopentia_natalensis_TLP78_contig0_dhs_exon1-7	Petopentia_natalensis_TLP78_dhs_exon1-7	Petopentia_natalensis_TLP78_dhs_exon1-7	IXXXN	T. Livshultz 03-2 (BH)	ON793559
Periplocoideae	*Petopentia natalensis* (Schltr.) Bullock	Petopentia_natalensis_TLP78_contig1_hss_exon1-7	Petopentia_natalensis_TLP78_hss_exon1-7	Petopentia_natalensis_TLP78_hss_exon1-7	IXXXD	T. Livshultz 03-2 (BH)	ON793560
Periplocoideae	*Phyllanthera grayi* (P.I.Forst.) Venter	Phyllanthera_grayi			IXXXN	Livshultz et al. 2018	MG817699
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii			IXXXD	Livshultz et al. 2018	MG817702
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii_P79_contig0_hss_exon1-6	Raphionacme_flanaganii_P79_hss_exon1-6	Raphionacme_flanaganii_P79_hss_exon1-6	IXXXD	T. Livshultz 03_23 (BH)	ON793561
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii_P79_contig1_hss_exon4-6	Raphionacme_flanaganii_P79_hss_exon4-6		IXXXD	T. Livshultz 03_23 (BH)	ON793562
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii_P79_contig2_hss_exon5-6_Ψ	Raphionacme_flanaganii_P79_hss_exon5-6_Ψ1		IXXXD	T. Livshultz 03_23 (BH)	ON793563
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii_P79_contig3_hss_exon5_Ψ	Raphionacme_flanaganii_P79_hss_exon5_Ψ2			T. Livshultz 03_23 (BH)	ON793564
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii_P79_contig4_hss_exon5-6_Ψ	Raphionacme_flanaganii_P79_hss_exon5-6_Ψ3		IXXXD	T. Livshultz 03_23 (BH)	ON793565
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii_P79_contig5_hss_exon4-6_Ψ	Raphionacme_flanaganii_P79_hss_exon5-6_Ψ4		IXXXD	T. Livshultz 03_23 (BH)	ON793566
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii_P79_contig6_dhs_exon1-7	Raphionacme_flanaganii_P79_dhs_exon1-7	Raphionacme_flanaganii_P79_dhs_exon1-7	IXXXN	T. Livshultz 03_23 (BH)	ON793567
Periplocoideae	*Raphionacme flanaganii* Schltr.	Raphionacme_flanaganii_P79_contig7_hss_exon5-6_Ψ	Raphionacme_flanaganii_P79_hss_exon5-6_Ψ5		IXXXD	T. Livshultz 03_23 (BH)	ON793568
Periplocoideae	*Zygostelma benthamii* Baill.	Zygostelma_benthamii_TL105_contig0_dhs_exon1-7	Zygostelma_benthamii_TL105_dhs_exon1-7	Zygostelma_benthamii_TL105_dhs_exon1-7	IXXXN	D. J. Middleton et al. 849 (A)	ON793569

Periplocoideae	*Zygostelma benthamii* Baill.	Zygostelma_benthamii_TL105_contig1_hss_exon1-4_Ψ	Zygostelma_benthamii_TL105_hss_exon1-7_Ψ			D. J. Middleton et al. 849 (A)	ON793570
Periplocoideae	*Zygostelma benthamii* Baill.	Zygostelma_benthamii_TL105_contig2_hss_exon5-7	Zygostelma_benthamii_TL105_hss_exon1-7_Ψ		IXXXD	D. J. Middleton et al. 849 (A)	ON793571
Plumerieae	*Allamanda schottii* Pohl	Allamanda_schottii			IXXXN	Livshultz et al. 2018	MG817714
Plumerieae	*Allamanda schottii* Pohl	Allamanda_schottii_46_contig0_dhs_exon1-7	Allamanda_schottii_46_dhs_exon1-7	Allamanda_schottii_46_dhs_exon1-7	IXXXN	T. Livshultz 03_26 (BH)	ON793572
Plumerieae	*Cerbera manghas* L.	Cerbera_manghas			IXXXN	Livshultz et al. 2018	MG817706
Plumerieae	*Himatanthus bracteatus* (A.DC.) Woodson	Himatanthus_bracteatus	Himatanthus_bracteatus	Himatanthus_bracteatus	IXXXN	Livshultz et al. 2018	MG817708
Plumerieae	*Himatanthus obovatus* (Müll.Arg.) Woodson	Himatanthus_obovatus_PA99_contig0_dhs_exon1-7	Himatanthus_obovatus_PA99_dhs_exon1-7	Himatanthus_obovatus_PA99_dhs_exon1-7	IXXXN	Kinoshita 02/109 (UEC)	ON793573
Plumerieae	*Plumeria cubensis* Urb.	Plumeria_cubensis			IXXXN	Livshultz et al. 2018	MG817704
Plumerieae	*Plumeria cubensis* Urb.	Plumeria_cubensis_48_contig0_dhs_exon1-7	Plumeria_cubensis_48_dhs_exon1-7	Plumeria_cubensis_48_dhs_exon1-7	IXXXN	M.E. Endress s.n. Aug. 2003 (PTBG)	ON793574
Plumerieae	*Thevetia peruviana* (Pers.) K.Schum.	Thevetia_peruviana			IXXXN	Livshultz et al. 2018	MG817705
Plumerieae	*Thevetia peruviana* (Pers.) K.Schum.	Thevetia_peruviana_56_contig0_dhs_exon1-4	Thevetia_peruviana_56_dhs_exon1-7	Thevetia_peruviana_56_dhs_exon1-7		T. Livshultz TL03-34 (GH)	ON793575
Plumerieae	*Thevetia peruviana* (Pers.) K.Schum.	Thevetia_peruviana_56_contig1_dhs_exon5-7	Thevetia_peruviana_56_dhs_exon1-7	Thevetia_peruviana_56_dhs_exon1-7	IXXXN	T. Livshultz TL03-34 (GH)	ON793576
Rhadadenieae	*Rhabdadenia biflora* (Jacq.) Müll.Arg.	Rhabdadenia_biflora_1	Rhabdadenia_biflora_1	Rhabdadenia_biflora_1	IXXXD	Livshultz et al. 2018	MG817691
Rhadadenieae	*Rhabdadenia biflora* (Jacq.) Müll.Arg.	Rhabdadenia_biflora_2			IXXXN	Livshultz et al. 2018	MG817690
Rhadadenieae	*Rhabdadenia madida* (Vell.) Miers	Rhabdadenia_madida_contig1_TL206_dhs_exon1-3	Rhabdadenia_madida_TL206_dhs_exon1-7	Rhabdadenia_madida_TL206_dhs_exon1-7		Smith et al. 776 (NY)	ON793577
Rhadadenieae	*Rhabdadenia madida* (Vell.) Miers	Rhabdadenia_madida_TL206_contig0_hss_exon1-7	Rhabdadenia_madida_TL206_hss_exon1-7	Rhabdadenia_madida_TL206_hss_exon1-7	IXXXD	Smith et al. 776 (NY)	ON793578

Rhadadenieae	*Rhabdadenia madida* (Vell.) Miers	Rhabdadenia_madida_TL206_contig2_dhs_exon4-7	Rhabdadenia_madida_TL206_dhs_exon1-7	Rhabdadenia_madida_TL206_dhs_exon1-7	IXXXN	Smith et al. 776 (NY)	ON793579
Secamonoideae	*Toxocarpus villosus* (Blume) Decne.	Toxocarpus_villosus_TLS261_contig0_hss_exon1-7	Toxocarpus_villosus_TLS261_hss_exon1-7	Toxocarpus_villosus_TLS261_hss_exon1-7	IXXXD	D. J. Middleton et al. 1341 (A)	ON793580
Secamonoideae	*Toxocarpus villosus* (Blume) Decne.	Toxocarpus_villosus_TLS261_contig1_dhs_exon1-4	Toxocarpus_villosus_TLS261_dhs_exon1-7	Toxocarpus_villosus_TLS261_dhs_exon1-7		D. J. Middleton et al. 1341 (A)	ON793581
Secamonoideae	*Toxocarpus villosus* (Blume) Decne.	Toxocarpus_villosus_TLS261_contig2_dhs_exon5-7	Toxocarpus_villosus_TLS261_dhs_exon1-7	Toxocarpus_villosus_TLS261_dhs_exon1-7	IXXXN	D. J. Middleton et al. 1341 (A)	ON793582
Tabernaemontaneae	*Tabernaemontana bufalina* Lour.	Tabernaemontana_bufalina_PA92_contig0_dhs_exon1-4	Tabernaemontana_bufalina_PA92_dhs_exon1-7	Tabernaemontana_bufalina_PA92_dhs_exon1-7		D. J. Middleton et al. 1749 (A)	ON793583
Tabernaemontaneae	*Tabernaemontana bufalina* Lour.	Tabernaemontana_bufalina_PA92_contig1_dhs_exon5-7	Tabernaemontana_bufalina_PA92_dhs_exon1-7	Tabernaemontana_bufalina_PA92_dhs_exon1-7	IXXXN	D. J. Middleton et al. 1749 (A)	ON793584
Tabernaemontaneae	*Tabernaemontana bufalina* Lour.	Tabernaemontana_bufalina_PA93_contig0_dhs_exon1-4	Tabernaemontana_bufalina_PA93_dhs_exon1-7	Tabernaemontana_bufalina_PA93_dhs_exon1-7		D. J. Middleton et al. 2615 (A)	ON793585
Tabernaemontaneae	*Tabernaemontana bufalina* Lour.	Tabernaemontana_bufalina_PA93_contig1_dhs_exon5-7	Tabernaemontana_bufalina_PA93_dhs_exon1-7	Tabernaemontana_bufalina_PA93_dhs_exon1-7	IXXXN	D. J. Middleton et al. 2615 (A)	ON793586
Tabernaemontaneae	*Tabernaemontana* elegans Stapf	Tabernaemontana_elegans	Tabernaemontana_elegans	Tabernaemontana_elegans	IXXXN	Phytometasyn, https://bioinformatics.tugraz.at/phytometasyn/	MG805361
Tabernaemontaneae	*Tabernaemontana pandacaqui* Poir.	Tabernaemontana_pandacaqui_PA94_contig0_dhs_exon1-4	Tabernaemontana_pandacaqui_PA94_dhs_exon1-7	Tabernaemontana_pandacaqui_PA94_dhs_exon1-7		D. J. Middleton et al. 1385 (A)	ON793587
Tabernaemontaneae	*Tabernaemontana pandacaqui* Poir.	Tabernaemontana_pandacaqui_PA94_contig1_dhs_exon5-7	Tabernaemontana_pandacaqui_PA94_dhs_exon1-7	Tabernaemontana_pandacaqui_PA94_dhs_exon1-7	IXXXN	D. J. Middleton et al. 1385 (A)	ON793588
Tabernaemontaneae	*Tabernaemontana peduncularis* Wall.	Tabernaemontana_peduncularis_PA95_contig0_dhs_exon1-4	Tabernaemontana_peduncularis_PA95_dhs_exon1-7	Tabernaemontana_peduncularis_PA95_dhs_exon1-7		D. J. Middleton et al. 2905 (A)	ON793589
Tabernaemontaneae	*Tabernaemontana peduncularis* Wall.	Tabernaemontana_peduncularis_PA95_contig1_dhs_exon5-7	Tabernaemontana_peduncularis_PA95_dhs_exon1-7	Tabernaemontana_peduncularis_PA95_dhs_exon1-7	IXXXN	D. J. Middleton et al. 2905 (A)	ON793590
Vinceae	*Catharanthus longifolius* (Pichon) Pichon	Catharanthus_longifolius	Catharanthus_longifolius	Catharanthus_longifolius	IXXXN	Phytometasyn, https://bioinformatics.tugraz.at/phytometasyn/	MG805365

Vinceae	*Catharanthus ovalis* Markgr.	Catharanthus_ovalis	Catharanthus_ovalis	Catharanthus_ovalis	IXXXN	Phytometasyn, https://bioinformatics.tugraz.at/phytometasyn/	MG805366
Vinceae	*Catharanthus roseus* (L.) G.Don	Catharanthus_roseus	Catharanthus_roseus	Catharanthus_roseus	IXXXN	Medicinal Plant Genomics Resource	GACD01064297
Vinceae	*Kamettia chandeei* D.J.Middleton	Kamettia_chandeei	Kamettia_chandeei	Kamettia_chandeei	IXXXN	Livshultz et al. 2018	MG817703
Vinceae	*Kopsia rosea* D.J.Middleton	Kopsia_rosea			IXXXN	Livshultz et al. 2018	MG817711
Vinceae	*Kopsia rosea* D.J.Middleton	Kopsia_rosea_69_contig0_dhs_exon1-7	Kopsia_rosea_69_dhs_exon1-7	Kopsia_rosea_69_dhs_exon1-7	IXXXN	D. J. Middleton et al. 4105 (A)	ON793591
Vinceae	*Ochrosia coccinea* (Teijsm. & Binn.) Miq.	Ochrosia_coccinea_PA88_contig0_dhs_exon1-4	Ochrosia_coccinea_PA88_dhs_exon1-7	Ochrosia_coccinea_PA88_dhs_exon1-7		W. Takeuchi 14422 (A)	ON793592
Vinceae	*Ochrosia coccinea* (Teijsm. & Binn.) Miq.	Ochrosia_coccinea_PA88_contig1_dhs_exon1-7_Ψ	Ochrosia_coccinea_PA88_dhs_exon1-7_Ψ		TXXXD	W. Takeuchi 14422 (A)	ON793593
Vinceae	*Ochrosia coccinea* (Teijsm. & Binn.) Miq.	Ochrosia_coccinea_PA88_contig2_dhs_exon5-7	Ochrosia_coccinea_PA88_dhs_exon1-7	Ochrosia_coccinea_PA88_dhs_exon1-7	IXXXN	W. Takeuchi 14422 (A)	ON793594
Vinceae	*Ochrosia poweri* F.M.Bailey	Ochrosia_poweri_PA89_contig0_dhs_exon1-4	Ochrosia_poweri_PA89_dhs_exon1-7	Ochrosia_poweri_PA89_dhs_exon1-7		D. J. Middleton 705 (A)	ON793595
Vinceae	*Ochrosia poweri* F.M.Bailey	Ochrosia_poweri_PA89_contig1_dhs_exon1-7_Ψ	Ochrosia_poweri_PA89_dhs_exon1-7_Ψ1		IXXXD	D. J. Middleton 705 (A)	ON793596
Vinceae	*Ochrosia poweri* F.M.Bailey	Ochrosia_poweri_PA89_contig2_dhs_exon5-7	Ochrosia_poweri_PA89_dhs_exon1-7	Ochrosia_poweri_PA89_dhs_exon1-7	IXXXN	D. J. Middleton 705 (A)	ON793597
Vinceae	*Ochrosia poweri* F.M.Bailey	Ochrosia_poweri_PA89_contig3_dhs_exon3_Ψ	Ochrosia_poweri_PA89_dhs_exon3_Ψ2			D. J. Middleton 705 (A)	ON793598
Vinceae	*Rauvolfia balansae* (Baill.) Boiteau	Rauvolfia_balansae_PA106_contig0_dhs_exon1-4	Rauvolfia_balansae_PA106_dhs_exon1-7	Rauvolfia_balansae_PA106_dhs_exon1-7		P. P. Lowry II et al. 5784 (MO)	ON793599
Vinceae	*Rauvolfia balansae* (Baill.) Boiteau	Rauvolfia_balansae_PA106_contig1_dhs_exon5-7	Rauvolfia_balansae_PA106_dhs_exon1-7	Rauvolfia_balansae_PA106_dhs_exon1-7	IXXXN	P. P. Lowry II et al. 5784 (MO)	ON793600
Vinceae	*Rauvolfia balansae* (Baill.) Boiteau	Rauvolfia_balansae_PA106_contig2_dhs_exon1-4_Ψ	Rauvolfia_balansae_PA106_dhs_exon1-4_Ψ			P. P. Lowry II et al. 5784 (MO)	ON793601

Vinceae	*Rauvolfia serpentina* (L.) Benth. ex Kurz	Rauvolfia_serpentina	Rauvolfia_serpentina	Rauvolfia_serpentina	IXXXN	Medicinal Plant Genomics Resource	GACE01073238
Vinceae	*Rauvolfia tetraphylla* L.	Rauvolfia_tetraphylla	Rauvolfia_tetraphylla	Rauvolfia_tetraphylla	IXXXN	1KP, www.onekp.com/public_data.html	scaffold-QEHE-2023261-Rauvolfia_tetraphyla
Vinceae	*Rauvolfia verticillata* (Lour.) Baill.	Rauvolfia_verticillata_PA91_contig0_dhs_exon1-4	Rauvolfia_verticillata_PA91_dhs_exon1-7	Rauvolfia_verticillata_PA91_dhs_exon1-7		M. F. Newman et al. 1098 (A)	ON793602
Vinceae	*Rauvolfia verticillata* (Lour.) Baill.	Rauvolfia_verticillata_PA91_contig1_dhs_exon1	Rauvolfia_verticillata_PA91_dhs_exon1-7	Rauvolfia_verticillata_PA91_dhs_exon1-7		M. F. Newman et al. 1098 (A)	ON793603
Vinceae	*Rauvolfia verticillata* (Lour.) Baill.	Rauvolfia_verticillata_PA91_contig2_dhs_exon5-7	Rauvolfia_verticillata_PA91_dhs_exon1-7	Rauvolfia_verticillata_PA91_dhs_exon1-7	IXXXN	M. F. Newman et al. 1098 (A)	ON793604
Vinceae	*Rauvolfia verticillata* (Lour.) Baill.	Rauvolfia_verticillata_PA91_contig3_dhs_exon7	Rauvolfia_verticillata_PA91_dhs_exon1-7	Rauvolfia_verticillata_PA91_dhs_exon1-7		M. F. Newman et al. 1098 (A)	ON793605
Vinceae	*Rauvolfia vomitoria* Wennberg	Rauvolfia_vomitoria_PA108_contig0_dhs_exon1-4	Rauvolfia_vomitoria_PA108_dhs_exon1-7	Rauvolfia_vomitoria_PA108_dhs_exon1-7		J. R. Stone & R. Niangadouma 3521 (MO)	ON793606
Vinceae	*Rauvolfia vomitoria* Wennberg	Rauvolfia_vomitoria_PA108_contig1_dhs_exon5-7	Rauvolfia_vomitoria_PA108_dhs_exon1-7	Rauvolfia_vomitoria_PA108_dhs_exon1-7	IXXXN	J. R. Stone & R. Niangadouma 3521 (MO)	ON793607
Vinceae	*Vinca major* L.	Vinca_major_43_contig0_dhs_exon1-4	Vinca_major_43_dhs_exon1-7	Vinca_major_43_dhs_exon1-7		M. Fishbein 7667 (OKLA)	ON793608
Vinceae	*Vinca major* L.	Vinca_major_43_contig1_dhs_exon5-7	Vinca_major_43_dhs_exon1-7	Vinca_major_43_dhs_exon1-7	IXXXN	M. Fishbein 7667 (OKLA)	ON793609
Vinceae	*Vinca minor* L.	Vinca_minor	Vinca_minor	Vinca_minor	IXXXN	Phytometasyn, https://bioinformatics.tugraz.at/phytometasyn/	MG805362
Wrightieae	*Pleioceras barteri* Baill.	Pleioceras_barteri_TLA244_contig0_dhs_exon1-7	Pleioceras_barteri_TLA244_dhs1_exon1-7	Pleioceras_barteri_TLA244_dhs1_exon1-7	IXXXN	Jongkind et al. 2131 (MO)	ON793610
Wrightieae	*Pleioceras barteri* Baill.	Pleioceras_barteri_TLA244_contig1_dhs_exon1-7	Pleioceras_barteri_TLA244_dhs2_exon1-7	Pleioceras_barteri_TLA244_dhs2_exon1-7	IXXXN	Jongkind et al. 2131 (MO)	ON793611

