

APG IV (2016)

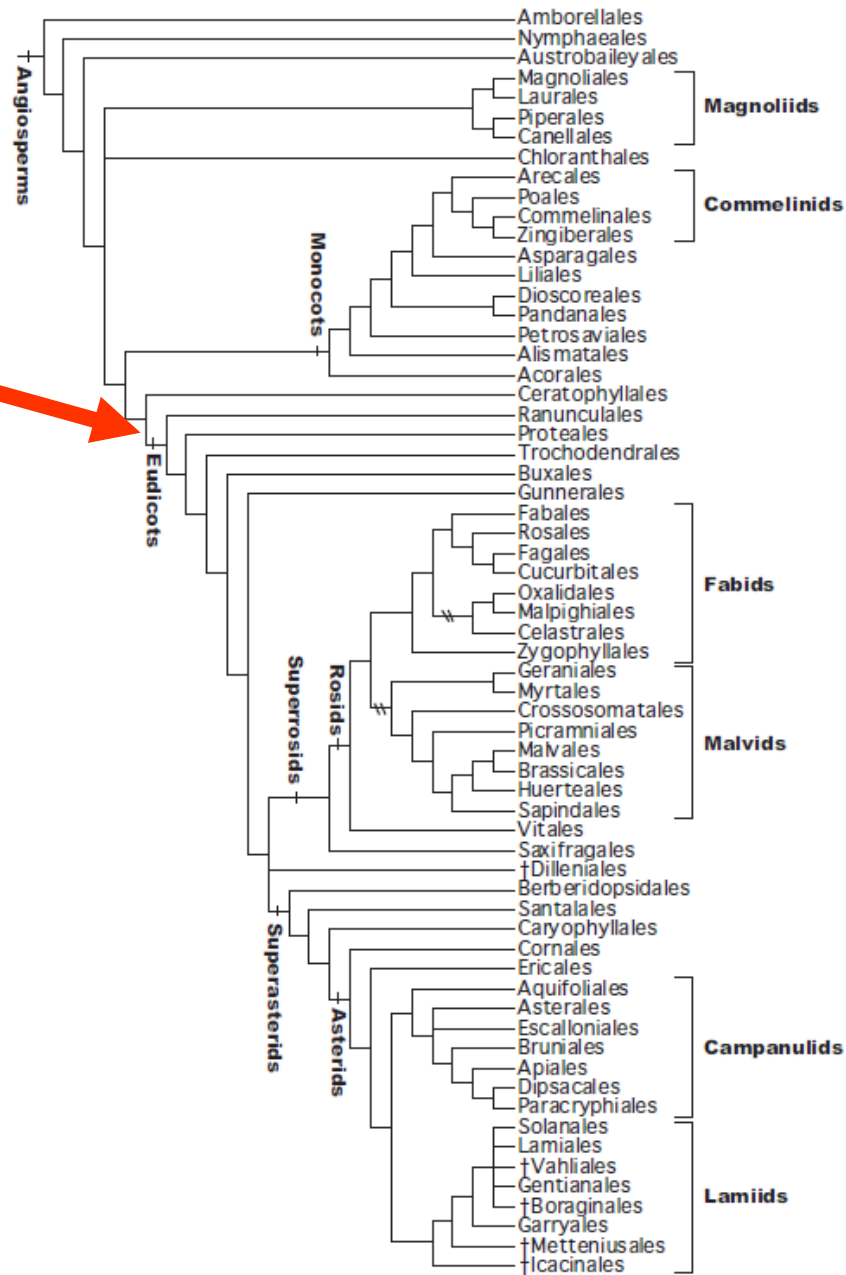
