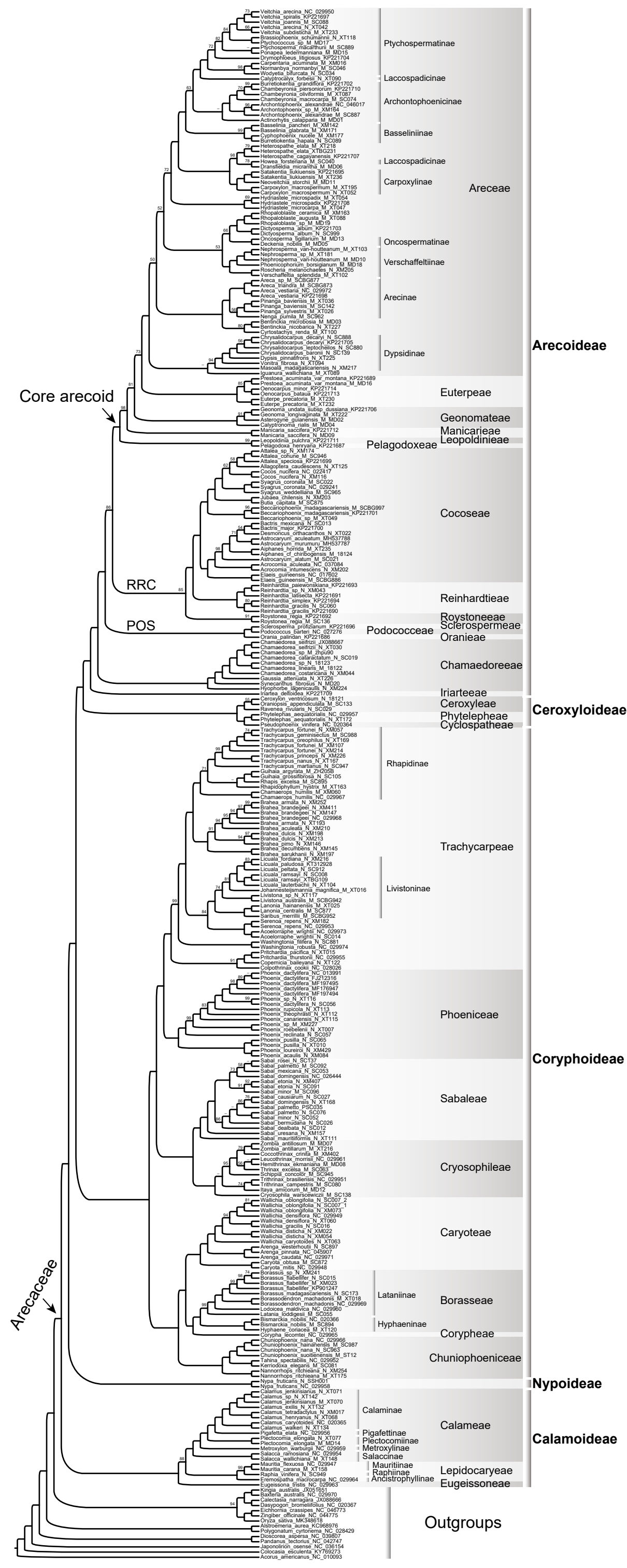
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Veitchia_arecina_N_XT042
Veitchia_subdisticha_M_XT233
Brassiophoenix_schumannii_N_XT118
Ptychococcus_sp_M_MD17
Ptychosperma_macarthurii_M_SC889
Ponapea_ledermanniana_M_MD15
Drymophloeus_litigiosus_KP221704
Carpentaria_acuminata_M_XM016
Normanbya_normanbyi_M_SC046
Wodyetia_bifurcata_N_SC034
Calyptrocalyx_forbesii_N_XT090
Burretiokentia_grandiflora_KP221702
Chambeyronia_piersoniorum_KP221710
Chambeyronia_oliviformis_M_XT087
Chambeyronia_macrocarpa_M_SC074
Archontophoenix_alexandrae_NC_046017
Archontophoenix_sp_M_XM164
Archontophoenix_alexandrae_M_SC887
Actinorhytis_calapparia_M_MD01
Basselinia_pancheri_M_XM142
Basselinia_glabrata_M_XM171
Cyphophoenix_nucele_M_XM177
Burretiokentia_hapala_N_SC089
Heterospathe_elata_M_XT218
Heterospathe_elata_XTBG231
Heterospathe_cagayanensis_KP221707
Howea_forsteriana_M_SC040
Dransfieldia_micranthia_M_MD06
Satakentia_liukiuensis_KP221695
Satakentia_liukiuensis_M_XT236
Neoveitchia_storchii_M_MD11
Carpoxylon_macrospermum_M_XT195
Carpoxylon_macrospermum_N_XT052
Hydriastele_microspadix_M_XT054
Hydriastele_microspadix_KP221708
Hydriastele_microcarpa_M_XT047
Rhopalobla ste_ceramica_M_XM163
Rhopalobla ste_augusta_M_XT088
Rhopalobla ste_sp_M_MD19
Dictyosperma_album_KP221703
Dictyosperma_album_N_SC999
Oncosperma_tigillarium_M_MD13
Deckenia_nobilis_M_MD05
Nephrosperma_van-houtteanum_M_XT103
Nephrosperma_sp_M_XT181
Nephrosperma_van-houtteanum_M_MD10
Phoenicophorium_borsigianum_M_MD18
Roscheria_melanochaetes_N_XM205
Verschaffeltia_splendida_M_XT102
Areca_sp_M_SCBG877
Areca_triandra_M_SCBG873
Areca_vestiaria_NC_029972
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Pinanga_baviensis_M_XT036
Pinanga_baviensis_M_SC142
Pinanga_sylvestris_M_XT026
Nenga_pumila_M_SC962
Bentinckia_microbosia_M_MD03
Bentinckia_nicobarica_N_XT227
Cyrtostachys_renda_M_XT100
Chrysalidocarpus_decaryi_N_SC888
Chrysalidocarpus_decaryi_KP221705
Chrysalidocarpus_leptocheilos_N_SC880
Chrysalidocarpus_baronii_N_SC139
Dypsis_pinnatifrons_N_XT225
Voniira_fibrosa_N_XT094
Masoala_madagascariensis_N_XM217
Iguanura_wallichiana_M_XT089
Prestoea_acuminata_var_montana_KP221689
Prestoea_acuminata_var_montana_M_MD16
Oenocarpus_minor_KP221714
Oenocarpus_bataua_KP221713
Euterpe_precatoria_M_XT230
Euterpe_precatoria_M_XT232