Wrightieae	*Stephanostema stenocarpum* K.Schum.	Stephanostema_stenocarpum_TLA232_contig0_dhs_exon1-4	Stephanostema_stenocarpum_TLA232_dhs1_exon1-7	Stephanostema_stenocarpum_TLA232_dhs1_exon1-7		W. R. Q. Luke et al. 3754 (MO)	ON793612
Wrightieae	*Stephanostema stenocarpum* K.Schum.	Stephanostema_stenocarpum_TLA232_contig1_dhs_exon5-7	Stephanostema_stenocarpum_TLA232_dhs1_exon1-7	Stephanostema_stenocarpum_TLA232_dhs1_exon1-7	IXXXN	W. R. Q. Luke et al. 3754 (MO)	ON793613
Wrightieae	*Stephanostema stenocarpum* K.Schum.	Stephanostema_stenocarpum_TLA232_contig2_dhs_exon1-3	Stephanostema_stenocarpum_TLA232_dhs_exon1-3			W. R. Q. Luke et al. 3754 (MO)	ON793614
Wrightieae	*Stephanostema stenocarpum* K.Schum.	Stephanostema_stenocarpum_TLA232_contig3_dhs_exon1-3	Stephanostema_stenocarpum_TLA232_dhs1_exon1-7	Stephanostema_stenocarpum_TLA232_dhs1_exon1-7		W. R. Q. Luke et al. 3754 (MO)	ON793615
Wrightieae	*Stephanostema stenocarpum* K.Schum.	Stephanostema_stenocarpum_TLA232_contig4_dhs_exon5-6	Stephanostema_stenocarpum_TLA232_dhs_exon5-6			W. R. Q. Luke et al. 3754 (MO)	ON793616
Wrightieae	*Stephanostema stenocarpum* K.Schum.	Stephanostema_stenocarpum_TLA232_contig5_dhs_exon1-7	Stephanostema_stenocarpum_TLA232_dhs2_exon1-7	Stephanostema_stenocarpum_TLA232_dhs2_exon1-7	IXXXN	W. R. Q. Luke et al. 3754 (MO)	ON793617
Wrightieae	*Wrightia arborea* (Dennst.) Mabb.	Wrightia_arborea_TLA91_contig0_dhs_exon1-7	Wrightia_arborea_TLA91_dhs1_exon1-7	Wrightia_arborea_TLA91_dhs1_exon1-7	IXXXN	D. J. Middleton 240 (A)	ON793618
Wrightieae	*Wrightia arborea* (Dennst.) Mabb.	Wrightia_arborea_TLA91_contig1_dhs_exon1-7	Wrightia_arborea_TLA91_dhs2_exon1-7	Wrightia_arborea_TLA91_dhs2_exon1-7	IXXXN	D. J. Middleton 240 (A)	ON793619
Wrightieae	*Wrightia lanceolata* Kerr	Wrightia_lanceolata_TL103_contig0_dhs_exon4	Wrightia_lanceolata_TL103_dhs_exon4			D. J. Middleton et al. 288 (A)	ON793620
Wrightieae	*Wrightia lanceolata* Kerr	Wrightia_lanceolata_TL103_contig1_dhs_exon1-7	Wrightia_lanceolata_TL103_dhs1_exon1-7	Wrightia_lanceolata_TL103_dhs1_exon1-7	IXXXN	D. J. Middleton et al. 288 (A)	ON793621
Wrightieae	*Wrightia lanceolata* Kerr	Wrightia_lanceolata_TL103_contig2_dhs_exon1-7	Wrightia_lanceolata_TL103_dhs2_exon1-7	Wrightia_lanceolata_TL103_dhs2_exon1-7	IXXXN	D. J. Middleton et al. 288 (A)	ON793622
Wrightieae	*Wrightia natalensis* Stapf	Wrightia_natalensis	Wrightia_natalensis	Wrightia_natalensis	IXXXN	1KP, www.onekp.com/public_data.html	scaffold-EDEQ-2004867-Wrightia_natalensis
Wrightieae	*Wrightia religiosa* (Teijsm. & Binn.) Benth. ex Kurz	Wrightia_religiosa_TL104_contig0_dhs_exon1-7	Wrightia_religiosa_TL104_dhs1_exon1-7	Wrightia_religiosa_TL104_dhs1_exon1-7	IXXXN	D. J. Middleton 2033 (A)	ON793623
Wrightieae	*Wrightia religiosa* (Teijsm. & Binn.) Benth. ex Kurz	Wrightia_religiosa_TL104_contig1_dhs_exon1-7	Wrightia_religiosa_TL104_dhs2_exon1-7	Wrightia_religiosa_TL104_dhs2_exon1-7	IXXXN	D. J. Middleton 2033 (A)	ON793624

Table S2: Descriptions of each of six alignments constructed, including how it was analyzed, its source alignment(s), modification of the source alignment, alignment length in base pairs (except for the Human_plant_dhshss alignment, in amino acids), number of *HSS*- and *DHS*-like sequences and possible pseudogenes in each alignment, and the figures with trees constructed from each alignment.

Alignment	**Analysis**	**source alignment(s)**	**modifications of source alignment**	**length (bp)**	**# *HSS*-like sequences**	**#*DHS*-like sequences**	**# pseudogene (non-terminal stop codon)**	**tree figure**
Initial alignment	Identification of *HSS*-like and *DHS*-like loci, contig concatenation	--	--	1872	148	233	56	Fig. S1
Full dataset	gene tree	Initial alignment	concatenation of partial contigs, exclusion of Sanger sequences from re-sequenced accessions.	1861	123	144	56	Fig. S2
Reduced dataset	Gene tree, ancestral state reconstruction, selection analysis	Full dataset	exclusion of pseudogenes and partial sequences; trimming of 5' (37 bp) and 3' (65 bp) ends	1162	104	132	0	Fig. 4, S3
Marsdenieae GARD	test for recombination	Reduced dataset	exclusion of non-Marsdenieae hss-like sequences, breaking of suspected recombinant sequences at identified breakpoint	1086	39	0	0	Fig. S4
Human_plant_dhshss	inference of functional sites	Reduced dataset; Livshultz et al. 2018; Wator et al.		411 (aa)				

Table S3: Primer sequences and annealing temperatures for mutagenesis of the *Parsonsia alboflavencens* HSS motif.

Mutation	Primer sequence (forward and reverse, respectively)	Tannealing
Single mutant V269I	5'- TTGTTCAGGATATTAGAAACATGGATGATGAGATTGTCCTTG-3' 5'-TTCTAATATCCTGAACAATATCAACGATTAAACTTGCAGGATTG-3'	53°C
Single mutant D273N	5'-GTTAGAAACATGAATGATGAGATTGTCCTTGCC-3' 5'-ATTCATGTTTCTAACATCCTGAACAATATCAACGATT-3'	53°C
Double mutant V269I and D273N	5'-ATTGTTCAGGATATTAGAAACATGAATGATGAGATTGTC-3' 5'-TTCTAATATCCTGAACAATATCAACGATTAAACTTGCAGGATTG-3'	52°C

Table S4: Percent (%) amino acid identity among sequences in the Full dataset alignment.

Table S5: Results of Shimodaira-Hasegawa (SH) tests comparing the fit of the full and reduced dataset topologies to the reduced dataset alignment as well as the monophyly (versus paraphyly) of the IXXXD *HSS*-like paralogs in Marsdenieae. Significant p values would indicate that the best fit topology is significantly more likely than the alternate (here, constrained) tree topology.

	Best Fit tree topology	Constrained tree topology	D(LH)	p value
1	Reduced dataset (Fig. 4)	Full dataset (Fig. S3)	23.93	>0.05
2	Reduced dataset (Fig. 4)	monophyletic Marsdenieae IXXXD *HSS*-like sequences	4.56	>0.05

Table S6: Reconstructions of the ancestral I269VXXXN273D amino acid motifs (joint and marginal results identical) on all branches of the full dataset topology tree (Fig. S3). The node numbers are in the labeled tree in Fig. S7, and the lettered branch labels in Figs. 3 and S3. The lower and upper end of the posterior probability of the marginal reconstruction are reported.

Node # (Fig. S7)	Branch Label (Figs. 3, S3)	Pos. 269 reconstruction	Pos. 269 posterior probability (marginal)	Pos. 273 reconstruction	Pos. 273 posterior probabilities (marginal)
root		I	0.901, 0.999	N	0.990, 0.999
1		I	0.844, 1.000	N	0.997, 1.000
2		I	1.000, 1.000	N	1.000, 1.000
3		I	1.000, 1.000	N	1.000, 1.000
4		I	1.000, 1.000	N	1.000, 1.000
5		I	1.000, 1.000	N	1.000, 1.000
6	A	I	0.749, 0.749	D	0.999, 0.999
7		I	0.748, 0.748	D	1.000, 1.000
8		I	0.981, 0.981	D	1.000, 1.000

9		I	0.981, 0.981	D	1.000, 1.000
10		I	0.959, 0.959	D	1.000, 1.000
11	B	V	0.998, 0.998	D	1.000, 1.000
12		V	1.000, 1.000	D	1.000, 1.000
13		V	1.000, 1.000	D	1.000, 1.000
14		V	1.000, 1.000	D	0.996, 1.000
15	C	V	1.000, 1.000	D	0.999, 1.000
16		V	0.999, 1.000	D	0.997, 1.000
17		V	1.000, 1.000	D	0.943, 1.000
18		V	1.000, 1.000	D	1.000, 1.000
19		V	1.000, 1.000	D	1.000, 1.000
20		V	1.000, 1.000	D	1.000, 1.000
21		V	1.000, 1.000	D	1.000, 1.000
26		V	1.000, 1.000	D	1.000, 1.000
30		V	0.997, 1.000	D	1.000, 1.000
31		V	0.999, 1.000	D	1.000, 1.000
32		V	1.000, 1.000	D	1.000, 1.000
36		V	0.963, 1.000	D	1.000, 1.000
37		V	0.998, 1.000	D	1.000, 1.000
41		V	1.000, 1.000	D	1.000, 1.000
42		V	1.000, 1.000	D	1.000, 1.000
43		V	1.000, 1.000	D	1.000, 1.000
44		V	1.000, 1.000	D	1.000, 1.000
47		V	1.000, 1.000	D	1.000, 1.000
52		V	1.000, 1.000	D	0.985, 1.000
53		V	1.000, 1.000	D	0.985, 1.000
57		V	1.000, 1.000	D	1.000, 1.000
58		V	1.000, 1.000	D	1.000, 1.000
59		V	1.000, 1.000	D	1.000, 1.000
60		V	1.000, 1.000	D	1.000, 1.000
64		V	1.000, 1.000	D	0.976, 1.000
68		V	1.000, 1.000	D	1.000, 1.000
71		V	1.000, 1.000	D	1.000, 1.000
72	E	V	1.000, 1.000	D	0.999, 1.000
73		V	0.990, 1.000	D	0.988, 1.000

74	D	V	1.000, 1.000	D	1.000, 1.000
75		V	1.000, 1.000	D	1.000, 1.000
76		V	1.000, 1.000	D	1.000, 1.000
80		V	1.000, 1.000	D	1.000, 1.000
84		V	1.000, 1.000	D	0.999, 1.000
85		V	1.000, 1.000	D	0.998, 1.000
86		V	1.000, 1.000	D	0.998, 1.000
87		V	1.000, 1.000	D	0.998, 1.000
88		V	1.000, 1.000	D	0.999, 1.000
89		V	1.000, 1.000	D	1.000, 1.000
90		V	1.000, 1.000	D	1.000, 1.000
96		V	1.000, 1.000	D	1.000, 1.000
97		V	1.000, 1.000	D	1.000, 1.000
101		V	1.000, 1.000	D	0.964, 1.000
104		V	1.000, 1.000	D	0.961, 1.000
108		I	0.999, 0.999	D	0.998, 1.000
111		I	0.975, 1.000	D	0.996, 1.000
112		I	1.000, 1.000	D	0.986, 1.000
113		I	1.000, 1.000	D	1.000, 1.000
114		I	1.000, 1.000	D	1.000, 1.000
120	L	I	0.999, 0.999	D	1.000, 1.000
121		I	0.999, 1.000	D	0.998, 1.000
122		I	1.000, 1.000	D	1.000, 1.000
123		I	1.000, 1.000	D	0.997, 0.997
124		I	1.000, 1.000	D	1.000, 1.000
125		I	1.000, 1.000	D	1.000, 1.000
126		I	1.000, 1.000	D	1.000, 1.000
127		I	0.999, 1.000	D	1.000, 1.000
128		I	1.000, 1.000	D	0.996, 0.996
129	J	I	1.000, 1.000	N	0.999, 0.999
130		I	1.000, 1.000	N	1.000, 1.000
131		I	1.000, 1.000	N	1.000, 1.000
132		I	1.000, 1.000	N	1.000, 1.000
133		I	1.000, 1.000	N	1.000, 1.000
134		I	1.000, 1.000	N	1.000, 1.000

135		I	1.000, 1.000	N	1.000, 1.000
136		I	1.000, 1.000	N	1.000, 1.000
137		I	1.000, 1.000	N	1.000, 1.000
143		I	1.000, 1.000	N	1.000, 1.000
144		I	1.000, 1.000	N	1.000, 1.000
145		I	1.000, 1.000	N	1.000, 1.000
150		I	1.000, 1.000	N	1.000, 1.000
153		I	1.000, 1.000	N	1.000, 1.000
156		I	1.000, 1.000	N	1.000, 1.000
157		I	1.000, 1.000	N	1.000, 1.000
158		I	1.000, 1.000	N	1.000, 1.000
159		I	0.997, 0.998	N	0.998, 0.998
163		I	1.000, 1.000	N	1.000, 1.000
166		I	1.000, 1.000	N	0.998, 0.998
169		I	1.000, 1.000	N	1.000, 1.000
170		I	1.000, 1.000	N	1.000, 1.000
176		I	1.000, 1.000	D	1.000, 1.000
179		I	1.000, 1.000	D	1.000, 1.000
180		I	1.000, 1.000	D	1.000, 1.000
181		I	1.000, 1.000	D	1.000, 1.000
184		I	1.000, 1.000	D	1.000, 1.000
187		I	1.000, 1.000	D	1.000, 1.000
189		I	1.000, 1.000	D	1.000, 1.000
192		I	1.000, 1.000	D	1.000, 1.000
194		I	1.000, 1.000	D	1.000, 1.000
195		I	1.000, 1.000	D	1.000, 1.000
199	I	I	1.000, 1.000	N	0.990, 0.991
200		I	1.000, 1.000	N	1.000, 1.000
201		I	1.000, 1.000	N	1.000, 1.000
202		I	1.000, 1.000	N	1.000, 1.000
210		I	1.000, 1.000	D	1.000, 1.000
211		I	1.000, 1.000	D	1.000, 1.000
215	F	V	0.951, 0.979	D	1.000, 1.000
216		V	0.967, 0.999	D	1.000, 1.000
217		V	0.997, 1.000	D	1.000, 1.000

218		V	1.000, 1.000	D	1.000, 1.000
219		V	1.000, 1.000	D	1.000, 1.000
226	B	I	0.684, 0.684	D	1.000, 1.000
228		I	0.686, 0.686	D	0.999, 1.000
229	K	I	1.000, 1.000	D	1.000, 1.000
233		I	1.000, 1.000	N	0.999, 1.000
234	H	I	1.000, 1.000	N	1.000, 1.000
235		I	1.000, 1.000	N	1.000, 1.000
236		I	1.000, 1.000	N	1.000, 1.000
237		I	1.000, 1.000	N	1.000, 1.000
238		I	1.000, 1.000	N	1.000, 1.000
239		I	1.000, 1.000	N	1.000, 1.000
240		I	1.000, 1.000	N	1.000, 1.000
241		I	1.000, 1.000	N	1.000, 1.000
242		I	1.000, 1.000	N	1.000, 1.000
243		I	1.000, 1.000	N	1.000, 1.000
244		I	1.000, 1.000	N	1.000, 1.000
245		I	1.000, 1.000	N	1.000, 1.000
246		I	1.000, 1.000	N	1.000, 1.000
247		I	1.000, 1.000	N	1.000, 1.000
248		I	1.000, 1.000	N	1.000, 1.000
249		I	1.000, 1.000	N	1.000, 1.000
253		I	1.000, 1.000	N	1.000, 1.000
254		I	1.000, 1.000	N	1.000, 1.000
260		I	1.000, 1.000	N	1.000, 1.000
261		I	1.000, 1.000	N	1.000, 1.000
265		I	1.000, 1.000	N	1.000, 1.000
266		I	1.000, 1.000	N	1.000, 1.000
267		I	1.000, 1.000	N	1.000, 1.000
268		I	1.000, 1.000	N	1.000, 1.000
269		I	1.000, 1.000	N	1.000, 1.000
276		I	1.000, 1.000	N	1.000, 1.000
278		I	1.000, 1.000	N	1.000, 1.000
281		I	1.000, 1.000	N	1.000, 1.000
282		I	1.000, 1.000	N	1.000, 1.000

283	I	1.000, 1.000	N	1.000, 1.000
284	I	1.000, 1.000	N	1.000, 1.000
290	I	1.000, 1.000	N	1.000, 1.000
293	I	1.000, 1.000	N	1.000, 1.000
294	I	1.000, 1.000	N	1.000, 1.000
295	I	1.000, 1.000	N	1.000, 1.000
296	I	1.000, 1.000	N	1.000, 1.000
297	I	1.000, 1.000	N	1.000, 1.000
298	I	1.000, 1.000	N	1.000, 1.000
299	I	1.000, 1.000	N	1.000, 1.000
300	I	1.000, 1.000	N	1.000, 1.000
301	I	1.000, 1.000	N	1.000, 1.000
302	I	1.000, 1.000	N	1.000, 1.000
303	I	1.000, 1.000	N	1.000, 1.000
311	I	1.000, 1.000	N	1.000, 1.000
312	I	1.000, 1.000	N	1.000, 1.000
315	I	1.000, 1.000	N	1.000, 1.000
318	I	1.000, 1.000	N	1.000, 1.000
319	I	1.000, 1.000	N	1.000, 1.000
320	I	1.000, 1.000	N	1.000, 1.000
321	I	1.000, 1.000	N	1.000, 1.000
326	I	1.000, 1.000	N	1.000, 1.000
330	I	1.000, 1.000	N	1.000, 1.000
331	I	1.000, 1.000	N	1.000, 1.000
335	I	1.000, 1.000	N	1.000, 1.000
336	I	1.000, 1.000	N	1.000, 1.000
337	I	1.000, 1.000	N	1.000, 1.000
341	I	0.976, 1.000	N	1.000, 1.000
344	I	1.000, 1.000	N	1.000, 1.000
345	I	1.000, 1.000	N	1.000, 1.000
346	I	1.000, 1.000	N	1.000, 1.000
347	I	0.981, 1.000	N	1.000, 1.000
348	I	0.999, 1.000	N	1.000, 1.000
349	I	1.000, 1.000	N	1.000, 1.000
350	I	1.000, 1.000	N	1.000, 1.000

351	I	1.000, 1.000	N	1.000, 1.000
352	I	1.000, 1.000	N	1.000, 1.000
353	I	1.000, 1.000	N	1.000, 1.000
354	I	1.000, 1.000	N	1.000, 1.000
355	I	1.000, 1.000	N	1.000, 1.000
356	I	1.000, 1.000	N	1.000, 1.000
361	I	1.000, 1.000	N	1.000, 1.000
362	I	1.000, 1.000	N	1.000, 1.000
363	I	1.000, 1.000	N	1.000, 1.000
368	I	1.000, 1.000	N	1.000, 1.000
369	I	1.000, 1.000	N	1.000, 1.000
373	I	1.000, 1.000	N	1.000, 1.000
374	I	1.000, 1.000	N	1.000, 1.000
375	I	1.000, 1.000	N	1.000, 1.000
379	I	1.000, 1.000	N	1.000, 1.000
382	I	1.000, 1.000	N	1.000, 1.000
383	I	1.000, 1.000	N	1.000, 1.000
384	I	1.000, 1.000	N	1.000, 1.000
387	I	1.000, 1.000	N	1.000, 1.000
390	I	1.000, 1.000	N	1.000, 1.000
391	I	1.000, 1.000	N	1.000, 1.000
395	I	1.000, 1.000	N	1.000, 1.000
396	I	1.000, 1.000	N	1.000, 1.000
397	I	1.000, 1.000	N	1.000, 1.000
398	I	1.000, 1.000	N	1.000, 1.000
403	I	1.000, 1.000	N	1.000, 1.000
404	I	1.000, 1.000	N	0.997, 1.000
410	I	1.000, 1.000	N	1.000, 1.000
411	I	1.000, 1.000	N	1.000, 1.000
415	I	1.000, 1.000	N	1.000, 1.000
416	I	1.000, 1.000	N	1.000, 1.000
417	I	1.000, 1.000	N	1.000, 1.000
418	I	1.000, 1.000	N	1.000, 1.000
419	I	1.000, 1.000	N	1.000, 1.000
422	I	1.000, 1.000	N	1.000, 1.000

