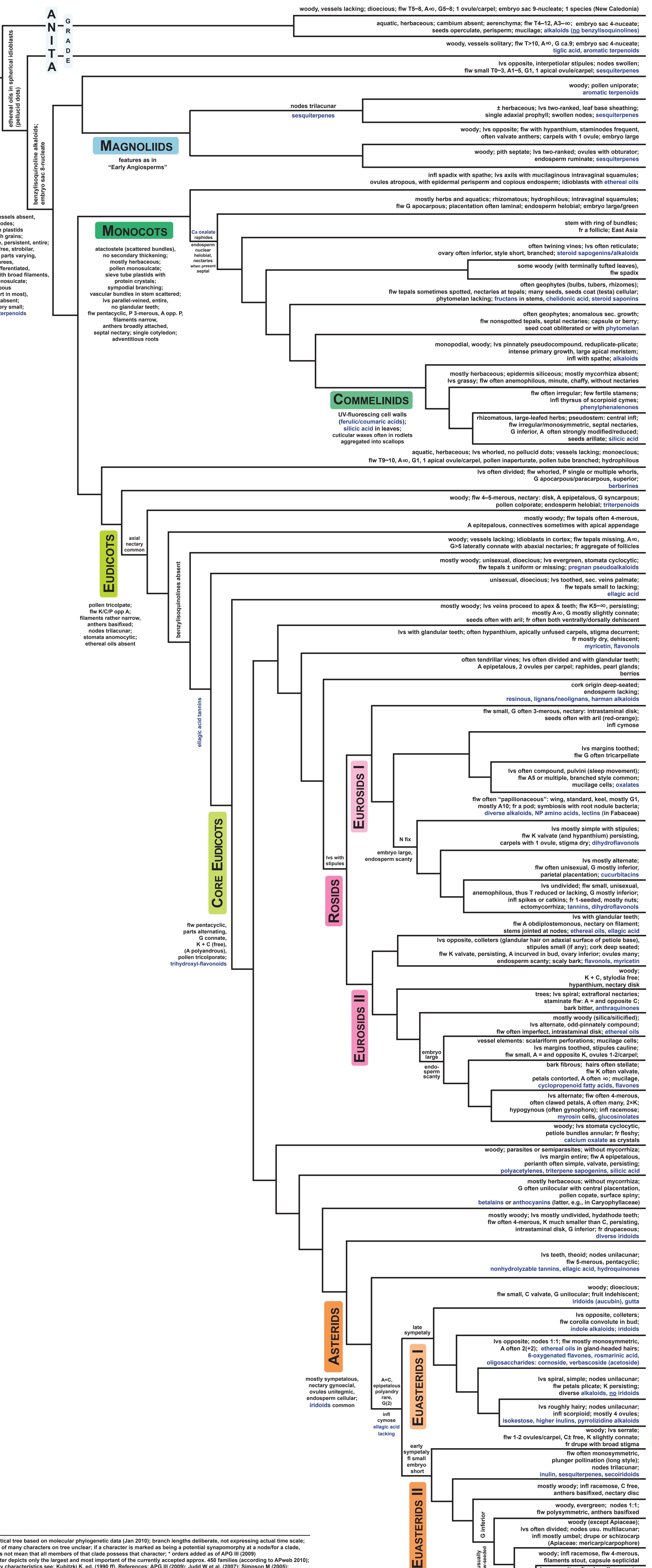


# Angiosperm Phylogeny

# Flowering Plant Systematics

EARLY ANGIOSPERMS



© Theodor C.H. Cole (Heidelberg) and Hartmut H. Hilger (Berlin) 2010

- hypothetical tree based on molecular phylogenetic data (Jan 2010); branch lengths deliberate, not expressing actual time scale;  
- position of many characters on tree unclear; if a character is marked as being a potential synapomorphy at a node for a clade,  
this does not mean that all members of that clade possess that character; \* orders added as of APG III (2009)  
- this poster depicts only the largest and most important of the currently accepted approx. 450 families (according to APWeb 2010);  
for family characteristics see: Kubitzki K, ed. (1990 ff). References: APG III (2009); Judd W et al. (2007); Simpson M (2005);  
Soltis DE et al. (2005); Stevens PF (2010) APWeb - www.mobot.org/MOBOT/research/APWeb; Watson/Dallwitz (2005) delta-intkey.  
com/intkey/  
- Thanks to Christoph Dobeš, Ray F. Evert, Peter H. Raven, Douglas E. Soltis, Peter F. Stevens, Maximilian Weigend, Michael Wink

## AMBORELLALES\*

Amborellaceae

## NYMPHAEALES\*

Cabombaceae Hydatellaceae Nymphaeaceae

## AUSTROBAILEYALES

Austrobaileyaceae Schisandraceae (incl. Illiciaceae) Trimeniaceae

## CHLORANTHALES

Chloranthaceae

## CANELLALES

Canellaceae Winteraceae

## PIPERALES

Aristolochiaceae Piperaceae

Hydnoraceae

## LAURALES

Calycanthaceae Hernandiaceae

Gomortegaceae Lauraceae

Monimiaceae Siparunaceae

## MAGNOLIALES

Annonaceae Eupomatiaceae

Degeneracieae Himantandraceae

Magnoliaceae Myristicaceae

## ACORALES

Acoraceae

## ALISMATALES

Alismataceae (incl. Limnocharitaceae)