Geonoma_undata_subsp_dussiana_KP221706
Geonoma_longivaginata_M_XT222
Asterogyne_guianensis_M_MD02
Calyptronoma_rialis_M_MD04
Manicaria_saccifera_KP221712
Manicaria_saccifera_N_MD09
Leopoldinia_pulchra_KP221711
Pelagodoxa_henryana_KP221687
Attalea_sp_N_XM174
Attalea_cohune_M_SC946
Attalea_speciosa_KP221699
Allagoptera_caudescens_N_XT125
Cocos_nucifera_NC_022317
Cocos_nucifera_N_XM116
Syagrus_coronata_M_SC022
Syagrus_coronata_NC_029241
Syagrus_weddelliana_M_SC965
Jubaea_chilensis_N_XM203
Butia_capitata_M_SC875
Beccariophoenix_madagascariensis_M_SCBG997
Beccariophoenix_madagascariensis_KP221701
Beccariophoenix_sp_M_XT049
Bactris_mexicana_N_SC013
Bactris_major_KP221700
Desmoncus_orthacanthos_N_XT022
Astrocaryum_aculeatum_MH537788
Astrocaryum_murumuru_MH537787
Aiphanes_horrida_M_XT235
Aiphanes_cf_chiribogensis_M_18124
Astrocaryum_alatum_M_SC021
Acrocomia_aculeata_NC_037084
Acrocomia_intumescens_N_XM202
Elaeis_guineensis_NC_017602
Elaeis_guineensis_M_SCBG886
Reinhardtia_paiewonskiana_KP221693
Reinhardtia_sp_N_XM043
Reinhardtia_latisecta_KP221691
Reinhardtia_simplex_KP221694
Reinhardtia_gracilis_N_SC060
Reinhardtia_gracilis_KP221690
Roystonea_regia_KP221692
Roystonea_regia_M_SC136
Sclerosperma_profizianum_KP221696
Podococcus_barteri_NC_027276
Orania_palindan_KP221686
Chamaedorea_seifrizii_JX088667
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Chamaedorea_sp_M_zhpu90
Chamaedorea_cataractatum_N_SC019
Chamaedorea_sp_N_18123
Chamaedorea_linearis_M_18122
Chamaedorea_costaricana_N_XM044
Gaussia_attenuata_N_XT226
Synecanthus_fibrosus_N_MD20
Hyophorbe_lagenicaulis_N_XM224
Iriartea_deltoidea_KP221709
Ceroxylon_ventricosum_N_18121
Oraniopsis_appendiculata_M_SC133
Ravenea_rivularis_N_SC029
Phytelephas_aequatorialis_NC_029957
Phytelephas_aequatorialis_N_XT172
Pseudophoenix_vinifera_NC_020364
Trachycarpus_fortunei_N_XM057
Trachycarpus_geminisectus_M_SC988
Trachycarpus_oreophilus_N_XT169
Trachycarpus_fortunei_M_XM107
Trachycarpus_fortunei_N_XM214
Trachycarpus_princeps_N_XM226
Trachycarpus_nanus_N_XT167
Trachycarpus_martianus_N_SC947
Guihaia_argyrata_M_ZH205B
Guihaia_grossifibrosa_N_SC105
Rhapis_excelsa_M_SC895
Rhapidophyllum_hystrix_M_XT163
Chamaerops_humilis_M_XM060
Chamaerops_humilis_NC_029967
Brahea_armata_N_XM252
Brahea_brandegeei_N_XM411
Brahea_brandegeei_N_XM147
Brahea_brandegeei_NC_029968
Brahea_armata_N_XT193