429	I	1.000, 1.000	N	1.000, 1.000
430	I	1.000, 1.000	N	1.000, 1.000
431	I	1.000, 1.000	N	1.000, 1.000
432	I	1.000, 1.000	N	1.000, 1.000
433	I	1.000, 1.000	N	1.000, 1.000
435	I	1.000, 1.000	N	1.000, 1.000
438	I	1.000, 1.000	N	1.000, 1.000
441	I	1.000, 1.000	N	1.000, 1.000
445	I	0.992, 1.000	N	1.000, 1.000
446	I	0.995, 1.000	N	0.990, 1.000
450	I	1.000, 1.000	N	1.000, 1.000
453	I	1.000, 1.000	N	1.000, 1.000
454	I	1.000, 1.000	N	1.000, 1.000
458	I	0.999, 1.000	N	1.000, 1.000
459	M	0.999, 0.999	N	1.000, 1.000
460	M	1.000, 1.000	N	1.000, 1.000
465	I	1.000, 1.000	N	0.991, 1.000
466	I	1.000, 1.000	N	0.991, 1.000
467	I	1.000, 1.000	N	0.991, 1.000
468	I	1.000, 1.000	N	0.952, 1.000
469	I	1.000, 1.000	N	1.000, 1.000
476	I	1.000, 1.000	N	1.000, 1.000
477	I	1.000, 1.000	N	1.000, 1.000
478	I	1.000, 1.000	N	1.000, 1.000
482	I	1.000, 1.000	N	1.000, 1.000
485	I	1.000, 1.000	N	1.000, 1.000
486	I	1.000, 1.000	N	1.000, 1.000
487	I	1.000, 1.000	N	1.000, 1.000
488	I	1.000, 1.000	N	1.000, 1.000
489	I	1.000, 1.000	N	1.000, 1.000
490	I	1.000, 1.000	N	1.000, 1.000
491	I	1.000, 1.000	N	1.000, 1.000
492	I	1.000, 1.000	N	1.000, 1.000
493	I	1.000, 1.000	N	1.000, 1.000
494	I	1.000, 1.000	N	1.000, 1.000

495		I	1.000, 1.000	N	1.000, 1.000
496		I	1.000, 1.000	N	1.000, 1.000
497		I	1.000, 1.000	N	1.000, 1.000
504		I	1.000, 1.000	N	1.000, 1.000
505		I	1.000, 1.000	N	1.000, 1.000
509		I	1.000, 1.000	N	1.000, 1.000
512		I	1.000, 1.000	N	0.921, 1.000
516		I	1.000, 1.000	N	1.000, 1.000
520		I	1.000, 1.000	N	1.000, 1.000
521		I	1.000, 1.000	N	1.000, 1.000
522		I	1.000, 1.000	N	1.000, 1.000
526		I	1.000, 1.000	N	1.000, 1.000
529		I	1.000, 1.000	N	1.000, 1.000
530		I	1.000, 1.000	N	1.000, 1.000
533		I	1.000, 1.000	N	0.870, 1.000
534		I	1.000, 1.000	N	1.000, 1.000
538		I	1.000, 1.000	N	1.000, 1.000
539		I	1.000, 1.000	N	1.000, 1.000
540		I	1.000, 1.000	N	1.000, 1.000
541		I	1.000, 1.000	N	1.000, 1.000

Table S7. Reconstructions of the ancestral I269VXXXN273D amino acid motifs (joint and marginal results identical) on all branches of the reduced dataset topology tree (Fig. 4). The node numbers are in the labeled tree in Fig. S8, and the lettered branch labels in Figs. 3 and 4. The lower and upper end of the posterior probability of the marginal reconstruction are reported.

node #	Branch Label	Pos. 269 reconstruction	Pos. 269 posterior probability (marginal reconstruction)	Pos. 273 reconstruction	Pos. 273 posterior probabilities (marginal reconstruction)
root		I	0.940, 0.999	N	0.991, 0.999
1		I	0.843, 1.000	N	0.997, 1.000
2		I	1.000, 1.000	N	1.000, 1.000
3		I	1.000, 1.000	N	1.000, 1.000
4		I	1.000, 1.000	N	1.000, 1.000
5		I	1.000, 1.000	N	1.000, 1.000
6		I	1.000, 1.000	N	0.995, 0.999
7	A	I	0.977, 0.977	D	0.999, 0.999

8		I	0.998, 0.998	D	1.000, 1.000
9		I	0.998, 0.998	D	0.999, 1.000
10		I	0.968, 0.968	D	1.000, 1.000
11	B	V	0.997, 0.997	D	1.000, 1.000
12		V	1.000, 1.000	D	1.000, 1.000
13		V	1.000, 1.000	D	1.000, 1.000
14		V	1.000, 1.000	D	0.995, 1.000
15	C	V	1.000, 1.000	D	0.999, 1.000
16		V	0.999, 1.000	D	0.997, 1.000
17		V	1.000, 1.000	D	0.943, 1.000
18		V	1.000, 1.000	D	1.000, 1.000
19		V	1.000, 1.000	D	1.000, 1.000
20		V	1.000, 1.000	D	1.000, 1.000
21		V	1.000, 1.000	D	1.000, 1.000
26		V	1.000, 1.000	D	1.000, 1.000
30		V	0.997, 1.000	D	1.000, 1.000
31		V	0.999, 1.000	D	1.000, 1.000
32		V	1.000, 1.000	D	1.000, 1.000
36		V	0.963, 1.000	D	1.000, 1.000
37		V	0.998, 1.000	D	1.000, 1.000
41		V	1.000, 1.000	D	1.000, 1.000
42		V	1.000, 1.000	D	1.000, 1.000
43		V	1.000, 1.000	D	1.000, 1.000
44		V	1.000, 1.000	D	1.000, 1.000
47		V	1.000, 1.000	D	1.000, 1.000
52		V	1.000, 1.000	D	0.981, 1.000
53		V	1.000, 1.000	D	0.986, 1.000
57		V	1.000, 1.000	D	1.000, 1.000
58		V	1.000, 1.000	D	1.000, 1.000
59		V	1.000, 1.000	D	1.000, 1.000
60		V	1.000, 1.000	D	0.975, 1.000
64		V	1.000, 1.000	D	1.000, 1.000
68		V	1.000, 1.000	D	1.000, 1.000

71		V	1.000, 1.000	D	0.999, 1.000
72	E	V	1.000, 1.000	D	0.999, 1.000
73		V	1.000, 1.000	D	0.999, 1.000
74		V	1.000, 1.000	D	0.999, 1.000
75		V	1.000, 1.000	D	0.998, 1.000
76		V	1.000, 1.000	D	0.998, 1.000
77		V	1.000, 1.000	D	0.994, 1.000
78		V	1.000, 1.000	D	0.998, 1.000
79		V	1.000, 1.000	D	1.000, 1.000
80		V	1.000, 1.000	D	1.000, 1.000
86		V	1.000, 1.000	D	1.000, 1.000
87		V	1.000, 1.000	D	1.000, 1.000
91		V	1.000, 1.000	D	0.964, 1.000
94		V	1.000, 1.000	D	0.960, 1.000
98	D	V	1.000, 1.000	D	1.000, 1.000
99		V	1.000, 1.000	D	1.000, 1.000
100		V	1.000, 1.000	D	1.000, 1.000
104		V	1.000, 1.000	D	1.000, 1.000
108		I	0.999, 0.999	D	0.998, 1.000
111		I	1.000, 1.000	D	0.898, 1.000
112		I	0.999, 1.000	D	0.994, 1.000
113		I	1.000, 1.000	D	1.000, 1.000
114		I	1.000, 1.000	D	1.000, 1.000
120	L	I	1.000, 1.000	D	1.000, 1.000
121		I	0.999, 1.000	D	0.998, 1.000
122		I	1.000, 1.000	D	1.000, 1.000
123		I	1.000, 1.000	D	0.998, 0.998
124		I	1.000, 1.000	D	1.000, 1.000
125		I	1.000, 1.000	D	1.000, 1.000
126		I	1.000, 1.000	D	1.000, 1.000
127		I	1.000, 1.000	D	1.000, 1.000
128		I	1.000, 1.000	D	0.998, 0.998
129		I	1.000, 1.000	D	0.998, 0.998

130		I	1.000, 1.000	D	0.994, 0.994
131	J	I	1.000, 1.000	N	0.999, 0.999
132		I	1.000, 1.000	N	1.000, 1.000
133		I	1.000, 1.000	N	1.000, 1.000
134		I	1.000, 1.000	N	1.000, 1.000
135		I	1.000, 1.000	N	1.000, 1.000
136		I	1.000, 1.000	N	1.000, 1.000
137		I	1.000, 1.000	N	1.000, 1.000
138		I	1.000, 1.000	N	1.000, 1.000
139		I	1.000, 1.000	N	1.000, 1.000
145		I	1.000, 1.000	N	1.000, 1.000
146		I	1.000, 1.000	N	1.000, 1.000
147		I	1.000, 1.000	N	1.000, 1.000
152		I	1.000, 1.000	N	1.000, 1.000
155		I	1.000, 1.000	N	1.000, 1.000
158		I	1.000, 1.000	N	1.000, 1.000
159		I	1.000, 1.000	N	1.000, 1.000
160		I	1.000, 1.000	N	1.000, 1.000
161		I	0.997, 0.998	N	0.998, 0.998
165		I	1.000, 1.000	N	1.000, 1.000
168		I	1.000, 1.000	N	0.998, 0.998
171		I	1.000, 1.000	N	1.000, 1.000
172		I	1.000, 1.000	N	1.000, 1.000
179		I	1.000, 1.000	D	1.000, 1.000
182		I	1.000, 1.000	D	1.000, 1.000
183		I	1.000, 1.000	D	1.000, 1.000
184		I	1.000, 1.000	D	1.000, 1.000
187		I	1.000, 1.000	D	1.000, 1.000
190		I	1.000, 1.000	D	1.000, 1.000
193		I	1.000, 1.000	D	1.000, 1.000
194		I	1.000, 1.000	D	1.000, 1.000
199	I	I	1.000, 1.000	N	0.990, 0.991
200		I	1.000, 1.000	N	1.000, 1.000

201		I	1.000, 1.000	N	1.000, 1.000
202		I	1.000, 1.000	N	1.000, 1.000
210		I	1.000, 1.000	D	1.000, 1.000
211		I	1.000, 1.000	D	1.000, 1.000
215	G	V	0.934, 0.934	D	1.000, 1.000
216	F	V	0.964, 0.998	D	1.000, 1.000
217		V	0.962, 1.000	D	1.000, 1.000
218		V	0.997, 1.000	D	1.000, 1.000
219		V	1.000, 1.000	D	1.000, 1.000
220		V	1.000, 1.000	D	1.000, 1.000
227		V	0.940, 0.940	D	1.000, 1.000
228		V	0.914, 0.915	D	0.999, 1.000
229	K	I	1.000, 1.000	D	1.000, 1.000
234		I	1.000, 1.000	N	0.893, 1.000
235		I	1.000, 1.000	N	0.889, 1.000
236		I	1.000, 1.000	N	0.889, 1.000
237		I	1.000, 1.000	N	0.998, 1.000
240		I	1.000, 1.000	N	0.889, 1.000
245	H	I	1.000, 1.000	N	1.000, 1.000
246		I	1.000, 1.000	N	1.000, 1.000
247		I	1.000, 1.000	N	1.000, 1.000
248		I	1.000, 1.000	N	1.000, 1.000
249		I	1.000, 1.000	N	1.000, 1.000
250		I	1.000, 1.000	N	1.000, 1.000
251		I	1.000, 1.000	N	1.000, 1.000
252		I	1.000, 1.000	N	1.000, 1.000
253		I	0.982, 1.000	N	1.000, 1.000
254		I	0.999, 1.000	N	1.000, 1.000
255		I	1.000, 1.000	N	1.000, 1.000
256		I	1.000, 1.000	N	1.000, 1.000
257		I	1.000, 1.000	N	1.000, 1.000
258		I	1.000, 1.000	N	1.000, 1.000
259		I	1.000, 1.000	N	1.000, 1.000

260	I	1.000, 1.000	N	1.000, 1.000
261	I	1.000, 1.000	N	1.000, 1.000
262	I	1.000, 1.000	N	1.000, 1.000
267	I	1.000, 1.000	N	1.000, 1.000
268	I	1.000, 1.000	N	1.000, 1.000
269	I	1.000, 1.000	N	1.000, 1.000
274	I	1.000, 1.000	N	1.000, 1.000
275	I	1.000, 1.000	N	1.000, 1.000
279	I	1.000, 1.000	N	1.000, 1.000
280	I	1.000, 1.000	N	1.000, 1.000
281	I	1.000, 1.000	N	1.000, 1.000
282	I	1.000, 1.000	N	1.000, 1.000
288	I	1.000, 1.000	N	1.000, 1.000
289	I	1.000, 1.000	N	1.000, 1.000
290	I	1.000, 1.000	N	1.000, 1.000
293	I	1.000, 1.000	N	1.000, 1.000
296	I	1.000, 1.000	N	1.000, 1.000
297	I	1.000, 1.000	N	1.000, 1.000
301	I	1.000, 1.000	N	1.000, 1.000
302	I	1.000, 1.000	N	1.000, 1.000
303	I	1.000, 1.000	N	1.000, 1.000
304	I	1.000, 1.000	N	1.000, 1.000
309	I	1.000, 1.000	N	1.000, 1.000
310	I	1.000, 1.000	N	0.997, 1.000
316	I	1.000, 1.000	N	1.000, 1.000
317	I	1.000, 1.000	N	1.000, 1.000
321	I	1.000, 1.000	N	1.000, 1.000
322	I	1.000, 1.000	N	1.000, 1.000
323	I	1.000, 1.000	N	1.000, 1.000
324	I	1.000, 1.000	N	1.000, 1.000
325	I	1.000, 1.000	N	1.000, 1.000
328	I	1.000, 1.000	N	1.000, 1.000
334	I	1.000, 1.000	N	1.000, 1.000

335	I	1.000, 1.000	N	1.000, 1.000
336	I	1.000, 1.000	N	1.000, 1.000
337	I	1.000, 1.000	N	1.000, 1.000
338	I	1.000, 1.000	N	1.000, 1.000
339	I	1.000, 1.000	N	1.000, 1.000
340	I	1.000, 1.000	N	1.000, 1.000
341	I	1.000, 1.000	N	1.000, 1.000
342	I	1.000, 1.000	N	1.000, 1.000
343	I	1.000, 1.000	N	1.000, 1.000
344	I	1.000, 1.000	N	1.000, 1.000
352	I	1.000, 1.000	N	1.000, 1.000
353	I	1.000, 1.000	N	1.000, 1.000
356	I	1.000, 1.000	N	1.000, 1.000
359	I	1.000, 1.000	N	1.000, 1.000
360	I	1.000, 1.000	N	1.000, 1.000
361	I	1.000, 1.000	N	1.000, 1.000
362	I	1.000, 1.000	N	1.000, 1.000
367	I	1.000, 1.000	N	1.000, 1.000
371	I	1.000, 1.000	N	1.000, 1.000
372	I	1.000, 1.000	N	1.000, 1.000
376	I	1.000, 1.000	N	1.000, 1.000
377	I	1.000, 1.000	N	1.000, 1.000
378	I	1.000, 1.000	N	1.000, 1.000
382	I	0.977, 1.000	N	1.000, 1.000
385	I	1.000, 1.000	N	1.000, 1.000
386	I	1.000, 1.000	N	1.000, 1.000
387	I	1.000, 1.000	N	1.000, 1.000
388	I	1.000, 1.000	N	1.000, 1.000
389	I	1.000, 1.000	N	1.000, 1.000
390	I	1.000, 1.000	N	1.000, 1.000
391	I	1.000, 1.000	N	1.000, 1.000
392	I	1.000, 1.000	N	1.000, 1.000
393	I	1.000, 1.000	N	1.000, 1.000

397	I	1.000, 1.000	N	1.000, 1.000
398	I	1.000, 1.000	N	1.000, 1.000
404	I	1.000, 1.000	N	1.000, 1.000
405	I	1.000, 1.000	N	1.000, 1.000
409	I	1.000, 1.000	N	1.000, 1.000
410	I	1.000, 1.000	N	1.000, 1.000
411	I	1.000, 1.000	N	1.000, 1.000
412	I	1.000, 1.000	N	1.000, 1.000
413	I	1.000, 1.000	N	1.000, 1.000
421	I	1.000, 1.000	N	1.000, 1.000
422	I	1.000, 1.000	N	1.000, 1.000
423	I	1.000, 1.000	N	1.000, 1.000
424	I	1.000, 1.000	N	1.000, 1.000
428	I	1.000, 1.000	N	1.000, 1.000
431	I	1.000, 1.000	N	1.000, 1.000
432	I	1.000, 1.000	N	1.000, 1.000
433	I	1.000, 1.000	N	1.000, 1.000
439	I	1.000, 1.000	N	1.000, 1.000
440	I	1.000, 1.000	N	1.000, 1.000
441	I	1.000, 1.000	N	1.000, 1.000
442	I	1.000, 1.000	N	1.000, 1.000
443	I	1.000, 1.000	N	1.000, 1.000
444	I	1.000, 1.000	N	1.000, 1.000
445	I	1.000, 1.000	N	1.000, 1.000
451	I	1.000, 1.000	N	1.000, 1.000
455	I	0.995, 1.000	N	0.999, 1.000
456	I	0.966, 1.000	N	1.000, 1.000
460	I	1.000, 1.000	N	1.000, 1.000
463	I	1.000, 1.000	N	1.000, 1.000
464	I	0.999, 0.999	N	1.000, 1.000
465	M	0.999, 0.999	N	1.000, 1.000
466	M	1.000, 1.000	N	1.000, 1.000
471	I	1.000, 1.000	N	1.000, 1.000

472	I	1.000, 1.000	N	1.000, 1.000
476	I	1.000, 1.000	N	1.000, 1.000
477	I	1.000, 1.000	N	1.000, 1.000
478	I	1.000, 1.000	N	1.000, 1.000
482	I	1.000, 1.000	N	1.000, 1.000
485	I	1.000, 1.000	N	1.000, 1.000
486	I	1.000, 1.000	N	1.000, 1.000
487	I	1.000, 1.000	N	1.000, 1.000
488	I	1.000, 1.000	N	1.000, 1.000
489	I	1.000, 1.000	N	1.000, 1.000
490	I	1.000, 1.000	N	1.000, 1.000
491	I	1.000, 1.000	N	1.000, 1.000
492	I	1.000, 1.000	N	1.000, 1.000
493	I	1.000, 1.000	N	1.000, 1.000
494	I	1.000, 1.000	N	1.000, 1.000
495	I	1.000, 1.000	N	1.000, 1.000
496	I	1.000, 1.000	N	1.000, 1.000
497	I	1.000, 1.000	N	1.000, 1.000
504	I	1.000, 1.000	N	1.000, 1.000
505	I	1.000, 1.000	N	1.000, 1.000
509	I	1.000, 1.000	N	1.000, 1.000
512	I	1.000, 1.000	N	0.921, 1.000
516	I	1.000, 1.000	N	1.000, 1.000
520	I	1.000, 1.000	N	1.000, 1.000
521	I	1.000, 1.000	N	1.000, 1.000
522	I	1.000, 1.000	N	1.000, 1.000
526	I	1.000, 1.000	N	1.000, 1.000
529	I	1.000, 1.000	N	1.000, 1.000
530	I	1.000, 1.000	N	0.998, 1.000
531	I	1.000, 1.000	N	0.867, 1.000
532	I	1.000, 1.000	N	1.000, 1.000
538	I	1.000, 1.000	N	1.000, 1.000
539	I	1.000, 1.000	N	1.000, 1.000

540	I	1.000, 1.000	N	1.000, 1.000
541	I	1.000, 1.000	N	1.000, 1.000

Table S8: Model selection from aBSREL, using AICc to infer the best model and optimal number of ω classes (up to three) for each tree topology. The full adaptive model was selected for both topologies. Also reported are the best fit ω summaries for both tree topologies.

	Model fits			
Tree topology	**Model**	**AICc**	**LogL**	**Parameters**
Full dataset	Nucleotide GTR	71309.49	-35098.68	555
	Baseline MG94xREV	66967.94	-32363.16	1108
	Full adaptive model	66218.33	-31881.83	1212
Reduced dataset	Nucleotide GTR	71291.44	-35089.66	555
	Baseline MG94xREV	66927.017	-32342.78	1108
	Full adaptive model	66180.47	-31862.90	1212

	ω summary			
Tree topology	**ω rate classes**	**# of branches**	**% of branches**	**# under selection**
Full dataset	1	495	90.5	0
	2	52	9.5	1
Reduced dataset	1	495	90.5	0
	2	52	9.5	0

Table S9: aBSREL ω rates and distributions over sites and RELAX general descriptive k for full dataset tree topology (Fig. S3). Node numbers are displayed in Fig. S7.