Aponogetonaceae Butomaceae

Araceae Hydrocharitaceae

Juncaginaceae Posidoniaceae

Potamogetonaceae Ruppiaceae

Scheuchzeriaceae Zosteraceae

## PETROSAVIALES\*

Petrosaviaceae

## DIOSCOREALES

Burmanniaceae Dioscoreaceae

Nartheciaceae Taccaceae

## PANDANALES

Cyclanthaceae Pandanaceae

Velloziaceae

## LILIALES

Astroemeriaeae Corsiaceae

Colchicaceae Liliaceae

Melanthiaceae Petermanniaceae

Philesiaceae Smilacaceae

## ASPARAGALES

Amaryllidaceae (incl. Agapanthaceae, Alliaceae)

Asparagaceae (incl. Agavaceae, Hyacinthaceae, Ruscaceae)

Hypoxidaceae Iridaceae Lanariaceae Orchidaceae

Xanthorrhoeaceae (incl. Asphodelaceae, Hemerocallidaceae)

## ARECALES

Arecaceae

## POALES

Bromeliaceae Eriocaulaceae

Cyperaceae Juncaceae

Rapateaceae

Typhaceae (incl. Sparganiaceae)

## COMMELINALES

Commelinaceae Haemodoraceae

Pontederiaceae

## ZINGIBERALES

Cannaceae Heliconiaceae

Costaceae Lowiaceae

Marantaceae Musaceae

Strelitziaceae Zingiberaceae

## CERATOPHYLLALES

Ceratophyllaceae

## RANUNCULALES

Berberidaceae Eupteleaceae

Circaeasteraceae Lardizabalaceae

Menispermaceae Papaveraceae

Ranunculaceae

## SABIALES

Sabiaceae

## PROTEALES

Nelumbonaceae Platanaceae

Proteaceae

## TROCHODENDRALES\*

Trochodendraceae

## BUXALES\*

Buxaceae (incl. Didymelaceae)

Haptanthaceae

## GUNNERALES

Gunneraceae Myrothamnaceae

## DILLENALES

Dilleniaceae

## SAXIFRAGALES

Altingiaceae Cercidiphyllaceae

Crassulaceae Grossulariaceae

Haloragaceae Hamamelidaceae

Paeoniaceae Saxifragaceae

## VITALES\*

Vitaceae

## ZYGOPHYLLALES\*

Krameriaceae Zygophyllaceae

## CEASTRALES

Celastraceae (incl. Hippocrateaceae, Brexiaceae)

Lepidobotryaceae Parnassiaceae

## MALPIGHIALES

Achariaceae Chrysobalanaceae

Clusiaceae Hypericaceae

Erythroxylaceae Linaceae

Malpighiaceae Malpighiaceae

Picrodendraceae Picramniaceae

Oxalidaceae Violaceae

## OXALIDALES

Brunelliaceae Connaraceae

Cephalotaceae Cunoniaceae

Elaeocarpaceae Huaceae

Oxalidaceae

## FABALES

Fabaceae Polygalaceae

Quillajaceae Surianaceae

## ROSALES

Barbeyaceae Elaeagnaceae

Cannabaceae Moraceae

Dirachmaceae Rhamnaceae

Rosaceae Urticaceae (incl. Cecropiaceae)

## CUCURBITALES

Anisophylaceae Coriariaceae

Begoniaceae Corynocarpaceae

Cucurbitaceae Daticaceae

Butelaceae Fagaceae Myricaceae

Casuarinaceae Juglandaceae Nothofagaceae

Rhoipteleaceae Ticodendraceae

## FAGALES

Fagaceae

Elaeagnaceae

Moraceae

Rhamnaceae Urticaceae

## GERANIALES

Francoaceae Melianthaceae

Lecythidaceae Ledocarpaceae

Geraniaceae

## MYRTALES

Combretaceae Myrtaceae

Lythraceae (incl. Punicaceae, Sonneratiaceae, Trapaceae)

Melastomataceae (incl. Memecylaceae)

Onagraceae Vochysiaceae

## CROSSOSOMATALES

Crossosomataceae

Geissolomataceae Stachyuraceae

Staphyleaceae Strasburgeriaceae

## PICRAMNIALES\*

Picramniaceae

## SAPINDALES

Anacardiaceae Meliaceae

Burseraceae Nitriariaceae

Rutaceae Sapindaceae

Simaroubaceae

## HUERTEALES\*

Diptodontaceae Gerrardinaceae

Tapisciaceae

## MALVALES

Bixaceae Malvaceae (incl. Bombacaceae, Sterculiaceae, Tiliaceae)

Cistaceae Cytinaceae

Muntingiaceae Neuradaceae

Sarcolaenaceae Thymelaeaceae

## BRASSICALES

Bataceae Caricaceae

Brassicaceae Cleomaceae

Moringaceae Resedaceae

Salvoraceae Tovariaceae

Tropaeolaceae

## BERBERIDOPSIDALES\*

Aextoxicaceae Berberidopsidaceae

## SANTALALES