Brahea_aculeata_N_XM210
Brahea_dulcis_N_XM198
Brahea_dulcis_N_XM213
Brahea_pimo_N_XM146
Brahea_decumbens_N_XM145
Brahea_sarukhanii_N_XM197
Licuala_fordiana_N_XM216
Licuala_paludosa_KT312928
Licuala_peltata_N_SC912
Licuala_ramsayi_N_SC008
Licuala_ramsayi_XTBG109
Licuala_lauterbachii_N_XT104
Johannesteijsmannia_magnifica_M_XT016
Livistona_sp_N_XT117
Livistona_australis_M_SCBG942
Lanonia_hainanensis_M_XT025
Lanonia_centralis_M_SC877
Saribus_merrillii_M_SCBG952
Serenoa_repens_N_XM182
Serenoa_repens_NC_029953
Acoelorraphe_wrightii_NC_029973
Acoelorraphe_wrightii_N_SC014
Washingtonia_filifera_N_SC881
Washingtonia_robusta_NC_029974
Pritchardia_pacifica_N_XT015
Pritchardia_thurstonii_NC_029955
Copernicia_baileyana_N_XT122
Colpothrinax_cookii_NC_028026
Phoenix_dactylifera_NC_013991
Phoenix_dactylifera_FJ212316
Phoenix_dactylifera_MF197495
Phoenix_dactylifera_MF176947
Phoenix_dactylifera_MF197494
Phoenix_sp_N_XT116
Phoenix_dactylifera_N_SC056
Phoenix_rupicola_N_XT113
Phoenix_theophrasti_N_XT112
Phoenix_canariensis_N_XT115
Phoenix_sp_M_XM227
Phoenix_roebelenii_N_XT007
Phoenix_reclinata_N_SC057
Phoenix_pusilla_N_SC065
Phoenix_pusilla_N_XT010
Phoenix_loureiroi_N_XM429
Phoenix_acaulis_N_XM084
Sabal_rosei_N_SC137
Sabal_palmetto_M_SC092
Sabal_mexicana_N_SC053
Sabal_domingensis_NC_026444
Sabal_etonia_N_XM407
Sabal_etonia_N_SC091
Sabal_minor_M_SC096
Sabal_causiarum_N_SC027
Sabal_domingensis_N_XT168
Sabal_palmetto_PSC035
Sabal_palmetto_N_SC076
Sabal_minor_N_SC052
Sabal_bermudana_N_SC026
Sabal_dealbata_N_SC012
Sabal_uresana_N_XM157
Sabal_mauritiiformis_N_XT111
Zombia_antillosum_M_MD07
Zombia_antillarum_M_XT216
Coccothrinax_crinita_M_XM402
Leucothrinax_morrisii_NC_029961
Hemithrinax_ekmaniana_M_MD08
Thrinax_excelsa_M_SC063
Schippia_concolor_M_SC945
Trithrinax_brasiliensis_NC_029951
Trithrinax_campestris_M_SC080
Itaya_amicorum_M_MD12
Cryosophila_warscewiczii_M_SC138
Wallichia_oblongifolia_N_SC007_2
Wallichia_oblongifolia_N_SC007_1
Wallichia_oblongifolia_N_XM073
Wallichia_densiflora_NC_029949
Wallichia_densiflora_N_XT060
Wallichia_gracilis_N_SC016
Wallichia_disticha_N_XM022
Wallichia_disticha_N_XM054
Wallichia_caryotoides_N_XT063
Arenga_westerhoutii_N_SC897
Arenga_pinnata_NC_045907
Arenga_caudata_NC_029971
Caryota_obtusa_M_SC872
Caryota_mitis_NC_029948
Borassus_sp_N_XM241
Borassus_flabellifer_N_SC015
Borassus_flabellifer_M_XM023