Node # or sequence name (Fig. S7)	**Branch label (Fig. 3, S3)**	**k (RELAX)**	**ω1 rate distribution over sites (% sites)**	**ω2 rate distribution over sites (% sites)**
Echites_umbellatus_PA86_hss_exon1-7		0.796223767	ω1 = 1.00 (100%)	
Echites_umbellatus_PA74_hss_exon1-7		2.70013591	ω1 = 0.00 (100%)	
Echites_umbellatus_PA76_hss2_exon1-7		0	ω1 = 10000000000 (100%)	
Echites_umbellatus_PA76_hss1_exon1-7		0.828127102	ω1 = 1.00 (100%)	
Echites_umbellatus_1		0	ω1 = 10000000000 (100%)	
Echites_umbellatus_2		0.656440499	ω1 = 0.0955 (100%)	
Echites_turriger_TLA137_hss_exon1-7		1.076789782	ω1 = 0.0506 (100%)	
Prestonia_coalita_2		0.370327313	ω1 = 0.150 (100%)	
Prestonia_coalita_1		0.300018657	ω1 = 0.170 (100%)	
Prestonia_portobellensis_51_hss_exon1-7		1.250371821	ω1 = 0.0403 (100%)	
Parsonsia_eucalyptophylla_2		0.101653342	ω1 = 0.340 (100%)	
Parsonsia_eucalyptophylla_1		2.708579123	ω1 = 0.00 (100%)	

Parsonsia_alboflavescens_PA90_hss_exon1-7	2.691076981	ω1 = 0.00 (100%)	
Rhodocalyx_rotundifolius_PA109b_hss_exon1-7	8.67274149	ω1 = 0.0499 (100%)	
Rhodocalyx_riedelii_TL205_hss_exon1-7	0.127937998	ω1 = 0.291 (100%)	
Macropharynx_spectabilis_TL210_hss_exon1-7	1.308045153	ω1 = 0.0391 (100%)	
Macropharynx_peltata_49_hss_exon1-7	0	ω1 = 1.48 (100%)	
Temnadenia_odorifera_TL213_hss_exon1-7	0.608327486	ω1 = 0.0788 (100%)	
Laubertia_boissieri_TL220_hss_exon1-7	0.974861964	ω1 = 0.0472 (99%)	ω2 = 21.3 (0.81%)
Odontadenia_perrottetii_PA60B_hss_exon1-7	13.25293137	ω1 = 0.0341 (99%)	ω2 = 21.6 (0.58%)
Stipecoma_peltigera_TLA134_hss_exon1-6	0.411724527	ω1 = 0.103 (100%)	
Secondatia_densiflora_PA62B_hss_exon1-7	0.910884275	ω1 = 0.0503 (100%)	
Mesechites_trifidus_45_hss_exon1-7	0.474235524	ω1 = 0.0967 (100%)	
Allomarkgrafia_brenesiana_PA98_hss_exon1-7	2.711872506	ω1 = 0.00 (100%)	
Forsteronia_guyanensis_TLA39_hss_exon1-7	0.746276126	ω1 = 0.0857 (100%)	
Mandevilla_longiflora	0.28330643	ω1 = 0.168 (100%)	
Mandevilla_boliviensis_TLA76_hss_exon1-7	0.188341025	ω1 = 0.212 (100%)	
Pinochia_corymbosa_TL96_hss_exon1-7	0.185008052	ω1 = 0.191 (100%)	
Elytropus_chilensis_TL208_hss_exon1-6	0.792167002	ω1 = 1.00 (100%)	
Elytropus_chilensis_TLA257_hss_exon1-7	0.792167002	ω1 = 1.00 (100%)	
Anodendron_oblongifolium_PA100_hss2_exon3-7	0.792626139	ω1 = 1.00 (100%)	

Anodendron_affine_PA79_hss1_exon1-7	0.788922399	ω1 = 1.00 (100%)
Anodendron_affine_PA79_hss2_exon1-7	0.34971664	ω1 = 0.143 (100%)
Anodendron_oblongifolium_PA100_hss1_exon1-6	0	ω1 = 10000000000 (100%)
Anodendron_parviflorum_TLA135_hss_exon1-7	0.214432918	ω1 = 0.203 (100%)
Papuechites_aambe_TLA130_hss_exon1-7	0.329651632	ω1 = 0.160 (100%)
Aganosma_schlechteriana_TLA24_hss_exon1-7	0.220807419	ω1 = 0.203 (100%)
Epigynum_griffithianum_TLA195_hss_exon1-6	2.779271698	ω1 = 0.00 (100%)
Epigynum_cochinchinensis_TLA62_hss_exon1-6	14.26574483	ω1 = 0.117 (100%)
Ichnocarpus_frutescens_TL621_hss_exon1-6	0.18265822	ω1 = 0.174 (100%)
Amalocalyx_microlobus_TLA272_hss_exon1-6	0.603932151	ω1 = 0.102 (100%)
Trachelospermum_asiaticum_PA66B_hss_exon1-7	0.096905156	ω1 = 0.355 (100%)
Trachelospermum_axillare_TLA84_hss_exon2-7	2.701408646	ω1 = 0.00 (100%)
Chonemorpha_fragrans_TLA37_hss_exon1-7	0.160539413	ω1 = 0.235 (100%)
Eucorymbia_alba_PA104_hss_exon1-6	0.195653274	ω1 = 0.210 (100%)
Amphineurion_marginatum_55_hss_exon1-7	0.856694879	ω1 = 0.0515 (100%)
Vallaris_solanacea_TLA90_hss_exon1-7	0.433393636	ω1 = 0.134 (100%)
Beaumontia_murtonii_53_hss_exon1-6	0.152045202	ω1 = 0.256 (100%)

Streptoechites_chinensis_54_hss_exon1-6	0.195251786	ω1 = 0.201 (100%)	
Rhabdadenia_madida_TL206_hss_exon1-7	0.394289571	ω1 = 0.141 (100%)	
Rhabdadenia_biflora_1	0.244049605	ω1 = 0.132 (98%)	ω2 = 5000 (1.6%)
Gymnanthera_oblonga_TLP274_hss_exon2-6	0.095402473	ω1 = 0.0900 (100%)	
Finlaysonia_insularum_TL63_hss_exon1-6	35.87119205	ω1 = 0.0749 (100%)	
Finlaysonia_lanuginosa_TLP286_hss_exon1-7	0.24965908	ω1 = 0.102 (100%)	
Petopentia_natalensis_TLP78_hss_exon1-7	0.427011949	ω1 = 0.126 (100%)	
Raphionacme_flanaganii_P79_hss_exon1-6	0.226739872	ω1 = 0.259 (100%)	
Ruehssia_laxiflora_TLAsc225_hss_exon1-6	0.112159485	ω1 = 0.284 (100%)	
Ruehssia_macrophylla_TL226_hss2_exon1-7	0.150176521	ω1 = 0.254 (100%)	
Ruehssia_guaranitica_TLAsc227_hss_exon1-7	0.097878628	ω1 = 0.349 (100%)	
Ruehssia_caatingae_PA111_hss2_exon1-6	0.401942585	ω1 = 0.141 (100%)	
Gymnema_sylvestre_TL615_hss_exon1-6	0.275029388	ω1 = 0.174 (100%)	
Gongronema_angolense_TL383_hss2_exon1-6	0.095081178	ω1 = 0.361 (100%)	
Gongronema_latifolium_TL381_hss2_exon1-6	0.392203416	ω1 = 0.144 (100%)	
Marsdenia_truncata_TL397_hss1_exon1-7	0.490073751	ω1 = 0.122 (100%)	
Gongronema_taylorii_TL377_hss_exon1-6	0.689705949	ω1 = 0.0896 (100%)	
Gongronema_angolense_TL383_hss1_exon1-6	50	ω1 = 0.00 (99%)	ω2 = 5000 (0.64%)
Stigmatorhynchus_umbellifer_TL394_hss1_exon1-6	2.700579525	ω1 = 0.00 (100%)	

Jasminanthes_maingayi_PA85_hss2_exon1-6	0.268466246	ω1 = 0.176 (100%)	
Marsdenia_longipedicellata_TL262_hss1_exon1-7	0.68014885	ω1 = 0.0634 (100%)	
Dischidia_albida_PA67bB_hss_exon1-6	0	ω1 = 1.03 (100%)	
Dischidia_cleistantha_TLAsc401_hss_exon1-7	0.009393782	ω1 = 0.617 (99%)	ω2 = 173 (0.50%)
Hoya_yuennanensis_TL238_hss_exon1-6	0.034282251	ω1 = 0.713 (100%)	
Marsdenia_coronata_TLAsc118_hss_exon1-7	0.024408718	ω1 = 0.725 (100%)	
Marsdenia_flavescens_TLAsc126_hss1_exon1-7	0.02711969	ω1 = 0.713 (100%)	
Marsdenia_glabra_TL99_hss_exon1-7	0.145318505	ω1 = 0.337 (99%)	ω2 = 10000000000 (0.65%)
Marsdenia_tinctoria_TL376_hss_exon1-7	0.079372932	ω1 = 0.353 (100%)	
Campestigma_purpureum_TL94_hss2_exon1-6	0.239993367	ω1 = 0.189 (100%)	
Sarcolobus_cambogensis_TL628_hss2_exon1-6	0.603681072	ω1 = 0.101 (100%)	
Lygisma_angustifolia_TL98_hss_exon1-7	0.364868665	ω1 = 0.108 (100%)	
Jasminanthes_maingayi_PA85_hss3_exon1-6	0.080121921	ω1 = 0.354 (100%)	
Anisopus_efulensis_TL386_hss_exon1-7	0.007402977	ω1 = 0.757 (100%)	
Ruehssia_caatingae_PA111_hss1_exon1-6	28.76981914	ω1 = 0.00 (98%)	ω2 = 105 (1.7%)
Ruehssia_macrophylla_TL226_hss1_exon1-6	0	ω1 = 0.860 (100%)	
Stigmatorhynchus_umbellifer_TL394_hss2_exon1-6	0.807656536	ω1 = 1.00 (100%)	
Gongronema_angolense_TL383_hss4_exon1-6	0.096417483	ω1 = 1.00 (100%)	
Sarcolobus_cambogensis_TL628_hss1_exon1-7	0.206721106	ω1 = 0.238 (100%)	

Campestigma_purpureum_TL94_hss1_exon1-6	0.113687271	ω1 = 0.215 (100%)	
Marsdenia_truncata_TL397_hss2_exon1-6	0.11205212	ω1 = 0.313 (100%)	
Gongronema_angolense_TL383_hss5_exon2-6	2.720448526	ω1 = 0.00 (100%)	
Gongronema_angolense_TL383_hss3_exon2-6	0.109838093	ω1 = 0.320 (100%)	
Marsdenia_flavescens_TLAsc126_hss2_exon2-6	1.121163131	ω1 = 0.0492 (100%)	
Marsdenia_longipedicellata_TL262_hss2_exon1-6	0.114384527	ω1 = 0.228 (100%)	
Gongronema_latifolium_TL381_hss1_exon1-7	22.18972259	ω1 = 0.00 (98%)	ω2 = 30.5 (2.5%)
Jasminanthes_maingayi_PA85_hss1_exon1-7	0.050673177	ω1 = 0.446 (99%)	ω2 = 336 (0.87%)
Tassadia_propinqua_33_hss_exon3-7	0.12675591	ω1 = 0.288 (100%)	
Tassadia_berteroanum_PA34_hss_exon1-7	1.346262405	ω1 = 0.0364 (100%)	
Peplonia_adnata_PA113_hss_exon1-7	0.122544575	ω1 = 0.00 (87%)	ω2 = 3.28 (13%)
Diplolepis_geminiflora_36_hss_exon1-7	0	ω1 = 1.11 (100%)	
Calotropis_gigantea_hss	0.655874536	ω1 = 0.104 (100%)	
Fockea_edulis_TL184_hss_exon1-7	0.602217032	ω1 = 0.103 (100%)	
Toxocarpus_villosus_TLS261_hss_exon1-7	0.49734864	ω1 = 0.118 (100%)	
Baissea_viridiflora_TL622_hss_exon1-6	0.190067375	ω1 = 0.144 (100%)	
Baissea_myrtifolia_TL638_hss_exon1-7	0.146829003	ω1 = 0.213 (100%)	
Oncinotis_glabrata_TL417_hss_exon1-7	0.420905361	ω1 = 0.0892 (100%)	
Malouetiella_mildbraedii_TLA246_hss_exon1-7	0.702247342	ω1 = 0.0888 (100%)	

Kibatalia_macrophylla_TLA18_hss_exon1-7	0.749918872	ω1 = 0.0825 (100%)	
Funtumia_elastica_TLA144_hss_exon1-7	12.3519515	ω1 = 0.00 (100%)	ω2 = 30.3 (0.37%)
Holarrhena_curtisii_TLA17_hss_exon1-7	0.09859379	ω1 = 0.329 (100%)	
Mascarenhasia_arborescens_TLA143_hss_exon1-7	0.442504448	ω1 = 0.135 (100%)	
Galactophora_schomburgkiana_PA87_hss_exon1-7	0.273205678	ω1 = 0.0747 (95%)	ω2 = 3.80 (5.0%)
Strophanthus_boivinii_TLA133_hss_exon1-7	0.25332579	ω1 = 0.0835 (97%)	ω2 = 16.2 (2.6%)
Alafia_thouarsii_TL216_hss_exon1-7	26.38982323	ω1 = 0.00 (99%)	ω2 = 209 (0.66%)
Alafia_barteri_52_hss_exon1-7	0.673468514	ω1 = 0.0940 (100%)	
Isonema_smeathmannii_TLA142_hss_exon1-6	0.218600744	ω1 = 0.0954 (99%)	ω2 = 183 (1.5%)
Echites_umbellatus_PA76_dhs2_exon1-7	2.715712433	ω1 = 0.00 (100%)	
Echites_umbellatus_PA76_dhs1_exon1-7	0.788430026	ω1 = 1.00 (100%)	
Echites_umbellatus_PA86_dhs_exon1-7	0.100708095	ω1 = 0.350 (100%)	
Echites_umbellatus_3	0.784091198	ω1 = 1.00 (100%)	
Echites_umbellatus_4	50	ω1 = 10000000000 (100%)	
Echites_umbellatus_PA74_dhs_exon1-7	0.784091198	ω1 = 1.00 (100%)	
Echites_woodsonianus_2	16.83442394	ω1 = 0.104 (99%)	ω2 = 10000000000 (0.77%)
Echites_turriger_TLA137_dhs_exon1-7	0.283309851	ω1 = 0.170 (100%)	
Prestonia_portobellensis_51_dhs_exon1-7	0.823874586	ω1 = 0.0855 (100%)	
Prestonia_coalita_3	0.103959797	ω1 = 0.326 (100%)	
Parsonsia_alboflavescens_PA90_dhs_exon1-7	48.55876297	ω1 = 0.00 (100%)	
Macropharynx_spectabilis_TL210_dhs_exon1-7	19.4091351	ω1 = 0.00 (99%)	ω2 = 26.8 (1.3%)

Macropharynx_peltata_49_dhs_exon1-7	2.69970798	ω1 = 0.00 (100%)	
Rhodocalyx_rotundifolius_PA109b_dhs_exon1-7	0.424060421	ω1 = 0.102 (100%)	
Rhodocalyx_riedelii_TL205_dhs_exon1-7	0.170874199	ω1 = 0.178 (100%)	
Temnadenia_odorifera_TL213_dhs_exon1-7	0.255212889	ω1 = 0.184 (100%)	
Laubertia_boissieri_TL220_dhs_exon1-7	0.472200659	ω1 = 0.0960 (100%)	
Secondatia_densiflora_PA62B_dhs_exon1-7	0.713529542	ω1 = 0.0684 (100%)	
Odontadenia_perrottetii_PA60B_dhs_exon1-7	15.72232602	ω1 = 0.00 (99%)	ω2 = 14.2 (1.2%)
Stipecoma_peltigera_TLA134_dhs_exon1-7	0.595929879	ω1 = 0.102 (100%)	
Allomarkgrafia_brenesiana_PA98_dhs_exon1-7	0.475802512	ω1 = 0.0956 (100%)	
Mesechites_trifidus_45_dhs_exon1-7	0.0838613	ω1 = 0.394 (100%)	
Mandevilla_boliviensis_TLA76_dhs_exon1-7	0.305358996	ω1 = 0.170 (100%)	
Forsteronia_guyanensis_TLA39_dhs_exon1-6	0.388022915	ω1 = 0.145 (100%)	
Pinochia_corymbosa_TL96_dhs_exon1-7	0.410243286	ω1 = 0.0984 (100%)	
Elytropus_chilensis_TLA257_dhs_exon1-7	0.781957662	ω1 = 1.00 (100%)	
Elytropus_chilensis_TL208_dhs_exon1-7	2.700019743	ω1 = 0.00 (100%)	
Aganosma_schlechteriana_TLA24_dhs_exon1-7	0.107336412	ω1 = 0.399 (100%)	
Epigynum_auritum	44.60835261	ω1 = 0.00 (98%)	ω2 = 1690 (2.0%)
Epigynum_cochinchinensis_TLA62_dhs_exon1-7	2.69903187	ω1 = 0.00 (100%)	
Ichnocarpus_frutescens_TL621_dhs_exon1-7	0.282808162	ω1 = 0.177 (100%)	

Epigynum_griffithianum_TLA195_dhs_exon1-7	0.864351658	ω1 = 0.0700 (100%)
Pottsia_laxiflora	0.426405822	ω1 = 0.135 (100%)
Chonemorpha_fragrans_TLA37_dhs_exon1-7	17.34356765	ω1 = 0.0914 (100%)
Trachelospermum_asiaticum_PA66B_dhs_exon1-7	1.241245387	ω1 = 0.0436 (100%)
Trachelospermum_axillare_TLA84_dhs_exon1-7	0.090789346	ω1 = 0.377 (100%)
Amalocalyx_microlobus_TLA272_dhs_exon1-7	0.781957662	ω1 = 1.00 (100%)
Amalocalyx_microlobus	2.709061973	ω1 = 0.00 (100%)
Apocynum_pictum_PA84_dhs_exon1-7	2.735992326	ω1 = 0.00 (100%)
Apocynum_venetum_PA82_dhs_exon1-7	0.781957662	ω1 = 1.00 (100%)
Apocynum_venetum_PA80_dhs_exon1-7	0	ω1 = 10000000000 (100%)
Apocynum_cannabinum_44_dhs_exon1-7	0	ω1 = 10000000000 (100%)
Apocynum_androsaemifolium	0.534065778	ω1 = 0.117 (100%)
Apocynum_androsaemifolium_TLA35_dhs_exon1-7	2.700061694	ω1 = 0.00 (100%)
Streptoechites_chinensis_54_dhs_exon1-7	0.398630591	ω1 = 0.108 (100%)
Eucorymbia_alba_PA104_dhs_exon1-7	0.554973889	ω1 = 0.110 (100%)
Amphineurion_marginatum_55_dhs_exon1-7	0.428891034	ω1 = 0.136 (100%)
Papuechites_aambe_TLA130_dhs_exon1-7	0.287529283	ω1 = 0.132 (100%)
Anodendron_oblongifolium_PA100_dhs_exon1-7	2.702998892	ω1 = 0.00 (100%)
Anodendron_affine_PA79_dhs_exon1-7	0.287684484	ω1 = 0.0871 (100%)
Anodendron_parviflorum_TLA135_dhs_exon1-7	0.385966099	ω1 = 0.146 (100%)
Vallaris_solanacea_TLA90_dhs_exon1-7	1.131126481	ω1 = 0.0493 (100%)

Beaumontia_murtonii_53_dhs_exon1-7	0.88339202	ω1 = 0.0689 (100%)	
Marsdenia_truncata_TL397_dhs_exon1-7	0.008907652	ω1 = 0.888 (100%)	
Gongronema_latifolium_TL381_dhs_exon1-7	0.026964686	ω1 = 0.709 (100%)	
Marsdenia_longipedicellata_TL262_dhs_exon1-7	2.721312489	ω1 = 0.00 (100%)	
Gongronema_angolense_TL383_dhs_exon1-7	0.880636494	ω1 = 1.00 (100%)	
Ruehssia_caatingae_PA111_dhs_exon1-7	0.519582066	ω1 = 0.118 (100%)	
Ruehssia_guaranitica_TLAsc227_dhs_exon1-7	34.22629598	ω1 = 0.00 (100%)	ω2 = 291 (0.31%)
Ruehssia_macrophylla_TL226_dhs_exon1-7	0.144405043	ω1 = 0.267 (100%)	
Ruehssia_laxiflora_TLAsc225_dhs_exon1-7	0.09696701	ω1 = 0.355 (100%)	
Jasminanthes_maingayi_PA85_dhs_exon1-7	0.072832882	ω1 = 0.357 (100%)	
Gymnema_sylvestre_TL615_dhs_exon1-7	0.172425308	ω1 = 0.234 (100%)	
Stigmatorhynchus_umbellifer_TL394_dhs_exon1-7	0.367829453	ω1 = 0.150 (100%)	
Sarcolobus_cambogensis_TL628_dhs_exon1-7	0.295588454	ω1 = 0.172 (100%)	
Campestigma_purpureum_TL94_dhs_exon1-7	0.719437444	ω1 = 0.0864 (100%)	
Lygisma_angustifolia_TL98_dhs_exon1-7	0.383984545	ω1 = 0.116 (100%)	
Anisopus_efulensis_TL386_dhs_exon1-7	2.700367775	ω1 = 0.00 (100%)	
Gongronema_taylorii_TL377_dhs_exon1-7	0.409141268	ω1 = 0.141 (100%)	
Marsdenia_glabra_TL99_dhs_exon1-7	0.14211424	ω1 = 0.268 (100%)	
Marsdenia_tinctoria_TL376_dhs_exon1-7	0	ω1 = 10000000000 (100%)	