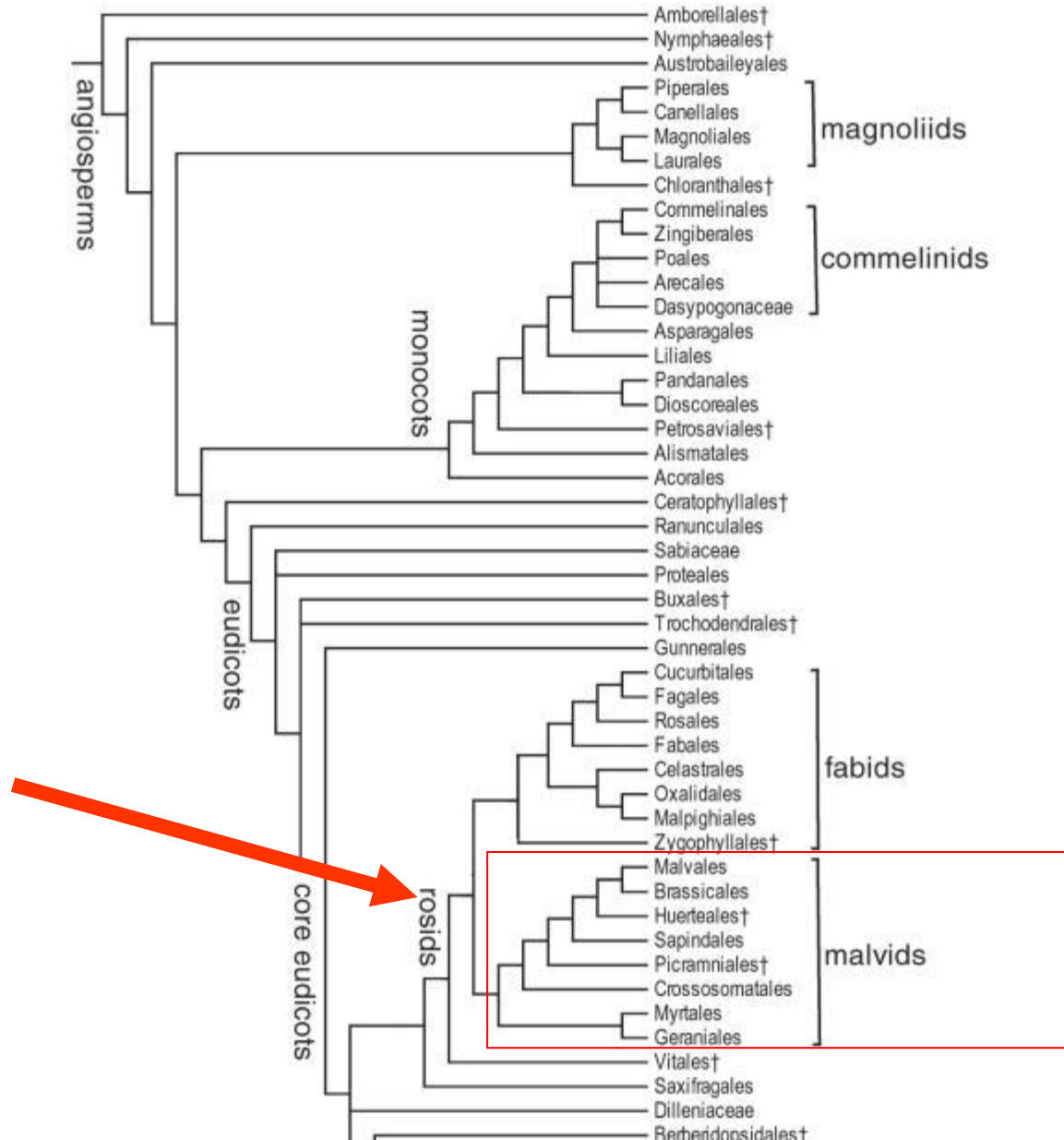
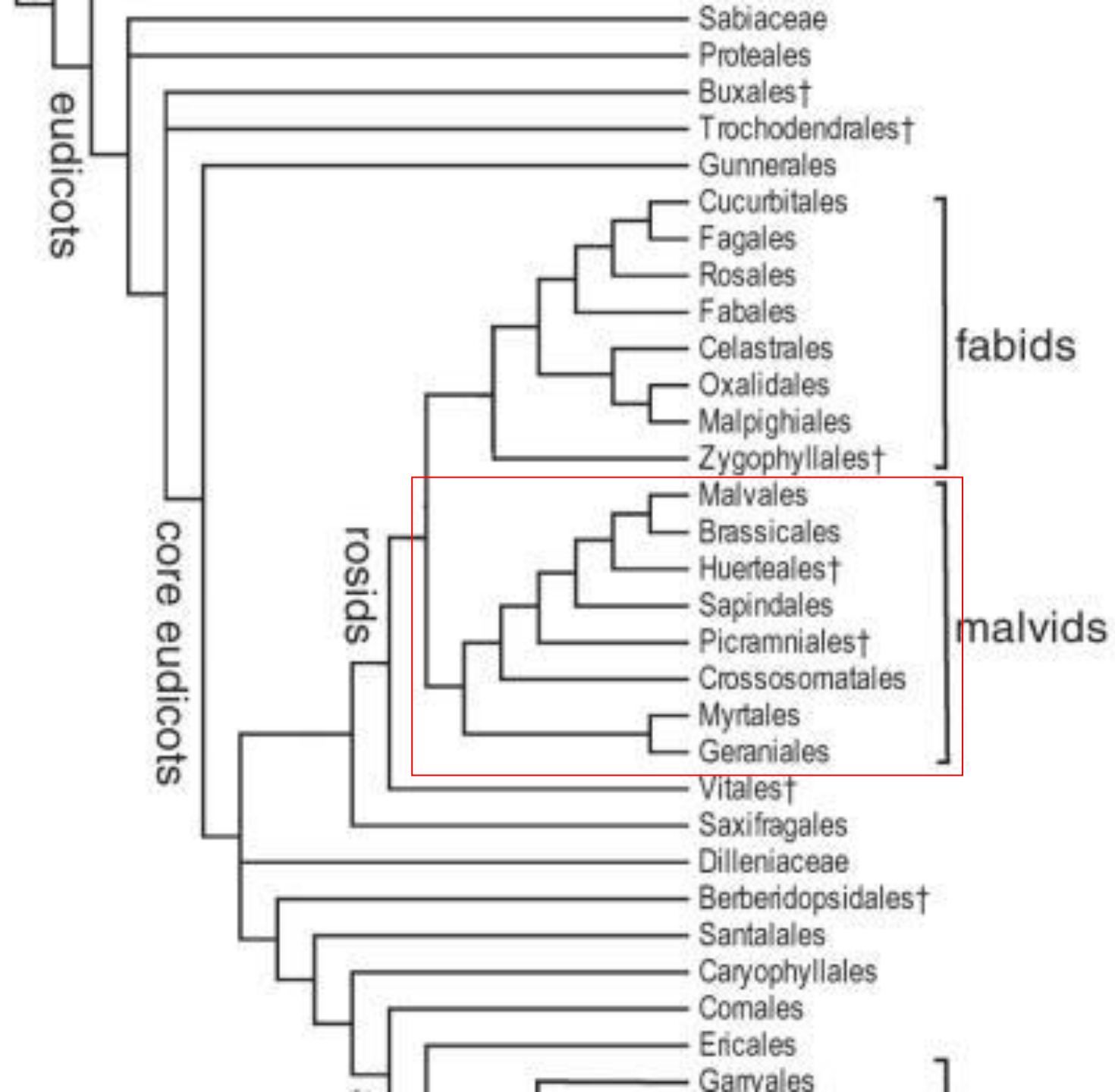