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Borassus_madagascariensis_N_SC173
Borassodendron_machadonis_M_XT018
Borassodendron_machadonis_NC_029969
Lodoicea_maldivica_NC_029960
Latania_loddigesii_M_SC055
Bismarckia_nobilis_NC_020366
Bismarckia_nobilis_M_SC894
Hyphaene_coriacea_M_XT120
Corypha_lecomtei_NC_029965
Chuniophoenix_nana_NC_029966
Chuniophoenix_hainanensis_M_SC987
Chuniophoenix_nana_N_SC963
Chuniophoenix_suoitienensis_M_ST12
Tahina_spectabilis_NC_029952
Kerriodoxa_elegans_M_SC081
Nannorrhops_ritchieana_N_XM254
Nannorrhops_ritchieana_M_XT175
Nypa_fruticans_N_SSH001
Nypa_fruticans_NC_029958
Calamus_jenkinsianus_N_XT071
Calamus_sp_N_XT142
Calamus_jenkinsianus_M_XT070
Calamus_exilis_N_XT132
Calamus_tetradactylus_N_XM017
Calamus_henryanus_N_XT068
Calamus_caryotoides_NC_020365
Calamus_walkeri_N_XT134
Pigafetta_elata_NC_029956
Plectocomia_elongata_N_XT077
Plectocomia_elongata_M_MD14
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Salacca_wallichiana_M_XT148
Mauritia_flexuosa_NC_029947
Mauritia_carana_M_XT158
Raphia_vinifera_N_SC949
Eremospatha_macrocarpa_NC_029964
Eugeissona_tristis_NC_029963
Kingia_australis_JX051651
Baxteria_australis_NC_029970
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Dasypogon_bromeliifolius_NC_020367
Eichhornia_crassipes_NC_046773
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Alstroemeria_aurea_KC968976
Polygonatum_cyrtonema_NC_028429
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Japonolirion_osense_NC_036154
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Acorus_americanus_NC_010093
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Laccospadicinae
Archontophoenicinae
Basseliniinae
Laccospadicinae
Carpoxylinae
Areceae
Oncospermatinae
Verschaffeltiinae
Arecinae
Dypsidinae
Arecoideae
Euterpeae
Geonomateae
Manicarieae
Leopoldinieae
Pelagodoxeae
Cocoseae
Reinhardtieae
Roystoneeae
Sclerospermeae
Podococceae
Oranieae
Chamaedoreeae
Iriarteeae
Ceroxyleae
Phytelepheae
Cyclospatheae
Ceroxyloideae
Rhapidinae
Trachycarpeae
Livistoninae
Phoeniceae
Coryphoideae
Sabaleae
Cryosophileae
Caryoteae
Lataniinae
Borasseae
Hyphaeninae
Corypheae
Chuniophoeniceae
Nypoideae
Calaminae
Pigafettinae
Plectocomiinae
Metroxylinae
Salaccinae
Calameae
Calamoideae
Mauritiinae
Raphiinae
Ancistrophyllinae
Lepidocaryeae
Eugeissoneae
Outgroups
Core arecoid
RRC
POS
Arecaceae