Marsdenia_coronata_TLAsc118_dhs_exon1-7	2.722623215	ω1 = 0.00 (100%)	
Marsdenia_flavescens_TLAsc126_dhs_exon1-7	0.148501956	ω1 = 0.174 (100%)	
Dischidia_albida_PA67bB_dhs_exon1-7	0.232846735	ω1 = 0.198 (100%)	
Dischidia_cleistantha_TLAsc401_dhs_exon1-7	1.424616819	ω1 = 0.0358 (100%)	
Hoya_yuennanensis_TL238_dhs_exon1-7	0.191491508	ω1 = 0.217 (100%)	
Tassadia_propinqua_33_dhs_exon1-7	0.387849155	ω1 = 0.0727 (100%)	
Tassadia_berteroanum_PA34_dhs_exon1-7	0.377782955	ω1 = 0.147 (100%)	
Peplonia_adnata_PA113_dhs_exon1-7	0.305147997	ω1 = 0.132 (100%)	
Diplolepis_geminiflora_36_dhs_exon1-7	0.189303468	ω1 = 0.161 (100%)	
Asclepias_curassavica	21.83054667	ω1 = 0.121 (98%)	ω2 = 28.5 (1.8%)
Asclepias_syriaca_2	2.698933031	ω1 = 0.00 (100%)	
Calotropis_gigantea_dhs	28.68374157	ω1 = 0.105 (94%)	ω2 = 135 (5.9%)
Fockea_edulis_TL184_dhs_exon1-7	0.401539002	ω1 = 0.146 (100%)	
Toxocarpus_villosus_TLS261_dhs_exon1-7	0.4243468	ω1 = 0.108 (100%)	
Baissea_viridiflora_TL622_dhs_exon1-7	1.091442874	ω1 = 0.0516 (100%)	
Baissea_myrtifolia_TL638_dhs_exon1-7	0.136283296	ω1 = 0.271 (100%)	
Oncinotis_glabrata_TL417_dhs_exon1-7	0.389451183	ω1 = 0.145 (100%)	
Finlaysonia_lanuginosa_TLP286_dhs_exon1-7	0.10167445	ω1 = 0.346 (100%)	
Zygostelma_benthamii_TL105_dhs_exon1-7	0.461960219	ω1 = 0.129 (100%)	
Finlaysonia_insularum_TL63_dhs1_exon1-7	2.699313146	ω1 = 0.00 (100%)	

Finlaysonia_insularum_TL63_dhs2_exon1-7	2.700397149	ω1 = 0.00 (100%)	
Gymnanthera_oblonga_TLP274_dhs_exon1-6	0.68822909	ω1 = 0.364 (100%)	
Raphionacme_flanaganii_P79_dhs_exon1-7	0.625172622	ω1 = 0.100 (100%)	
Petopentia_natalensis_TLP78_dhs_exon1-7	0.89594281	ω1 = 0.0382 (100%)	
Rhabdadenia_madida_TL206_dhs_exon1-7	0.209047121	ω1 = 0.175 (100%)	
Malouetiella_mildbraedii_TLA246_dhs_exon1-7	0.526441727	ω1 = 0.117 (100%)	
Funtumia_elastica_TLA144_dhs2_exon1-7	0	ω1 = 1.44 (100%)	
Kibatalia_macrophylla_TLA18_dhs1_exon1-7	0.286292237	ω1 = 0.0867 (100%)	
Kibatalia_macrophylla_TLA18_dhs2_exon1-7	0.051277215	ω1 = 0.526 (100%)	
Funtumia_elastica_TLA144_dhs1_exon1-7	0.162596036	ω1 = 0.242 (100%)	
Holarrhena_curtisii_TLA17_dhs_exon1-7	14.59035361	ω1 = 0.0575 (100%)	
Holarrhena_pubescens_2	2.735200665	ω1 = 0.00 (100%)	
Mascarenhasia_arborescens_TLA143_dhs_exon1-7	0.604686047	ω1 = 0.102 (100%)	
Galactophora_schomburgkiana_PA87_dhs_exon1-7	0.483417499	ω1 = 0.115 (100%)	
Pachypodium_baronii_47_dhs_exon1-7	0.276254583	ω1 = 0.157 (100%)	
Neobracea_valenzuelana	0.682735131	ω1 = 0.0947 (100%)	
Nerium_oleander_TLA109_dhs_exon1-7	0.056723262	ω1 = 0.473 (100%)	
Adenium_obesum	0.979049284	ω1 = 0.0587 (100%)	
Alafia_barteri_52_dhs_exon1-7	0.213488085	ω1 = 0.152 (100%)	
Alafia_thouarsii_TL216_dhs_exon1-7	0.160916584	ω1 = 0.247 (100%)	
Isonema_smeathmannii_TLA142_dhs_exon1-7	18.64627925	ω1 = 0.0259 (98%)	ω2 = 18.1 (1.6%)

Strophanthus_boivinii_TLA133_dhs3_exon1-7	0.098885753	ω1 = 0.355 (100%)
Strophanthus_boivinii_TLA133_dhs1_exon1-7	0.814574707	ω1 = 1.00 (100%)
Strophanthus_boivinii_TLA133_dhs2_exon1-7	0.460976736	ω1 = 0.132 (100%)
Strophanthus_preussii_TLA10_dhs_exon1-7	0.191738999	ω1 = 0.217 (100%)
Wrightia_lanceolata_TL103_dhs2_exon1-7	0	ω1 = 10000000000 (100%)
Wrightia_arborea_TLA91_dhs2_exon1-7	0.524714774	ω1 = 0.00 (100%)
Wrightia_religiosa_TL104_dhs2_exon1-7	0.289063106	ω1 = 0.117 (100%)
Pleioceras_barteri_TLA244_dhs2_exon1-7	2.730072312	ω1 = 0.00 (100%)
Stephanostema_stenocarpum_TLA232_dhs2_exon1-7	0.523396243	ω1 = 0.141 (100%)
Wrightia_natalensis	0.192710667	ω1 = 0.334 (100%)
Wrightia_arborea_TLA91_dhs1_exon1-7	0.536784421	ω1 = 0.116 (100%)
Wrightia_religiosa_TL104_dhs1_exon1-7	0.534857074	ω1 = 0.116 (100%)
Wrightia_lanceolata_TL103_dhs1_exon1-7	0.028891666	ω1 = 0.696 (100%)
Stephanostema_stenocarpum_TLA232_dhs1_exon1-7	0.514060949	ω1 = 0.116 (100%)
Pleioceras_barteri_TLA244_dhs1_exon1-7	0	ω1 = 10000000000 (100%)
Rauvolfia_balansae_PA106_dhs_exon1-7	0.143670327	ω1 = 0.267 (100%)
Rauvolfia_tetraphylla	0.243280105	ω1 = 0.139 (100%)
Rauvolfia_vomitoria_PA108_dhs_exon1-7	0.434286031	ω1 = 0.133 (100%)
Rauvolfia_serpentina	0.176163629	ω1 = 0.167 (100%)
Rauvolfia_verticillata_PA91_dhs_exon1-7	0.463149762	ω1 = 0.0638 (100%)

Kamettia_chandeei	14.5974206	ω1 = 0.0759 (99%)	ω2 = 39.3 (0.81%)
Catharanthus_ovalis	0.791827594	ω1 = 1.00 (100%)	
Catharanthus_roseus	0.793796612	ω1 = 1.00 (100%)	
Catharanthus_longifolius	0.350445004	ω1 = 0.00 (100%)	
Vinca_minor	0.167475072	ω1 = 0.244 (100%)	
Vinca_major_43_dhs_exon1-7	0.315890992	ω1 = 0.0827 (100%)	
Ochrosia_poweri_PA89_dhs_exon1-7	0.092772352	ω1 = 0.365 (100%)	
Ochrosia_coccinea_PA88_dhs_exon1-7	0.364629562	ω1 = 0.151 (100%)	
Pycnobotrya_nitida_59_dhs_exon1-7	0.604849685	ω1 = 0.0909 (100%)	
Diplorhynchus_condylocarpon_70_dhs_exon1-7	0.210510588	ω1 = 0.00246 (93%)	ω2 = 4.07 (7.1%)
Plectaneia_thouarsii	1.684727401	ω1 = 0.0276 (100%)	
Kopsia_rosea_69_dhs_exon1-7	0.511961032	ω1 = 0.100 (100%)	ω2 = 12.6 (0.49%)
Tabernaemontana_bufalina_PA93_dhs_exon1-7	0.788840815	ω1 = 1.00 (100%)	
Tabernaemontana_bufalina_PA92_dhs_exon1-7	0.026272008	ω1 = 0.716 (100%)	
Tabernaemontana_elegans	0.406021788	ω1 = 0.105 (100%)	
Tabernaemontana_peduncularis_PA95_dhs_exon1-7	0.094224378	ω1 = 0.363 (100%)	
Tabernaemontana_pandacaqui_PA94_dhs_exon1-7	2.720698541	ω1 = 0.00 (100%)	
Craspidospermum_verticillatum_58_dhs_exon1-7	0.38253518	ω1 = 0.122 (100%)	
Hunteria_zeylanica_67c_dhs_exon1-7	1.513506405	ω1 = 0.0313 (100%)	
Amsonia_hubrichtii_1	0.785696852	ω1 = 1.00 (100%)	
Amsonia_hubrichtii_2	0	ω1 = 1.45 (100%)	
Amsonia_orientalis_PA97_dhs_exon1-7	0	ω1 = 1.10 (100%)	
Himatanthus_obovatus_PA99_dhs_exon1-7	0.787970202	ω1 = 1.00 (100%)	
Himatanthus_bracteatus	0.786233123	ω1 = 1.00 (100%)	

Plumeria_cubensis_48_dhs_exon1-7		0.186467903	ω1 = 0.188 (100%)	
Allamanda_schottii_46_dhs_exon1-7		0.467171689	ω1 = 0.101 (100%)	ω2 = 42.1 (0.41%)
Thevetia_peruviana_56_dhs_exon1-7		0.531926795	ω1 = 0.100 (100%)	
Haplophyton_crooksii		8.669213708	ω1 = 0.00 (97%)	ω2 = 2.85 (2.7%)
Gelsemium_sempervirens_32_dhs_exon1-7		0.930281604	ω1 = 0.00556 (94%)	ω2 = 1.40 (5.7%)
root		0	ω1 = 0	
1		0	ω1 = 0	
2		0.256345726	ω1 = 0.115 (99%)	ω2 = 28.9 (1.4%)
3		14.22657998	ω1 = 0.0969 (100%)	
4		1.992565036	ω1 = 0.00363 (100%)	
5		0	ω1 = 10000000000 (100%)	
6	A	0.01496363	ω1 = 0.821 (100%)	
7		0.046651572	ω1 = 0.395 (100%)	
8		0.394800967	ω1 = 0.138 (100%)	
9		0.191187825	ω1 = 0.134 (100%)	
10		0.700412273	ω1 = 0.125 (100%)	
11	B	0.172526429	ω1 = 0.235 (100%)	
12		0.733136514	ω1 = 0.125 (100%)	
13		0.795005809	ω1 = 1.00 (100%)	
14		0.061413062	ω1 = 0.221 (100%)	
15	C	0.12037927	ω1 = 0.249 (98%)	ω2 = 19.1 (2.3%)
16		1.066939268	ω1 = 0.0576 (100%)	
17		1.267364291	ω1 = 0.0383 (100%)	
18		1.587229847	ω1 = 0.0367 (100%)	
19		2.457148449	ω1 = 0.00 (100%)	
20		0.693325874	ω1 = 0.0906 (100%)	
21		2.707099228	ω1 = 0.00 (100%)	
26		2.713624442	ω1 = 0.00 (100%)	
30		31.04985636	ω1 = 0.00 (99%)	ω2 = 142 (0.91%)
31		0.446373693	ω1 = 0.133 (100%)	
32		0.192998589	ω1 = 0.212 (100%)	

36		0.535210162	ω1 = 0.132 (100%)	
37		0.969595951	ω1 = 0.0594 (100%)	
41		2.706178456	ω1 = 0.00 (100%)	
42		0.185069594	ω1 = 0.249 (100%)	
43		0.293109361	ω1 = 0.209 (100%)	
44		0.128555392	ω1 = 0.296 (100%)	
47		0.53587278	ω1 = 0.120 (100%)	
52		0.004331817	ω1 = 0.967 (100%)	
53		0.786024446	ω1 = 1.00 (100%)	
57		2.698937574	ω1 = 0.00 (100%)	
58		1.538928943	ω1 = 0.0479 (100%)	
59		2.702330079	ω1 = 0.00 (100%)	
60		0.134562523	ω1 = 0.230 (100%)	
64		25.49018761	ω1 = 0.00 (100%)	ω2 = 10000000000 (0.42%)
68		0.178743887	ω1 = 0.206 (100%)	
71		2.731651223	ω1 = 0.00 (100%)	
72	E	2.695372929	ω1 = 0.00 (100%)	
73		0	ω1 = 10000000000 (100%)	
74	D	0.230408577	ω1 = 0.133 (100%)	
75		0	ω1 = 10000000000 (100%)	
76		0	ω1 = 10000000000 (100%)	
80		2.702941544	ω1 = 0.00 (100%)	
84		0.001234035	ω1 = 0.895 (100%)	
85		0	ω1 = 10000000000 (100%)	
86		16.35510144	ω1 = 0.0752 (100%)	
87		0.805216214	ω1 = 1.00 (100%)	
88		0.409941694	ω1 = 0.139 (100%)	
89		2.707426633	ω1 = 0.00 (100%)	
90		0.794047732	ω1 = 1.00 (100%)	

96		0.881340574	ω1 = 0.0685 (100%)	
97		0.272248835	ω1 = 0.180 (100%)	
101		0.081440037	ω1 = 0.272 (99%)	ω2 = 543 (0.68%)
104		0.920440187	ω1 = 0.0366 (100%)	
108		2.561733105	ω1 = 0.00 (100%)	
111		0.363534481	ω1 = 0.129 (100%)	
112		0.467666279	ω1 = 0.127 (100%)	
113		2.695881061	ω1 = 0.120 (100%)	
114		2.705269844	ω1 = 0.00 (100%)	
120	L	17.31878669	ω1 = 0.0972 (100%)	
121		0.310925251	ω1 = 0.0595 (99%)	ω2 = 141 (0.80%)
122		0.658699037	ω1 = 0.00824 (95%)	ω2 = 2.23 (4.9%)
123		1.213409762	ω1 = 0.0414 (100%)	
124		0.357819453	ω1 = 0.161 (100%)	
125		2.714161048	ω1 = 0.00 (100%)	
126		50	ω1 = 0.00 (100%)	ω2 = 2810 (0.32%)
127		2.712376565	ω1 = 0.106 (100%)	
128		0.504143192	ω1 = 0.118 (100%)	
129	J	23.70591721	ω1 = 0.603 (100%)	
130		0	ω1 = 0.727 (100%)	
131		0.275789734	ω1 = 0.179 (100%)	
132		0.887300818	ω1 = 10000000000 (100%)	
133		2.720852498	ω1 = 0.00 (100%)	
134		0.873219837	ω1 = 1.00 (100%)	
135		2.765004537	ω1 = 0.00 (100%)	
136		0	ω1 = 10000000000 (100%)	
137		29.02747021	ω1 = 0.00 (99%)	ω2 = 254 (0.74%)
143		0.024157018	ω1 = 0.740 (100%)	
144		2.705756398	ω1 = 0.00 (100%)	
145		24.20813544	ω1 = 0.00 (100%)	ω2 = 10000000000 (0.31%)
150		0.433884715	ω1 = 0.134 (100%)	

153		46.20373993	ω1 = 10000000000 (100%)	
156		0.846610998	ω1 = 0.00 (100%)	
157		0.841382336	ω1 = 1.00 (100%)	
158		0.091846259	ω1 = 0.372 (100%)	
159		0	ω1 = 0.967 (100%)	
163		0.721746737	ω1 = 0.0881 (100%)	
166		2.723168437	ω1 = 0.00 (100%)	
169		2.694988483	ω1 = 0.691 (100%)	
170		0.080707405	ω1 = 0.401 (100%)	
176		1.236039481	ω1 = 0.0437 (100%)	
179		2.696477331	ω1 = 0.00 (100%)	
180		2.706012089	ω1 = 0.00 (100%)	
181		1.135869764	ω1 = 0.0492 (100%)	
184		2.704981765	ω1 = 0.00 (100%)	
187		2.714229849	ω1 = 0.00 (100%)	
189		12.7988903	ω1 = 0.0934 (100%)	
192		0.803635955	ω1 = 1.00 (100%)	
194		0	ω1 = 10000000000 (100%)	
195		2.723878194	ω1 = 0.00 (100%)	
199	I	0.3396636	ω1 = 0.00 (95%)	ω2 = 3.31 (4.9%)
200		0.389003801	ω1 = 0.132 (100%)	
201		0.012656796	ω1 = 0.979 (100%)	ω2 = 2780 (0.35%)
202		0.156936172	ω1 = 0.246 (100%)	
210		0.420526786	ω1 = 0.138 (100%)	
211		0.088496885	ω1 = 0.363 (100%)	
215	F	30.84621644	ω1 = 0.00 (99%)	ω2 = 152 (1.5%)
216		0	ω1 = 0.800 (100%)	
217		13.9791336	ω1 = 0.0961 (100%)	
218		0.36600493	ω1 = 0.145 (100%)	
219		2.717456686	ω1 = 0.00 (100%)	
226	B	0.087426422	ω1 = 0.339 (100%)	
228		0.173294386	ω1 = 0.143 (98%)	ω2 = 12.9 (1.8%)
229	K	0.098198039	ω1 = 0.353 (99%)	ω2 = 61.4 (0.54%)

233		0.29306355	ω1 = 0.176 (100%)	
234	H	0.0934698	ω1 = 0.187 (100%)	
235		2.708182091	ω1 = 0.00 (100%)	
236		2.717879901	ω1 = 0.00 (100%)	
237		2.743241408	ω1 = 0.00 (100%)	
238		0.097132687	ω1 = 0.377 (100%)	
239		2.706588615	ω1 = 0.00 (100%)	
240		2.760597615	ω1 = 0.00 (100%)	
241		0.115124673	ω1 = 0.324 (100%)	
242		2.706078562	ω1 = 0.00 (100%)	
243		0.822630551	ω1 = 0.0482 (100%)	
244		0.061862696	ω1 = 0.391 (100%)	
245		20.23516287	ω1 = 0.0371 (100%)	
246		0.180450356	ω1 = 0.238 (100%)	
247		0.383070895	ω1 = 0.145 (100%)	
248		2.700239024	ω1 = 0.00 (100%)	
249		0	ω1 = 10000000000 (100%)	
253		2.699699953	ω1 = 0.00 (100%)	
254		0.783023384	ω1 = 0.941 (99%)	ω2 = 5000 (0.87%)
260		0.088716662	ω1 = 0.388 (100%)	
261		2.716166889	ω1 = 0.00 (100%)	
265		0.215300585	ω1 = 0.209 (100%)	
266		2.763893941	ω1 = 0.00 (100%)	
267		2.70020589	ω1 = 0.00 (100%)	
268		2.69912909	ω1 = 0.00 (100%)	
269		0.157604781	ω1 = 0.252 (100%)	
276		0.11490688	ω1 = 0.106 (100%)	
278		2.702800893	ω1 = 0.00 (100%)	
281		2.709293705	ω1 = 0.00 (100%)	
282		0.129628321	ω1 = 0.282 (100%)	
283		0.062805326	ω1 = 0.476 (100%)	
284		1.46019584	ω1 = 0.0341 (100%)	
290		0.06572342	ω1 = 0.461 (100%)	