Figure 1. Interrelationships of the APG IV orders and some families supported by jackknife/bootstrap percentages >50 or Bayesian posterior probabilities >0.95 in large-scale analyses of angiosperms. See text for literature supporting these relationships. The alternative placements representing incongruence between nuclear/mitochondrial and plastid results for the Celastrales/Oxalidales/Malpighiales (COM) clade are indicated by slash marks (//). †Orders newly recognized in APG.

4 THE ANGIOSPERM PHYLOGENY GROUP





Eudicotiledôneas

Rosideas

Malvideas

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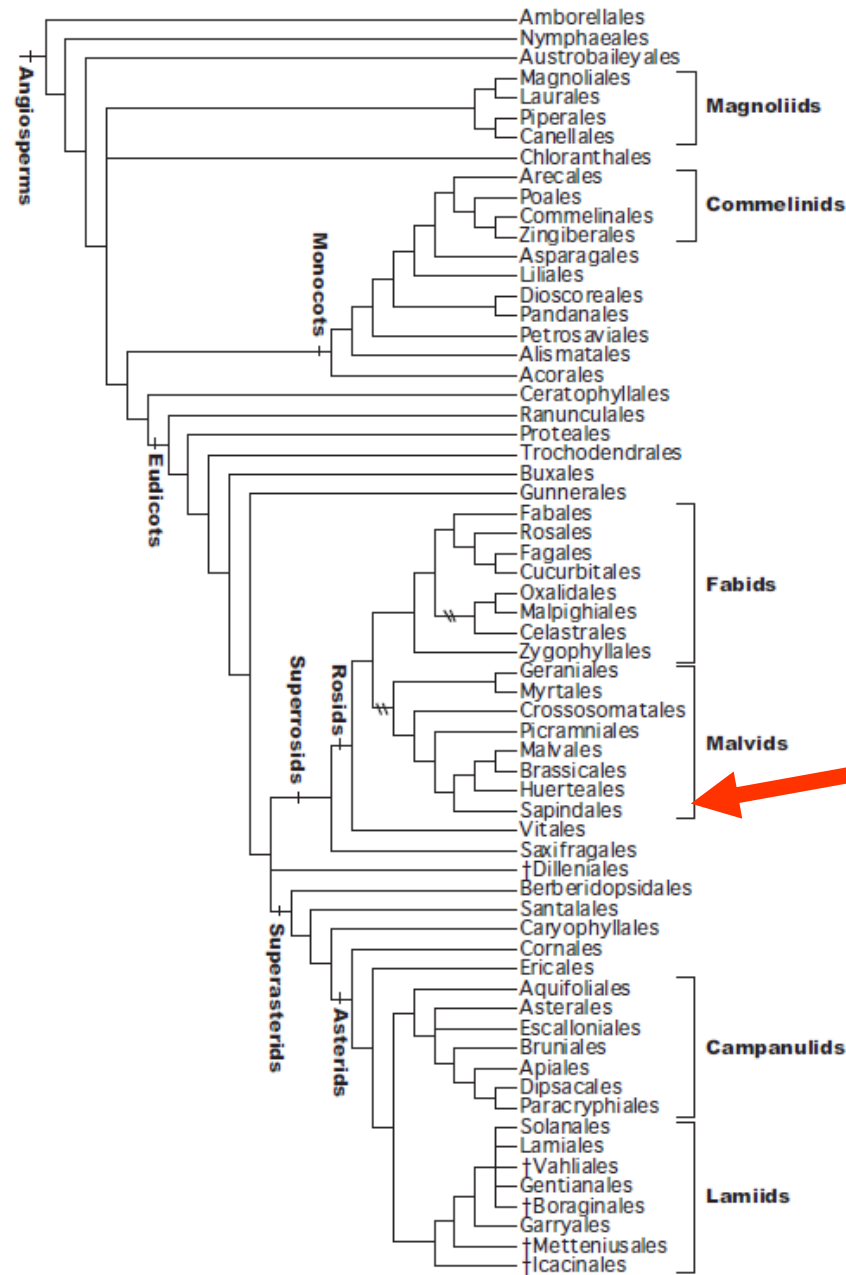
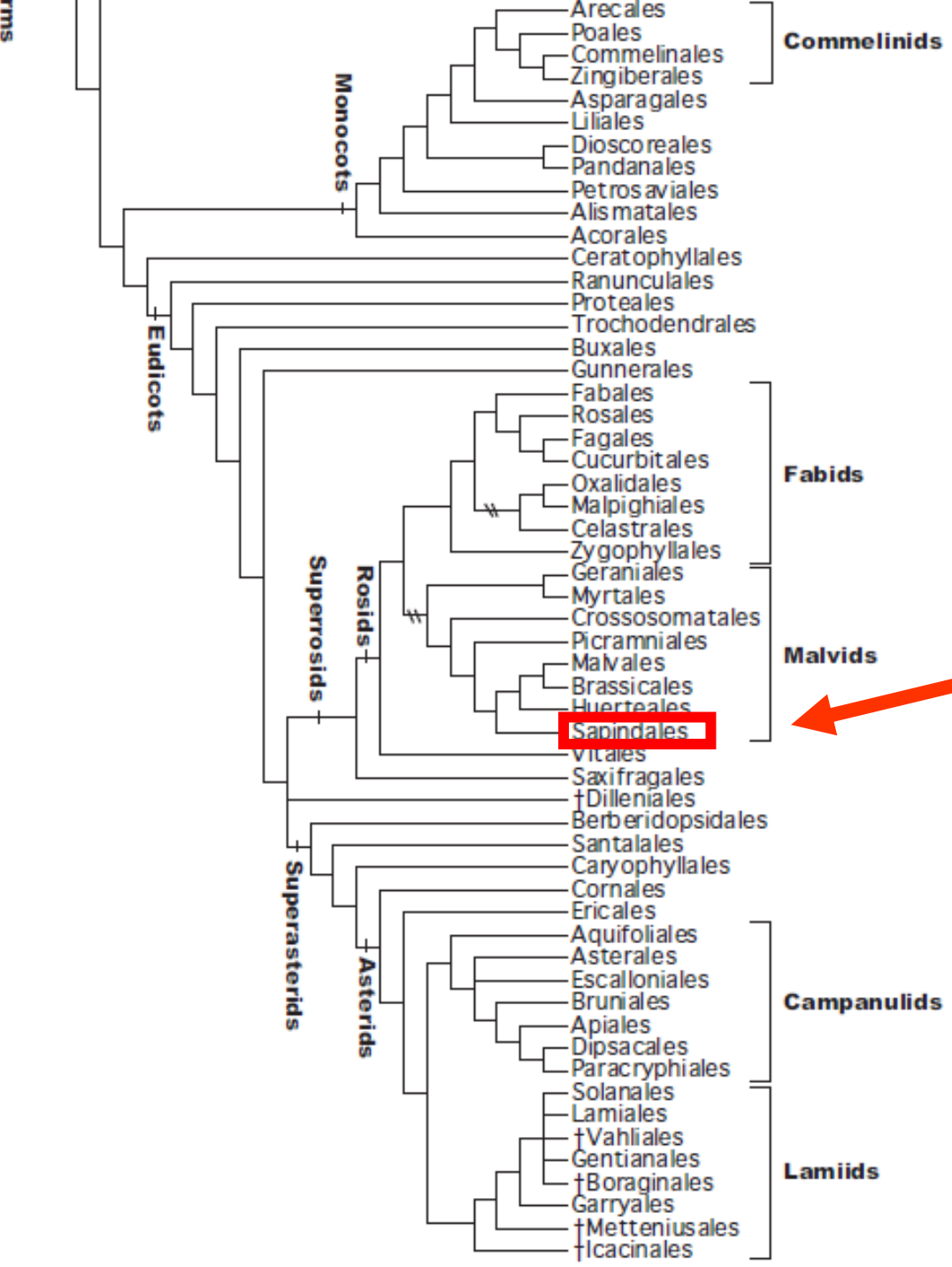