293	0.621364762	ω1 = 0.100 (100%)	
294	0.031241919	ω1 = 0.932 (100%)	
295	2.703762038	ω1 = 0.00 (100%)	
296	2.718189514	ω1 = 0.00 (100%)	
297	0.799592389	ω1 = 0.0839 (100%)	
298	2.700478545	ω1 = 0.00 (100%)	
299	2.655761309	ω1 = 0.00 (100%)	
300	0	ω1 = 1.01 (100%)	
301	0.060545496	ω1 = 0.321 (100%)	
302	2.714427169	ω1 = 0.00 (100%)	
303	2.675157282	ω1 = 0.00 (100%)	
311	2.713145004	ω1 = 0.00 (100%)	
312	19.37479476	ω1 = 0.197 (100%)	
315	1.216432974	ω1 = 0.0520 (100%)	
318	0.412201959	ω1 = 0.117 (100%)	
319	0	ω1 = 10000000000 (100%)	
320	2.736496482	ω1 = 0.00 (100%)	
321	0.027474318	ω1 = 0.707 (100%)	
326	2.714452146	ω1 = 0.00 (100%)	
330	0.362066011	ω1 = 0.146 (100%)	
331	1.231957685	ω1 = 0.0440 (100%)	
335	2.70109811	ω1 = 0.00 (100%)	
336	19.66296199	ω1 = 0.0614 (99%)	ω2 = 366 (0.67%)
337	0.174402663	ω1 = 0.231 (100%)	
341	0.529962955	ω1 = 0.112 (100%)	
344	0.16194281	ω1 = 0.274 (100%)	
345	0.653353388	ω1 = 0.0931 (100%)	
346	0.63114084	ω1 = 0.120 (100%)	
347	1.399081845	ω1 = 0.0347 (100%)	
348	0.074546051	ω1 = 0.251 (100%)	
349	1.493154161	ω1 = 0.0331 (100%)	
350	26.75817335	ω1 = 0.0746 (100%)	ω2 = 798 (0.36%)
351	0.47668514	ω1 = 0.118 (100%)	

352	0.199500725	ω1 = 0.179 (100%)	
353	2.699880746	ω1 = 0.00 (100%)	
354	0.878741344	ω1 = 1.00 (100%)	
355	0.890939368	ω1 = 1.00 (100%)	
356	2.7163264	ω1 = 0.00 (100%)	
361	0.281674507	ω1 = 0.178 (100%)	
362	0.886788652	ω1 = 1.00 (100%)	
363	0.902378918	ω1 = 1.00 (100%)	
368	2.69680295	ω1 = 0.00 (100%)	
369	0	ω1 = 10000000000 (100%)	
373	2.699659807	ω1 = 0.00 (100%)	
374	0.053127506	ω1 = 0.528 (100%)	
375	0.086458189	ω1 = 0.392 (100%)	
379	0.861714588	ω1 = 1.00 (100%)	
382	0	ω1 = 10000000000 (100%)	
383	0.870986385	ω1 = 1.00 (100%)	
384	0.170263435	ω1 = 0.119 (100%)	
387	0.278700285	ω1 = 0.179 (100%)	
390	0.170438092	ω1 = 0.238 (100%)	
391	0.08772365	ω1 = 0.381 (100%)	
395	14.38418574	ω1 = 0.00 (99%)	ω2 = 15.0 (1.0%)
396	0.312375057	ω1 = 0.203 (100%)	
397	2.723959963	ω1 = 0.00 (100%)	
398	0.161607525	ω1 = 0.191 (100%)	
403	0.929253526	ω1 = 0.0597 (100%)	
404	0.42563369	ω1 = 0.102 (100%)	
410	2.690552703	ω1 = 0.00 (100%)	
411	0.175441925	ω1 = 0.216 (100%)	
415	0.550586254	ω1 = 0.0927 (100%)	
416	0.231314312	ω1 = 0.185 (100%)	
417	2.718878874	ω1 = 0.00 (100%)	
418	2.717605338	ω1 = 0.00 (100%)	

419	2.699242267	ω1 = 0.00 (100%)	
422	0.289131641	ω1 = 0.175 (100%)	
429	0.51553221	ω1 = 0.0797 (100%)	
430	2.716190595	ω1 = 0.00 (100%)	
431	2.728756498	ω1 = 0.00 (100%)	
432	2.694095257	ω1 = 0.00 (100%)	
433	0.793089244	ω1 = 1.00 (100%)	
435	0.293636086	ω1 = 0.173 (100%)	
438	2.706018401	ω1 = 0.00 (100%)	
441	0.603799348	ω1 = 0.105 (100%)	
445	2.739248061	ω1 = 0.00 (100%)	
446	0.865846292	ω1 = 0.0779 (100%)	
450	2.53253041	ω1 = 0.00 (100%)	
453	0.676414947	ω1 = 0.103 (100%)	
454	0.498489038	ω1 = 0.123 (100%)	
458	2.715051369	ω1 = 0.00 (100%)	
459	0.144313922	ω1 = 0.216 (100%)	
460	0.152813587	ω1 = 0.249 (100%)	
465	0.169981666	ω1 = 0.165 (100%)	
466	28.48740621	ω1 = 0.00 (100%)	ω2 = 660 (0.31%)
467	0.805895868	ω1 = 1.00 (100%)	
468	2.699551598	ω1 = 0.00 (100%)	
469	2.714695726	ω1 = 0.00 (100%)	
476	0.25375446	ω1 = 0.00 (91%)	ω2 = 2.41 (9.0%)
477	46.8168212	ω1 = 0.00 (99%)	ω2 = 462 (1.4%)
478	0.804230343	ω1 = 1.00 (100%)	
482	0.255001358	ω1 = 0.192 (100%)	
485	0	ω1 = 10000000000 (100%)	
486	0.165319261	ω1 = 0.209 (100%)	
487	2.709265129	ω1 = 0.00 (100%)	
488	2.717728661	ω1 = 0.00 (100%)	
489	0.094599394	ω1 = 0.352 (100%)	

490	0.174272055	ω1 = 0.219 (100%)	
491	2.717451085	ω1 = 0.00 (100%)	
492	2.787038071	ω1 = 0.00 (100%)	
493	0	ω1 = 0.00 (98%)	ω2 = 1130 (1.8%)
494	14.01330898	ω1 = 0.0612 (100%)	
495	0	ω1 = 1.00 (100%)	
496	2.70453986	ω1 = 0.00 (100%)	
497	0.536250333	ω1 = 0.115 (100%)	
504	0.920849389	ω1 = 0.0623 (100%)	
505	2.72714086	ω1 = 0.00 (100%)	
509	0.421331947	ω1 = 0.106 (100%)	
512	0.670008464	ω1 = 0.0997 (100%)	
516	2.721808751	ω1 = 0.00 (100%)	
520	0.424685114	ω1 = 0.124 (100%)	
521	0.079807427	ω1 = 0.387 (100%)	
522	0.312572394	ω1 = 0.169 (100%)	
526	0.104527628	ω1 = 0.519 (100%)	
529	0	ω1 = 10000000000 (100%)	
530	0.787431354	ω1 = 0.00 (100%)	
533	0.45994012	ω1 = 0.134 (100%)	
534	0.087806497	ω1 = 0.379 (100%)	
538	0.548135717	ω1 = 0.00 (100%)	
539	0.243231078	ω1 = 0.148 (100%)	
540	1.633388729	ω1 = 0.0303 (100%)	
541	0.105047961	ω1 = 0.339 (100%)	

Table S10: aBSREL ω rates and distributions over sites and RELAX general descriptive k for reduced dataset tree topology (Fig. 4). Node numbers are displayed in Fig. S8.

Node #/sequence name (Fig. S8)	Branch label (Figs. 3, 4)	k	ω1 rate distribution over sites (% sites)	ω2 rate distribution over sites (% sites)
Echites_umbellatus_PA74_hss_exon1-7		3.333975395	ω1 = 0.00 (100%)	
Echites_umbellatus_PA86_hss_exon1-7		1.060987288	ω1 = 1.00 (100%)	
Echites_umbellatus_PA76_hss2_contig1-7		0	ω1 = 10000000000 (100%)	
Echites_umbellatus_PA76_hss1_contig1-7		1.004109789	ω1 = 1.00 (100%)	
Echites_umbellatus_1		0	ω1 = 10000000000 (100%)	
Echites_umbellatus_2		0.775165835	ω1 = 0.0956 (100%)	
Echites_turriger_TLA137_hss_exon1-7		1.272215828	ω1 = 0.0506 (100%)	
Prestonia_coalita_2		0.341399431	ω1 = 0.150 (100%)	
Prestonia_coalita_1		0.43043946	ω1 = 0.170 (100%)	
Prestonia_portobellensis_51_hss_exon1-7		1.470196149	ω1 = 0.0403 (100%)	
Parsonsia_eucalyptophylla_1		3.349581733	ω1 = 0.00 (100%)	
Parsonsia_eucalyptophylla_A2		0.102341052	ω1 = 0.340 (100%)	
Parsonsia_alboflavescens_PA90_hss_exon1-7		3.323795747	ω1 = 0.00 (100%)	
Macropharynx_spectabilis_TL210_hss_exon1-7		1.523095879	ω1 = 0.0391 (100%)	
Macropharynx_peltata_49_hss_exon1-7		0	ω1 = 1.48 (100%)	
Rhodocalyx_rotundifolius_PA109b_hss_exon1-7		10.92035644	ω1 = 0.0499 (100%)	
Rhodocalyx_riedelii_TL205_hss_exon1-7		0.129864424	ω1 = 0.291 (100%)	
Temnadenia_odorifera_TL213_hss_exon1-7		0.726686573	ω1 = 0.0788 (100%)	
Laubertia_boissieri_TL220_hss_exon1-7		1.117087651	ω1 = 0.0471 (99%)	ω2 = 21.1 (0.80%)
Stipecoma_peltigera_TLA134_hss_exon1-6		0.5259512	ω1 = 0.0959 (100%)	
Secondatia_densiflora_PA62B_hss_exon1-7		1.388174741	ω1 = 0.0290 (100%)	
Odontadenia_perrottetii_PA60B_hss_exon1-7		15.84232114	ω1 = 0.00248 (99%)	ω2 = 20.1 (0.71%)
Mandevilla_longiflora		0.322758062	ω1 = 0.169 (100%)	
Mandevilla_boliviensis_TLA76_hss_exon1-7		0.174910014	ω1 = 0.210 (100%)	
Forsteronia_guyanensis_TLA39_hss_exon1-7		0.922347757	ω1 = 0.0813 (100%)	
Mesechites_trifidus_45_hss_exon1-7		0.559581358	ω1 = 0.0964 (100%)	
Allomarkgrafia_brenesiana_PA98_hss_exon1-7		3.350740333	ω1 = 0.00 (100%)	
Pinochia_corymbosa_TL96_hss_exon1-7		0.192124176	ω1 = 0.191 (100%)	
Elytropus_chilensis_TLA257_hss_exon1-7		0.999808354	ω1 = 1.00 (100%)	
Elytropus_chilensis_TL208_hss_exon1-6		0.999808354	ω1 = 1.00 (100%)	

Epigynum_cochinchinensis_TLA62_hss_exon1-6	16.81246035	ω1 = 0.117 (100%)	
Ichnocarpus_frutescens_TL621_hss_exon1-6	0.453267731	ω1 = 0.0930 (100%)	
Aganosma_schlechteriana_TLA24_hss_exon1-7	0.256086017	ω1 = 0.194 (100%)	
Epigynum_griffithianum_TLA195_hss_exon1-6	3.423617395	ω1 = 0.00 (100%)	
Amalocalyx_microlobus_TLA272_hss_exon1-6	0.580171703	ω1 = 0.121 (100%)	
Trachelospermum_axillare_TLA84_hss_exon2-7	3.337009822	ω1 = 0.00 (100%)	
Trachelospermum_asiaticum_PA66B_hss_exon1-7	0.097262055	ω1 = 0.356 (100%)	
Chonemorpha_fragrans_TLA37_hss_exon1-7	0.164654312	ω1 = 0.236 (100%)	
Amphineurion_marginatum_55_hss_exon1-7	1.017690301	ω1 = 0.0515 (100%)	
Eucorymbia_alba_PA104_hss_exon1-6	0.206311605	ω1 = 0.210 (100%)	
Beaumontia_murtonii_53_hss_exon1-6	0.156490668	ω1 = 0.257 (100%)	
Vallaris_solanacea_TLA90_hss_exon1-7	0.508600272	ω1 = 0.134 (100%)	
Papuechites_aambe_TLA130_hss_exon1-7	0.286689344	ω1 = 0.160 (100%)	
Anodendron_oblongifolium_PA100_hss2_exon3-7	0.999808354	ω1 = 0.00 (100%)	
Anodendron_affine_PA79_hss1_exon1-7	0.999808354	ω1 = 0.758 (100%)	
Anodendron_affine_PA79_hss2_exon1-7	0.405138149	ω1 = 0.0871 (100%)	
Anodendron_oblongifolium_PA100_hss1_exon1-6	0	ω1 = 0.143 (100%)	
Anodendron_parviflorum_TLA135_hss_exon1-7	0.229176533	ω1 = 1.00 (100%)	
Streptoechites_chinensis_54_hss_exon1-6	0.18942696	ω1 = 0.212 (100%)	
Rhabdadenia_madida_TL206_hss_exon1-7	0.460546075	ω1 = 0.130 (100%)	
Rhabdadenia_biflora_1	0.255485721	ω1 = 0.133 (98%)	ω2 = 5000 (1.6%)
Gymnanthera_oblonga_TLP274_hss_exon2-6	0.095717443	ω1 = 0.0863 (100%)	
Finlaysonia_lanuginosa_TLP286_hss_exon1-7	0.171123625	ω1 = 0.129 (100%)	
Finlaysonia_insularum_TL63_hss_exon1-6	36.24913479	ω1 = 0.0694 (100%)	
Raphionacme_flanaganii_P79_hss_exon1-6	0.311436914	ω1 = 0.202 (100%)	
Petopentia_natalensis_TLP78_hss_exon1-7	14.36209009	ω1 = 0.0876 (100%)	
Gongronema_angolense_TL383_hss2_exon1-6	0.095843422	ω1 = 0.361 (100%)	
Gongronema_latifolium_TL381_hss2_exon1-6	0.457585475	ω1 = 0.144 (100%)	
Marsdenia_truncata_TL397_hss1_exon1-7	0.579281144	ω1 = 0.122 (100%)	
Gongronema_taylorii_TL377_hss_exon1-6	0.825240718	ω1 = 0.0897 (100%)	
Gymnema_sylvestre_TL615_hss_exon1-6	0.312278633	ω1 = 0.174 (100%)	
Ruehssia_laxiflora_TLAsc225_hss_exon1-6	0.15954997	ω1 = 0.284 (100%)	
Ruehssia_macrophylla_TL226_hss2_exon1-7	0.153443795	ω1 = 0.254 (100%)	
Ruehssia_guaranitica_TLAsc227_hss_exon1-7	0.098906043	ω1 = 0.349 (100%)	

Ruehssia_caatingae_PA111_hss2_exon1-6	0.469689676	ω1 = 0.141 (100%)	
Stigmatorhynchus_umbellifer_TL394_hss1_exon1-6	0.030655849	ω1 = 0.00 (100%)	
Gongronema_angolense_TL383_hss1_exon1-6	50	ω1 = 0.00 (99%)	ω2 = 5000 (0.63%)
Jasminanthes_maingayi_PA85_hss2_exon1-6	0.300950083	ω1 = 0.176 (100%)	
Marsdenia_longipedicellata_TL262_hss1_exon1-7	0.806967951	ω1 = 0.0635 (100%)	
Dischidia_albida_PA67bB_hss_exon1-6	0	ω1 = 1.03 (100%)	
Dischidia_cleistantha_TLAsc401_hss_exon1-7	0.009331785	ω1 = 0.625 (100%)	ω2 = 183 (0.46%)
Hoya_yuennanensis_TL238_hss_exon1-6	0.034322515	ω1 = 0.714 (100%)	
Marsdenia_flavescens_TLAsc126_hss1_exon1-7	0.026901855	ω1 = 0.714 (100%)	
Marsdenia_coronata_TLAsc118_hss_exon1-7	0.024430191	ω1 = 0.726 (100%)	
Marsdenia_tinctoria_TL376_hss_exon1-7	0.079647499	ω1 = 0.353 (100%)	
Marsdenia_glabra_TL99_hss_exon1-7	0.151622597	ω1 = 0.338 (99%)	ω2 = 10000000000 (0.65%)
Campestigma_purpureum_TL94_hss2_exon1-6	0.263795927	ω1 = 0.189 (100%)	
Sarcolobus_cambogensis_TL628_hss2_exon1-6	0.716099803	ω1 = 0.101 (100%)	
Lygisma_angustifolia_TL98_hss_exon1-7	0.689598267	ω1 = 0.108 (100%)	
Jasminanthes_maingayi_PA85_hss3_exon1-6	0.095146817	ω1 = 0.355 (100%)	
Anisopus_efulensis_TL386_hss_exon1-7	0.025298619	ω1 = 0.203 (100%)	
Marsdenia_truncata_TL397_hss2_exon1-6	0.114507863	ω1 = 0.248 (100%)	
Ruehssia_caatingae_PA111_hss1_exon1-6	30.00744563	ω1 = 0.00 (98%)	ω2 = 99.8 (1.7%)
Ruehssia_macrophylla_TL226_hss1_exon1-6	0	ω1 = 0.894 (100%)	
Campestigma_purpureum_TL94_hss1_exon1-6	0.122639168	ω1 = 0.210 (100%)	
Sarcolobus_cambogensis_TL628_hss1_exon1-7	0.205523251	ω1 = 0.241 (100%)	
Stigmatorhynchus_umbellifer_TL394_hss2_exon1-6	0.999044934	ω1 = 1.00 (100%)	
Gongronema_angolense_TL383_hss4_exon1-6	0.097149177	ω1 = 1.00 (100%)	
Gongronema_angolense_TL383_hss5_exon2-6	3.367549835	ω1 = 0.00 (100%)	
Gongronema_angolense_TL383_hss3_exon2-6	0.091359062	ω1 = 0.375 (100%)	
Gongronema_latifolium_TL381_hss1_exon1-7	0.12093841	ω1 = 0.00 (97%)	ω2 = 17.6 (3.5%)
Marsdenia_longipedicellata_TL262_hss2_exon1-6	0.155264834	ω1 = 0.193 (100%)	
Marsdenia_flavescens_TLAsc126_hss2_exon2-6	1.306548533	ω1 = 0.0499 (100%)	
Jasminanthes_maingayi_PA85_hss1_exon1-7	0	ω1 = 0.126 (95%)	ω2 = 38.0 (4.7%)
Tassadia_berteroanum_PA34_hss_exon1-7	1.566313881	ω1 = 0.0364 (100%)	
Tassadia_propinqua_33_hss_exon3-7	0.128523393	ω1 = 0.288 (100%)	
Peplonia_adnata_PA113_hss_exon1-7	0.126349805	ω1 = 0.00 (87%)	ω2 = 3.30 (13%)

Diplolepis_geminiflora_36_hss_exon1-7	0	ω1 = 1.08 (100%)	
Calotropis_gigantea_hss	0.772243798	ω1 = 0.104 (100%)	
Fockea_edulis_TL184_hss_exon1-7	0.705255144	ω1 = 0.104 (100%)	
Toxocarpus_villosus_TLS261_hss_exon1-7	0.66259472	ω1 = 0.114 (100%)	
Baissea_viridiflora_TL622_hss_exon1-6	0.209182194	ω1 = 0.144 (100%)	
Baissea_myrtifolia_TL638_hss_exon1-7	0.146954973	ω1 = 0.213 (100%)	
Oncinotis_glabrata_TL417_hss_exon1-7	0.50090867	ω1 = 0.0890 (100%)	
Malouetiella_mildbraedii_TLA246_hss_exon1-7	34.77913906	ω1 = 0.0889 (100%)	
Kibatalia_macrophylla_TLA18_hss_exon1-7	0.890168965	ω1 = 0.0825 (100%)	
Funtumia_elastica_TLA144_hss_exon1-7	15.16182911	ω1 = 0.00 (100%)	ω2 = 30.3 (0.37%)
Holarrhena_curtisii_TLA17_hss_exon1-7	0.099355267	ω1 = 0.329 (100%)	
Mascarenhasia_arborescens_TLA143_hss_exon1-7	0.415925164	ω1 = 0.139 (100%)	
Galactophora_schomburgkiana_PA87_hss_exon1-7	0.28476245	ω1 = 0.0774 (95%)	ω2 = 4.32 (4.7%)
Alafia_barteri_52_hss_exon1-7	0.812403084	ω1 = 0.0922 (100%)	
Alafia_thouarsii_TL216_hss_exon1-7	30.6692659	ω1 = 0.00 (99%)	ω2 = 210 (0.65%)
Isonema_smeathmannii_TLA142_hss_exon1-6	0.249577476	ω1 = 0.0867 (98%)	ω2 = 205 (1.5%)
Strophanthus_boivinii_TLA133_hss_exon1-7	0.270127209	ω1 = 0.0750 (97%)	ω2 = 15.6 (2.7%)
Wrightia_arborea_TLA91_dhs2_exon1-7	0.61882512	ω1 = 0.00 (100%)	
Wrightia_lanceolata_TL103_dhs2_exon1-7	0	ω1 = 10000000000 (100%)	
Stephanostema_stenocarpum_TLA232_dhs2_exon1-7	0.62349277	ω1 = 0.139 (100%)	
Wrightia_religiosa_TL104_dhs2_exon1-7	0.472156868	ω1 = 0.0892 (100%)	
Pleioceras_barteri_TLA244_dhs2_exon1-7	3.379202189	ω1 = 0.00 (100%)	
Wrightia_natalensis	0.236288284	ω1 = 0.323 (100%)	
Ruehssia_macrophylla_TL226_dhs_exon1-7	0.147883828	ω1 = 0.268 (100%)	
Ruehssia_caatingae_PA111_dhs_exon1-7	0.612519503	ω1 = 0.118 (100%)	
Ruehssia_guaranitica_TLAsc227_dhs_exon1-7	35.32054358	ω1 = 0.00 (100%)	ω2 = 292 (0.31%)
Ruehssia_laxiflora_TLAsc225_dhs_exon1-7	0.097648688	ω1 = 0.355 (100%)	
Gongronema_latifolium_TL381_dhs_exon1-7	0.026838455	ω1 = 0.709 (100%)	
Marsdenia_truncata_TL397_dhs_exon1-7	0.008827926	ω1 = 0.889 (100%)	
Marsdenia_longipedicellata_TL262_dhs_exon1-7	3.3674883	ω1 = 0.00 (100%)	
Gongronema_angolense_TL383_dhs_exon1-7	0.998282387	ω1 = 1.00 (100%)	
Jasminanthes_maingayi_PA85_dhs_exon1-7	0.072985835	ω1 = 0.357 (100%)	
Gymnema_sylvestre_TL615_dhs_exon1-7	0.179180828	ω1 = 0.234 (100%)	

Stigmatorhynchus_umbellifer_TL394_dhs_exon1-7	0.428296191	ω1 = 0.151 (100%)	
Campestigma_purpureum_TL94_dhs_exon1-7	0.852417728	ω1 = 0.0864 (100%)	
Sarcolobus_cambogensis_TL628_dhs_exon1-7	0.336668039	ω1 = 0.172 (100%)	
Lygisma_angustifolia_TL98_dhs_exon1-7	0.448161203	ω1 = 0.116 (100%)	
Anisopus_efulensis_TL386_dhs_exon1-7	3.334937811	ω1 = 0.143 (100%)	
Gongronema_taylorii_TL377_dhs_exon1-7	0.478198732	ω1 = 0.141 (100%)	
Marsdenia_flavescens_TLAsc126_dhs_exon1-7	0.15258709	ω1 = 0.174 (100%)	
Marsdenia_coronata_TLAsc118_dhs_exon1-7	3.368268077	ω1 = 0.00 (100%)	
Marsdenia_tinctoria_TL376_dhs_exon1-7	0	ω1 = 10000000000 (100%)	
Marsdenia_glabra_TL99_dhs_exon1-7	0.145284826	ω1 = 0.268 (100%)	
Dischidia_cleistantha_TLAsc401_dhs_exon1-7	1.647143761	ω1 = 0.0358 (100%)	
Dischidia_albida_PA67bB_dhs_exon1-7	0.253962528	ω1 = 0.198 (100%)	
Hoya_yuennanensis_TL238_dhs_exon1-7	0.201458186	ω1 = 0.217 (100%)	
Tassadia_berteroanum_PA34_dhs_exon1-7	0.43980076	ω1 = 0.147 (100%)	
Tassadia_propinqua_33_dhs_exon1-7	0.452350463	ω1 = 0.0727 (100%)	
Peplonia_adnata_PA113_dhs_exon1-7	0.349827321	ω1 = 0.132 (100%)	
Diplolepis_geminiflora_36_dhs_exon1-7	0.198707056	ω1 = 0.162 (100%)	
Asclepias_syriaca_2	3.336981729	ω1 = 0.00 (100%)	
Asclepias_curassavica	0.08213162	ω1 = 0.0918 (98%)	ω2 = 25.5 (2.1%)
Calotropis_gigantea_dhs	29.37215614	ω1 = 0.109 (94%)	ω2 = 142 (5.9%)
Fockea_edulis_TL184_dhs_exon1-7	0.463903036	ω1 = 0.145 (100%)	
Toxocarpus_villosus_TLS261_dhs_exon1-7	0.552724149	ω1 = 0.0963 (100%)	
Baissea_myrtifolia_TL638_dhs_exon1-7	0.13627688	ω1 = 0.274 (100%)	
Baissea_viridiflora_TL622_dhs_exon1-7	1.300310461	ω1 = 0.0509 (100%)	
Oncinotis_glabrata_TL417_dhs_exon1-7	0.447444987	ω1 = 0.147 (100%)	
Finlaysonia_lanuginosa_TLP286_dhs_exon1-7	0.102623718	ω1 = 0.346 (100%)	
Zygostelma_benthamii_TL105_dhs_exon1-7	0.54263873	ω1 = 0.129 (100%)	
Finlaysonia_insularum_TL63_dhs1_exon1-7	3.334738816	ω1 = 0.00 (100%)	
Finlaysonia_insularum_TL63_dhs2_exon1-7	3.336966681	ω1 = 0.00 (100%)	
Gymnanthera_oblonga_TLP274_dhs_exon1-6	0.8442705	ω1 = 0.365 (100%)	
Raphionacme_flanaganii_P79_dhs_exon1-7	0.74032973	ω1 = 0.100 (100%)	
Petopentia_natalensis_TLP78_dhs_exon1-7	1.047877458	ω1 = 0.0391 (100%)	

Epigynum_auritum	45.6874383	ω1 = 0.00 (98%)	ω2 = 1690 (2.1%)
Aganosma_schlechteriana_TLA24_dhs_exon1-7	0.106268829	ω1 = 0.400 (100%)	
Epigynum_cochinchinensis_TLA62_dhs_exon1-7	3.336903426	ω1 = 0.00 (100%)	
Ichnocarpus_frutescens_TL621_dhs_exon1-7	0.317954228	ω1 = 0.177 (100%)	
Epigynum_griffithianum_TLA195_dhs_exon1-7	1.021318531	ω1 = 0.0700 (100%)	
Pottsia_laxiflora	0.499821237	ω1 = 0.134 (100%)	
Chonemorpha_fragrans_TLA37_dhs_exon1-7	19.02699534	ω1 = 0.0915 (100%)	
Trachelospermum_axillare_TLA84_dhs_exon1-7	0.091340643	ω1 = 0.377 (100%)	
Trachelospermum_asiaticum_PA66B_dhs_exon1-7	1.449592971	ω1 = 0.0436 (100%)	
Amalocalyx_microlobus_TLA272_dhs_exon1-7	1.002573964	ω1 = 1.00 (100%)	
Amalocalyx_microlobus	3.35001091	ω1 = 0.00 (100%)	
Apocynum_pictum_PA84_dhs_exon1-7	3.388124822	ω1 = 0.00 (100%)	
Apocynum_venetum_PA82_dhs_exon1-7	0.998282387	ω1 = 1.00 (100%)	
Apocynum_venetum_PA80_dhs_exon1-7	0	ω1 = 10000000000 (100%)	
Apocynum_cannabinum_44_dhs_exon1-7	0	ω1 = 10000000000 (100%)	
Apocynum_androsaemifolium	0.629891087	ω1 = 0.117 (100%)	
Apocynum_androsaemifolium_TLA35_dhs_exon1-7	3.337938966	ω1 = 0.00 (100%)	
Streptoechites_chinensis_54_dhs_exon1-7	0.458986458	ω1 = 0.108 (100%)	
Eucorymbia_alba_PA104_dhs_exon1-7	0.654194257	ω1 = 0.111 (100%)	
Amphineurion_marginatum_55_dhs_exon1-7	0.503280628	ω1 = 0.136 (100%)	
Papuechites_aambe_TLA130_dhs_exon1-7	0.323461894	ω1 = 0.132 (100%)	
Anodendron_oblongifolium_PA100_dhs_exon1-7	3.339703029	ω1 = 1.00 (100%)	
Anodendron_affine_PA79_dhs_exon1-7	0.326120102	ω1 = 0.00 (100%)	
Anodendron_parviflorum_TLA135_dhs_exon1-7	0.469551394	ω1 = 10000000000 (100%)	
Vallaris_solanacea_TLA90_dhs_exon1-7	1.340229533	ω1 = 0.0488 (100%)	
Beaumontia_murtonii_53_dhs_exon1-7	1.028704038	ω1 = 0.0700 (100%)	
Echites_umbellatus_PA76_dhs1_exon1-7	1.075689909	ω1 = 1.00 (100%)	
Echites_umbellatus_PA76_dhs2_exon1-7	3.359364075	ω1 = 0.00 (100%)	
Echites_umbellatus_PA86_dhs_exon1-7	0.10160641	ω1 = 0.350 (100%)	
Echites_umbellatus_4	50	ω1 = 0.0540 (99%)	ω2 = 5000 (0.87%)
Echites_umbellatus_3	1.02824629	ω1 = 1.00 (100%)	
Echites_umbellatus_PA74_dhs_exon1-7	1.010588824	ω1 = 1.00 (100%)	
Echites_turriger_TLA137_dhs_exon1-7	0.206812258	ω1 = 0.207 (100%)	

Echites_woodsonianus_2	17.95260929	ω1 = 0.111 (99%)	ω2 = 10000000000 (0.77%)
Prestonia_portobellensis_51_dhs_exon1-7	0.96603662	ω1 = 0.0855 (100%)	
Prestonia_coalita_3	0.103847871	ω1 = 0.327 (100%)	
Parsonsia_alboflavescens_PA90_dhs_exon1-7	48.55876297	ω1 = 0.00 (100%)	
Macropharynx_spectabilis_TL210_dhs_exon1-7	21.46336819	ω1 = 0.00 (99%)	ω2 = 27.9 (1.2%)
Macropharynx_peltata_49_dhs_exon1-7	3.334027358	ω1 = 0.00 (100%)	
Rhodocalyx_rotundifolius_PA109b_dhs_exon1-7	0.497762688	ω1 = 0.102 (100%)	
Rhodocalyx_riedelii_TL205_dhs_exon1-7	0.177470267	ω1 = 0.178 (100%)	
Temnadenia_odorifera_TL213_dhs_exon1-7	0.284490594	ω1 = 0.184 (100%)	
Laubertia_boissieri_TL220_dhs_exon1-7	0.557337312	ω1 = 0.0961 (100%)	
Pinochia_corymbosa_TL96_dhs_exon1-7	0.581854414	ω1 = 0.100 (100%)	
Secondatia_densiflora_PA62B_dhs_exon1-7	0.803988071	ω1 = 0.0724 (100%)	
Odontadenia_perrottetii_PA60B_dhs_exon1-7	17.12241033	ω1 = 0.00 (99%)	ω2 = 14.6 (1.2%)
Stipecoma_peltigera_TLA134_dhs_exon1-7	0.721453325	ω1 = 0.0999 (100%)	
Elytropus_chilensis_TLA257_dhs_exon1-7	1.002573964	ω1 = 1.00 (100%)	
Elytropus_chilensis_TL208_dhs_exon1-7	3.338393954	ω1 = 0.00 (100%)	
Mesechites_trifidus_45_dhs_exon1-7	0.073609302	ω1 = 0.433 (100%)	
Allomarkgrafia_brenesiana_PA98_dhs_exon1-7	0.661528799	ω1 = 0.0761 (100%)	
Forsteronia_guyanensis_TLA39_dhs_exon1-6	0.380945486	ω1 = 0.157 (100%)	
Mandevilla_boliviensis_TLA76_dhs_exon1-7	0.360826315	ω1 = 0.165 (100%)	
Rhabdadenia_madida_TL206_dhs_exon1-7	0.223829049	ω1 = 0.173 (100%)	
Kibatalia_macrophylla_TLA18_dhs1_exon1-7	0.323380619	ω1 = 0.0868 (100%)	
Funtumia_elastica_TLA144_dhs2_exon1-7	0	ω1 = 1.44 (100%)	
Malouetiella_mildbraedii_TLA246_dhs_exon1-7	0.611702635	ω1 = 0.118 (100%)	
Funtumia_elastica_TLA144_dhs1_exon1-7	0.254567379	ω1 = 0.194 (100%)	
Kibatalia_macrophylla_TLA18_dhs2_exon1-7	0.057997267	ω1 = 0.489 (100%)	
Holarrhena_pubescens_2	3.38677139	ω1 = 0.00 (100%)	
Holarrhena_curtisii_TLA17_dhs_exon1-7	17.13655578	ω1 = 0.0579 (100%)	
Mascarenhasia_arborescens_TLA143_dhs_exon1-7	0.662826016	ω1 = 0.110 (100%)	
Pachypodium_baronii_47_dhs_exon1-7	0.445036417	ω1 = 0.135 (100%)	
Neobracea_velenzuelana	1.31805063	ω1 = 0.0484 (100%)	
Galactophora_schomburgkiana_PA87_dhs_exon1-7	0.542260754	ω1 = 0.120 (100%)	
Nerium_oleander_TLA109_dhs_exon1-7	0.053610783	ω1 = 0.489 (100%)	

Adenium_obesum	1.157507948	ω1 = 0.0588 (100%)	
Strophanthus_boivinii_TLA133_dhs1_exon1-7	1.033965941	ω1 = 1.00 (100%)	
Strophanthus_boivinii_TLA133_dhs3_exon1-7	0.099808973	ω1 = 0.355 (100%)	
Strophanthus_boivinii_TLA133_dhs2_exon1-7	0.546476896	ω1 = 0.131 (100%)	
Strophanthus_preussii_TLA10_dhs_exon1-7	0.221951977	ω1 = 0.206 (100%)	
Alafia_thouarsii_TL216_dhs_exon1-7	0.137607422	ω1 = 0.279 (100%)	
Alafia_barteri_52_dhs_exon1-7	0.294063414	ω1 = 0.137 (100%)	
Isonema_smeathmannii_TLA142_dhs_exon1-7	0.23372624	ω1 = 0.00549 (98%)	ω2 = 14.6 (2.0%)
Wrightia_religiosa_TL104_dhs1_exon1-7	0.631421032	ω1 = 0.116 (100%)	
Wrightia_arborea_TLA91_dhs1_exon1-7	0.633521428	ω1 = 0.116 (100%)	
Wrightia_lanceolata_TL103_dhs1_exon1-7	0.028791317	ω1 = 0.697 (100%)	
Stephanostema_stenocarpum_TLA232_dhs1_exon1-7	0.609103699	ω1 = 0.116 (100%)	
Pleioceras_barteri_TLA244_dhs1_exon1-7	0	ω1 = 10000000000 (100%)	
Rauvolfia_tetraphylla	0.267360099	ω1 = 0.139 (100%)	
Rauvolfia_balansae_PA106_dhs_exon1-7	0.147177786	ω1 = 0.267 (100%)	
Rauvolfia_vomitoria_PA108_dhs_exon1-7	0.509525251	ω1 = 0.133 (100%)	
Rauvolfia_serpentina	0.182212257	ω1 = 0.168 (100%)	
Rauvolfia_verticillata_PA91_dhs_exon1-7	0.544369269	ω1 = 0.0638 (100%)	
Kamettia_chandeei	15.20596061	ω1 = 0.0759 (99%)	ω2 = 39.2 (0.79%)
Catharanthus_ovalis	1.001808541	ω1 = 1.00 (100%)	
Catharanthus_roseus	0.999808354	ω1 = 1.00 (100%)	
Catharanthus_longifolius	0.396301399	ω1 = 0.00 (100%)	
Vinca_minor	0.1736246	ω1 = 0.244 (100%)	
Vinca_major_43_dhs_exon1-7	0.361664845	ω1 = 0.0827 (100%)	
Ochrosia_poweri_PA89_dhs_exon1-7	0.092951483	ω1 = 0.365 (100%)	
Ochrosia_coccinea_PA88_dhs_exon1-7	0.425120144	ω1 = 0.151 (100%)	
Pycnobotrya_nitida_59_dhs_exon1-7	0.717960078	ω1 = 0.0909 (100%)	
Plectaneia_thouarsii	1.918548171	ω1 = 0.0276 (100%)	
Diplorhynchus_condylocarpon_70_dhs_exon1-7	0.222131712	ω1 = 0.00 (93%)	ω2 = 4.01 (7.3%)
Kopsia_rosea_69_dhs_exon1-7	0.599644462	ω1 = 0.100 (100%)	ω2 = 13.0 (0.47%)
Tabernaemontana_bufalina_PA92_dhs_exon1-7	0.026226525	ω1 = 0.716 (100%)	
Tabernaemontana_bufalina_PA93_dhs_exon1-7	1.001809781	ω1 = 1.00 (100%)	
Tabernaemontana_elegans	0.475464977	ω1 = 0.105 (100%)	
Tabernaemontana_pandacaqui_PA94_dhs_exon1-7	3.363621336	ω1 = 0.00 (100%)	

Tabernaemontana_peduncularis_PA95_dhs_exon1-7		0.094906951	ω1 = 0.363 (100%)	
Amsonia_hubrichtii_2		0	ω1 = 1.46 (100%)	
Amsonia_hubrichtii_1		1.009209103	ω1 = 1.00 (100%)	
Amsonia_orientalis_PA97_dhs_exon1-7		0	ω1 = 1.10 (100%)	
Hunteria_zeylanica_67c_dhs_exon1-7		1.732431151	ω1 = 0.0322 (100%)	
Craspidospermum_verticillatum_58_dhs_exon1-7		0.448120107	ω1 = 0.121 (100%)	
Himatanthus_bracteatus		1.149262922	ω1 = 1.00 (100%)	
Himatanthus_obovatus_PA99_dhs_exon1-7		1.149262922	ω1 = 1.00 (100%)	
Plumeria_cubensis_48_dhs_exon1-7		0.194918084	ω1 = 0.189 (100%)	
Allamanda_schottii_46_dhs_exon1-7		0.541530589	ω1 = 0.101 (100%)	ω2 = 41.4 (0.41%)
Thevetia_peruviana_56_dhs_exon1-7		0.632566776	ω1 = 0.101 (100%)	
Haplophyton_crooksii		1.920159503	ω1 = 0.00 (97%)	ω2 = 2.88 (2.6%)
Gelsemium_sempervirens_32_dhs_exon1-7		1.104423486	ω1 = 0.0104 (95%)	ω2 = 1.60 (4.7%)
root		0	ω1 = 0	
1		0	ω1 = 0	
2		0.26811171	ω1 = 0.113 (99%)	ω2 = 28.0 (1.5%)
3		16.5354877	ω1 = 0.0968 (100%)	
4		2.219431619	ω1 = 0.00 (100%)	
5		0	ω1 = 35.6 (100%)	
6		0	ω1 = 2.04 (100%)	
7	A	0.010603799	ω1 = 0.826 (100%)	
8		0.462448582	ω1 = 0.131 (100%)	
9		0.209344944	ω1 = 0.129 (100%)	
10		0.877755792	ω1 = 0.117 (100%)	
11	B	0.408378276	ω1 = 0.168 (100%)	
12		1.935439934	ω1 = 0.00 (100%)	
13		0.998282387	ω1 = 1.00 (100%)	
14		0.075613853	ω1 = 0.158 (100%)	
15	C	0.118646063	ω1 = 0.261 (98%)	ω2 = 19.0 (2.3%)
16		1.25476622	ω1 = 0.0573 (100%)	
17		1.490929545	ω1 = 0.0382 (100%)	

18		1.804826961	ω1 = 0.0367 (100%)	
19		2.977342561	ω1 = 0.00 (100%)	
20		0.818960701	ω1 = 0.0907 (100%)	
21		3.347321783	ω1 = 0.00 (100%)	
26		3.352762036	ω1 = 0.00 (100%)	
30		31.80967374	ω1 = 0.00 (99%)	ω2 = 142 (0.91%)
31		0.522125274	ω1 = 0.133 (100%)	
32		0.202203922	ω1 = 0.212 (100%)	
36		0.613866767	ω1 = 0.133 (100%)	
37		1.146507432	ω1 = 0.0596 (100%)	
41		3.347714096	ω1 = 0.00 (100%)	
42		0.194579702	ω1 = 0.250 (100%)	
43		0.304739311	ω1 = 0.208 (100%)	
44		0.633742162	ω1 = 0.120 (100%)	
47		0.130654664	ω1 = 0.296 (100%)	
52		0.002898517	ω1 = 0.988 (100%)	
53		0	ω1 = 10000000000 (100%)	
57		3.336618148	ω1 = 0.00 (100%)	
58		1.848504502	ω1 = 0.0437 (100%)	
59		0.998282387	ω1 = 1.00 (100%)	
60		50	ω1 = 0.00 (100%)	ω2 = 10000000000 (0.41%)
64		0.150891659	ω1 = 0.214 (100%)	
68		0.185678897	ω1 = 0.205 (100%)	
71		3.375033565	ω1 = 0.00 (100%)	
72	E	3.333348104	ω1 = 0.00 (100%)	
73		0	ω1 = 10000000000 (100%)	
74		0.006072081	ω1 = 0.911 (100%)	
75		0	ω1 = 10000000000 (100%)	
76		17.33293904	ω1 = 0.0744 (100%)	
77		3.34349407	ω1 = 0.00 (100%)	
78		0.355951351	ω1 = 0.166 (100%)	
79		3.348977709	ω1 = 0.00 (100%)	
80		0.999808354	ω1 = 1.00 (100%)	