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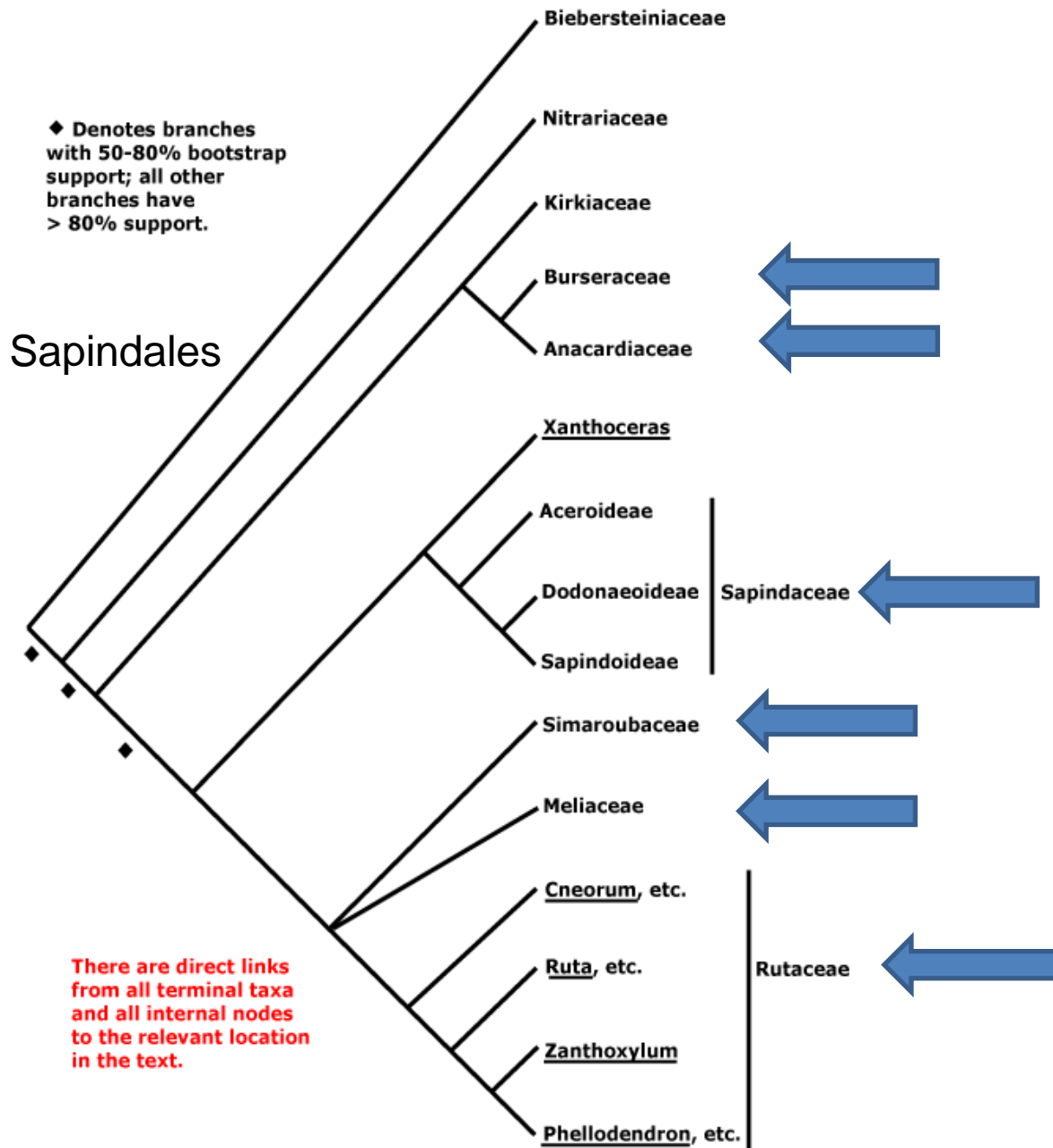