86		1.053980029	ω1 = 0.0676 (100%)	
87		0.302421028	ω1 = 0.181 (100%)	
91		0.082740202	ω1 = 0.273 (99%)	ω2 = 670 (0.66%)
94		1.092417568	ω1 = 0.0366 (100%)	
98	D	0.182009164	ω1 = 0.154 (100%)	
99		0	ω1 = 10000000000 (100%)	
100		0	ω1 = 10000000000 (100%)	
104		3.342340851	ω1 = 0.00 (100%)	
108		1.735209336	ω1 = 0.0264 (100%)	
111		0.371698164	ω1 = 0.143 (100%)	
112		0.151125208	ω1 = 0.263 (100%)	
113		3.350183252	ω1 = 0.126 (100%)	
114		3.332234969	ω1 = 0.00 (100%)	
120	L	3.591722092	ω1 = 0.00 (100%)	
121		0.329575763	ω1 = 0.0590 (99%)	ω2 = 145 (0.79%)
122		0.6886241	ω1 = 0.0132 (95%)	ω2 = 2.27 (4.7%)
123		1.350367761	ω1 = 0.0433 (100%)	
124		0.496661199	ω1 = 0.152 (100%)	
125		0.311252584	ω1 = 0.158 (100%)	
126		3.355414708	ω1 = 0.00 (100%)	
127		50	ω1 = 0.00 (100%)	ω2 = 2950 (0.41%)
128		3.345814456	ω1 = 0.00 (100%)	
129		0.004229264	ω1 = 0.359 (100%)	
130		0.598195905	ω1 = 0.117 (100%)	
131	J	25.05826724	ω1 = 0.600 (100%)	
132		0.021353792	ω1 = 0.726 (100%)	
133		0.29795872	ω1 = 0.179 (100%)	
134		0.998282387	ω1 = 10000000000 (100%)	
135		3.364339001	ω1 = 0.00 (100%)	
136		0	ω1 = 1.00 (100%)	
137		0.023002465	ω1 = 0.740 (100%)	
138		3.344106572	ω1 = 0.00 (100%)	

139		27.83308997	ω1 = 0.00 (100%)	ω2 = 10000000000 (0.31%)
145		3.434715775	ω1 = 0.00 (100%)	
146		0	ω1 = 10000000000 (100%)	
147		31.43247178	ω1 = 0.00 (99%)	ω2 = 250 (0.74%)
152		0.505232912	ω1 = 0.134 (100%)	
155		49.59788209	ω1 = 10000000000 (100%)	
158		0.23695942	ω1 = 0.00 (100%)	
159		1.006893287	ω1 = 1.00 (100%)	
160		0.092342727	ω1 = 0.372 (100%)	
161		0	ω1 = 0.968 (100%)	
165		0.853461199	ω1 = 0.0882 (100%)	
168		3.367491689	ω1 = 0.00 (100%)	
171		0.112405282	ω1 = 0.692 (100%)	
172		0.019905828	ω1 = 0.402 (100%)	
179		1.422202587	ω1 = 0.0447 (100%)	
182		3.337130391	ω1 = 0.00 (100%)	
183		3.341336097	ω1 = 0.00 (100%)	
184		3.346633246	ω1 = 0.00 (100%)	
187		1.448171468	ω1 = 0.0463 (100%)	
190		1.030061972	ω1 = 0.0691 (100%)	
193		1.002573964	ω1 = 1.00 (100%)	
194		0.269322968	ω1 = 0.144 (100%)	
199	I	0.375219868	ω1 = 0.00 (95%)	ω2 = 3.29 (5.0%)
200		0.460131157	ω1 = 0.133 (100%)	
201		0.011993156	ω1 = 0.990 (100%)	ω2 = 2790 (0.35%)
202		0.160774773	ω1 = 0.246 (100%)	
210		0.304709644	ω1 = 0.143 (100%)	
211		0.088458648	ω1 = 0.375 (100%)	
215	G	0.050935898	ω1 = 0.580 (100%)	
216	F	32.50620624	ω1 = 0.00 (99%)	ω2 = 198 (1.2%)
217		0.005274499	ω1 = 0.581 (100%)	
218		0.915544575	ω1 = 0.0928 (100%)	
219		0.453706443	ω1 = 0.145 (100%)	

220		3.355614723	ω1 = 0.00 (100%)	
227		0.065033782	ω1 = 0.423 (100%)	
228		0.17988491	ω1 = 0.138 (98%)	ω2 = 12.2 (1.9%)
229	K	0.100296179	ω1 = 0.363 (99%)	ω2 = 62.5 (0.52%)
234		0.247987194	ω1 = 0.129 (100%)	
235		34.42620881	ω1 = 0.00 (100%)	ω2 = 631 (0.32%)
236		0.999808354	ω1 = 1.00 (100%)	
237		3.363496323	ω1 = 0.00 (100%)	
240		0.999808354	ω1 = 1.00 (100%)	
245	H	0.119850293	ω1 = 0.151 (100%)	
246		3.358719011	ω1 = 0.00 (100%)	
247		3.389900248	ω1 = 0.00 (100%)	
248		3.338260294	ω1 = 0.00 (100%)	
249		0.214567634	ω1 = 0.209 (100%)	
250		0.386617792	ω1 = 0.172 (100%)	
251		0.578354431	ω1 = 0.123 (100%)	
252		3.36560223	ω1 = 0.00 (100%)	
253		48.85788251	ω1 = 0.0171 (100%)	
254		0.062737309	ω1 = 0.329 (100%)	
255		1.737518635	ω1 = 0.0327 (100%)	
256		30.10681522	ω1 = 0.0789 (100%)	ω2 = 766 (0.36%)
257		0.563948894	ω1 = 0.118 (100%)	
258		0.212245236	ω1 = 0.178 (100%)	
259		3.332369102	ω1 = 0.00 (100%)	
260		0.316798907	ω1 = 0.178 (100%)	
261		0.998282387	ω1 = 1.00 (100%)	
262		1.001337824	ω1 = 1.00 (100%)	
267		0.998282387	ω1 = 1.00 (100%)	
268		0.998282387	ω1 = 1.00 (100%)	
269		3.357775954	ω1 = 0.00 (100%)	
274		3.327451879	ω1 = 0.00 (100%)	
275		0	ω1 = 10000000000 (100%)	
279		3.334766272	ω1 = 0.00 (100%)	

280	0.998282387	ω1 = 1.00 (100%)	
281	0.053237403	ω1 = 0.528 (100%)	
282	0.08693414	ω1 = 0.393 (100%)	
288	0	ω1 = 10000000000 (100%)	
289	0.998282387	ω1 = 1.00 (100%)	
290	0.313225949	ω1 = 0.179 (100%)	
293	0.177221579	ω1 = 0.119 (100%)	
296	0.177316749	ω1 = 0.238 (100%)	
297	0.08818641	ω1 = 0.381 (100%)	
301	16.54707353	ω1 = 0.00 (99%)	ω2 = 15.4 (0.98%)
302	0.357817288	ω1 = 0.203 (100%)	
303	3.364926605	ω1 = 0.00 (100%)	
304	0.165766871	ω1 = 0.191 (100%)	
309	1.084631184	ω1 = 0.0597 (100%)	
310	0.499036663	ω1 = 0.102 (100%)	
316	0.199608303	ω1 = 0.225 (100%)	
317	0.182419588	ω1 = 0.216 (100%)	
321	0.743450056	ω1 = 0.0799 (100%)	
322	0.279352528	ω1 = 0.175 (100%)	
323	3.363784177	ω1 = 0.00 (100%)	
324	3.360110653	ω1 = 0.00 (100%)	
325	3.336294207	ω1 = 0.00 (100%)	
328	0.327704248	ω1 = 0.175 (100%)	
334	3.364496761	ω1 = 0.00 (100%)	
335	0.021703289	ω1 = 0.963 (100%)	
336	3.337507752	ω1 = 0.00 (100%)	
337	3.355117264	ω1 = 0.00 (100%)	
338	0.943792168	ω1 = 0.0842 (100%)	
339	3.338768563	ω1 = 0.00 (100%)	
340	3.278259375	ω1 = 0.00 (100%)	
341	0	ω1 = 1.01 (100%)	
342	0.060978392	ω1 = 0.320 (100%)	

343	3.357609259	ω1 = 0.00 (100%)	
344	3.304643283	ω1 = 0.00 (100%)	
352	3.353977958	ω1 = 0.00 (100%)	
353	20.46226556	ω1 = 0.197 (100%)	
356	1.420085335	ω1 = 0.0521 (100%)	
359	0.485790787	ω1 = 0.117 (100%)	
360	0	ω1 = 10000000000 (100%)	
361	3.387480897	ω1 = 0.00 (100%)	
362	0.027333776	ω1 = 0.707 (100%)	
367	3.358367285	ω1 = 0.00 (100%)	
371	0.384795301	ω1 = 0.153 (100%)	
372	1.467791418	ω1 = 0.0430 (100%)	
376	3.339434541	ω1 = 0.00 (100%)	
377	21.20621256	ω1 = 0.0613 (99%)	ω2 = 358 (0.69%)
378	0.171410029	ω1 = 0.237 (100%)	
382	0.629857681	ω1 = 0.112 (100%)	
385	1.536624753	ω1 = 0.0401 (100%)	
386	0.175057455	ω1 = 0.00 (100%)	
387	1.14849123	ω1 = 0.0488 (100%)	
388	0.063036918	ω1 = 0.388 (100%)	
389	22.93256959	ω1 = 0.103 (100%)	
390	3.36056655	ω1 = 0.00 (100%)	
391	0.423585293	ω1 = 0.152 (100%)	
392	3.338609961	ω1 = 0.00 (100%)	
393	0	ω1 = 10000000000 (100%)	
397	3.338330894	ω1 = 0.00 (100%)	
398	1.010588824	ω1 = 10000000000 (100%)	
404	0.087972754	ω1 = 0.383 (100%)	
405	3.361553388	ω1 = 0.00 (100%)	
409	0.232603186	ω1 = 0.208 (100%)	
410	3.421100069	ω1 = 0.00 (100%)	
411	3.335779983	ω1 = 0.00 (100%)	

412	3.33834429	ω1 = 0.00 (100%)	
413	0.162532468	ω1 = 0.252 (100%)	
421	3.339350745	ω1 = 0.00 (100%)	
422	0	ω1 = 10000000000 (100%)	
423	0.457942234	ω1 = 0.00 (100%)	
424	3.350380727	ω1 = 0.00 (100%)	
428	0.071926757	ω1 = 0.432 (100%)	
431	0.173227189	ω1 = 0.234 (100%)	
432	0.013495715	ω1 = 0.964 (100%)	
433	1.298302389	ω1 = 0.0506 (100%)	
439	0.513549003	ω1 = 0.0911 (100%)	
440	3.354299689	ω1 = 0.00 (100%)	
441	3.384900912	ω1 = 0.00 (100%)	
442	0.999044934	ω1 = 1.00 (100%)	
443	3.333439538	ω1 = 0.00 (100%)	
444	0.998282387	ω1 = 1.00 (100%)	
445	0.353580792	ω1 = 0.167 (100%)	
451	0.653045581	ω1 = 0.113 (100%)	
455	3.411741435	ω1 = 0.00 (100%)	
456	0.0107735	ω1 = 0.935 (100%)	
460	3.09296643	ω1 = 0.00 (100%)	
463	3.345088353	ω1 = 0.00 (100%)	
464	3.357386942	ω1 = 0.00 (100%)	
465	0.133652963	ω1 = 0.232 (100%)	
466	0.155627966	ω1 = 0.250 (100%)	
471	0.827489595	ω1 = 0.0979 (100%)	
472	0.571208102	ω1 = 0.124 (100%)	
476	0.272184204	ω1 = 0.00 (91%)	ω2 = 2.42 (8.9%)
477	50	ω1 = 0.00 (99%)	ω2 = 725 (1.3%)
478	1.007194478	ω1 = 1.00 (100%)	
482	0.2663649	ω1 = 0.192 (100%)	
485	0	ω1 = 10000000000 (100%)	

486	0.16813912	ω1 = 0.210 (100%)	
487	3.350486791	ω1 = 0.00 (100%)	
488	3.362584161	ω1 = 0.00 (100%)	
489	0.094850645	ω1 = 0.351 (100%)	
490	0.179828724	ω1 = 0.220 (100%)	
491	3.3551024	ω1 = 0.00 (100%)	
492	50	ω1 = 0.00 (100%)	
493	0	ω1 = 0.00 (98%)	ω2 = 624 (2.0%)
494	15.69072744	ω1 = 0.0605 (100%)	
495	0	ω1 = 1.00 (100%)	
496	3.342014482	ω1 = 0.00 (100%)	
497	0.632679551	ω1 = 0.115 (100%)	
504	1.094657992	ω1 = 0.0623 (100%)	
505	3.371466293	ω1 = 0.00 (100%)	
509	0.493657022	ω1 = 0.106 (100%)	
512	0.794190147	ω1 = 0.0998 (100%)	
516	3.362684042	ω1 = 0.00 (100%)	
520	0.497318825	ω1 = 0.124 (100%)	
521	0.080118996	ω1 = 0.386 (100%)	
522	0.357559884	ω1 = 0.169 (100%)	
526	0.105577002	ω1 = 0.519 (100%)	
529	0	ω1 = 10000000000 (100%)	
530	3.331692292	ω1 = 0.00 (100%)	
531	0.515860738	ω1 = 0.141 (100%)	
532	0.088418365	ω1 = 0.379 (100%)	
538	0.650051685	ω1 = 0.00 (100%)	
539	0.263439045	ω1 = 0.146 (100%)	
540	1.866731288	ω1 = 0.0305 (100%)	
541	0.105986066	ω1 = 0.339 (100%)	

Table S11: Model selection using AICc with RELAX, comparing the null and alternative models for designated reference and test branches (see Table 2 for details of the comparisons). The fit of the general descriptive model is also reported. The optimal ω1, ω2, ω3 rates and percentage of sites assigned to each rate class are reported for each model. See Figs. 3, 4, and S3 for reduced and full dataset topologies.

Table S11.1: V269I

Tree Topology	Model	logL	# parameters	AICc	Branch set	ω1	ω2	ω3
Reduced dataset	General descriptive	-33649.9	1113	69550.8	shared	0.0 (72.61%)	0.14 (26.03%)	1.21 (1.37%)
	RELAX alternative	-34093.5	572	69337.6	reference	0.0 (80.81%)	0.89 (18.43%)	22.07 (0.75%)
					test	0.0 (80.81%)	0.87 (18.43%)	37.52 (0.75%)
	RELAX null	-34092.3	571	69335.7	reference	0.0 (80.47%)	0.84 (18.67%)	22.03 (0.86%)
					test	0.0 (80.47%)	0.84 (18.67%)	22.03 (0.86%)

Table S11.2: D273N

Tree	Model	logL	# parameters	AICc	Branch set	ω1	ω2	ω3
Full dataset topology (1)	General descriptive	-33786.0	1113	69823	shared	0.0 (4.77%)	0.0 (86.88%)	1.08 (8.34%)
	RELAX alternative	-34110.5	572	69371.6	reference	0.09 (77.97%)	0.23 (20.75%)	11.50 (1.29%)
					test	0.12 (77.97%)	0.28 (20.75%)	8.31 (1.29%)
	RELAX null	-34112.0	571	69372.4	reference	0.09 (77.27%)	0.26 (21.20%)	8.72 (1.53%)
					test	0.09 (77.27%)	0.26 (21.20%)	8.72 (1.53%)
Full dataset topology (2)	General descriptive	-33664.7	1113	69580.3	shared	0.0 (72.29%)	0.14 (26.31%)	1.21 (1.39%)
	RELAX alternative	-34106.7	572	69363.9	reference	0.0 (32.98%)	0.0 (58.52%)	2.64 (8.50%)
					test	0.0 (32.98%)	0.0 (58.52%)	3.21 (8.50%)
	RELAX null	-34111.9	571	69372.3	reference	0.06 (65.58%)	0.26 (32.97%)	8.98 (1.45%)
					test	0.06 (65.58%)	0.26 (32.97%)	8.98 (1.45%)
Reduced dataset (1)	General descriptive	-33651.3	1113	69553.5	shared	0.0 (72.83%)	0.12 (25.82%)	1.24 (1.35%)
	RELAX alternative	-34091.3	572	69333.2	reference	0.08 (66.94%)	0.2 (31.9%)	12.68 (1.15%)
					test	0.12 (66.94%)	0.25 (31.9%)	8.79 (1.15%)
	RELAX null	-34093.1	571		reference	0.1 (69.7%)	0.22 (28.95%)	9.52 (1.36%)
				69347.5	test	0.1 (69.7%)	0.22 (28.95%)	9.52 (1.36%)
Reduced dataset (2)	General descriptive	-33651.3	1113	69563.2	shared	0.0 (73.19%)	0.15 (25.56%)	1.24 (1.25%)
	RELAX alternative	-34091.5	572	69333.6	reference	0.08 (68.82%)	0.2 (30.05%)	12.9 (1.13%)
					test	0.12 (68.82%)	0.26 (30.05%)	8.92 (1.13%)
	RELAX null	-34093.5	571		reference	0.1 (70.23%)	0.21 (28.42%)	9.56 (1.35%)
				69341.2	test	0.1 (70.23%)	0.21 (28.42%)	9.56 (1.35%)

Table S11.3: HSS-like IXXXN and IXXXD vs. VXXXD

Tree	Model	logL	# parameters	AICc	Branch set	ω1	ω2	ω3
Full dataset topology	General descriptive	-33665.0	1113	69580.9	shared	0.0 (71.99%)	0.13 (26.62%)	1.22 (1.39%)
	RELAX alternative	-34110.3	572	69371.1	reference	0.03 (81.21%)	0.71 (18.61%)	47.79 (0.18%)
					test	0.06 (81.21%)	0.76 (18.61%)	20.87 (0.18%)
	RELAX null	-34111.1	571	69370.8	reference	0.0 (79.86%)	0.81 (19.97%)	40.63 (0.17%)
					test	0.0 (79.86%)	0.81 (19.97%)	40.63 (0.17%)
Reduced dataset	General descriptive	-31999.6	1113	66251.1	shared	0.0 (74.93%)	0.09 (23.84%)	1.24 (1.23%)
	RELAX alternative	-32425.4	572	66001.5	reference	0.0 (83.99%)	1.0 (15.92%)	57.19 (0.09%)
					test	0.0 (83.99%)	1.0 (15.92%)	428.54 (0.09%)
	RELAX null	-32428.0	571	66004.8	reference	0.01 (84.31%)	0.96 (15.62%)	107.35 (0.08%)
					test	0.01 (84.31%)	0.96 (15.62%)	107.35 (0.08%)

Table S11.4: HSS-like vs. DHS-like

Tree	Model	logL	# parameters	AICc	Branch set	ω1	ω2	ω3
Full dataset topology	General descriptive	-33663.6	1113	69578.3	shared	0.0 (72.13%)	0.16 (26.48%)	1.18 (1.4%)
	RELAX alternative	-34112.8	572	69376.2	reference	0.0 (83.48%)	1.0 (16.44%)	32.34 (0.08%
					test	0.0 (83.48%)	1.0 (16.44%)	94.77 (0.08%
	RELAX null	-34108.5	571	69378.3	reference	0.01 (83.48%)	0.91 (16.46%)	43.81 (0.11%)
					test	0.01 (83.48%)	0.91 (16.46%)	43.81 (0.11%)
Reduced dataset	General descriptive	-33658.6	1113	69568.2	shared	0.0 (72.83%)	0.23 (26.11%)	1.17 (1.06%)
	RELAX alternative	-34098.1	572	69346.7	reference	0.0 (83.53%)	1.0 (16.39%)	32.05 (0.08%)
					test	0.0 (83.53%)	1.0 (16.39%)	92.32 (0.08%)
	RELAX null	-34099.5	571	69347.5	reference	0.01 (82.93%)	0.92 (16.99%)	67.36 (0.08%)
					test	0.01 (82.93%)	0.92 (16.99%)	67.36 (0.08%)

Table S12: Model selection with AICc with MEME, and inferred ω for *a priori* test branches (lettered branches A-G, as well as the *hss*-like *Amphineurion marginatum*, *Isonema smeathmannii*, *Marsdenia tinctoria*, and *Strophanthus boivinii* branches (Figs. 3, 4, S3) and the background branches (i.e. remainder of tree) under the optimal model.

Tree	Model	AICc	LogL	parameters	ω background branches	ω test branches
Full dataset toplogy	Nucleotide GTR	71309.49	-35098.68	555	--	--
	Global MG94xREV	66307.48	-32587.45	563	0.142	0.262
Reduced dataset	Nucleotide GTR	71291.44	-35089.66	555	--	--
	Global MG94xREV	66282.23	-32574.83	563	0.143	0.279