Ordens que serão tratadas em Rosidae:

- **Malvales** – Malvaceae
- **Sapindales** – Sapindaceae, Rutaceae, Anacardiaceae, Meliaceae
- **Myrtales** – Myrtaceae e Melastomataceae
- **Fabales**- Fabaceae

Sapindales

- Características muito frequentes (prováveis sinapomorfias)
 - Plantas lenhosas.
 - Folhas alternas, compostas, sem estípulas.
 - Androceu diplostêmone.
 - Ovário súpero.
 - Disco nectarífero bem desenvolvido.



Principais famílias de Sapindales (folhas compostas, alternas sem estípula, flores monoclinas ou díclinas funcionais, pentâmeras, diplostêmones, ovário súpero, etc) **no Brasil:**

- Rutaceae – **Pontuações translúcidas nas folhas** – Pau Marfim, Jaborandi, Guarantã, Chupa Ferro, Chal-Chal, Mamica de Porca
- Anacardiaceae – **Folhas e ramos aromáticos**- Aroeira verdadeira, Guaritá, Cajú Açú, Cajá, Umbú
- Sapindaceae - **Geralmente 1 óvulo por lóculo e estames livres**- Camboatã, Guaraná
- Meliaceae - **Geralmente vários óvulos por lóculo e estames unidos**- Mogno, Cedro, Cedro de cheiro, Canjerana, Catiguá, Andiroba
- Burseraceae – **Flores unissexuadas, 2 óvulos/lóculo**- *Protium* spp- Breu, Almiscar
- Simaroubaceae – **Flores unissexuadas, 1 óvulos/lóculo**- - *Simarouba amara*- Marupá

Rutaceae

Glândula translúcida!!!



Anacardiaceae

Schinus terebinthifolius

Pimenta rosa, aroeira

pimenteira etc

Plantas odoríferas
(cheiro de manga)



Meliaceae (família do Mogno)

-Aproximadamente 50 **gêneros** (6 Brasil) e 600 espécies (80 spp Brasil)

-Árvores ou arbustos

-Folhas **alternas** (raro opostas), **compostas**, raro unifoliolada, às vezes raque com gema apical (*Guarea*), **sem estípulas**

-Flor **monoclina**, às vezes **funcionalmente unissexuadas**, **actinomorfa**, **diclamídeas**, geralmente 5 (**pentâmera**),

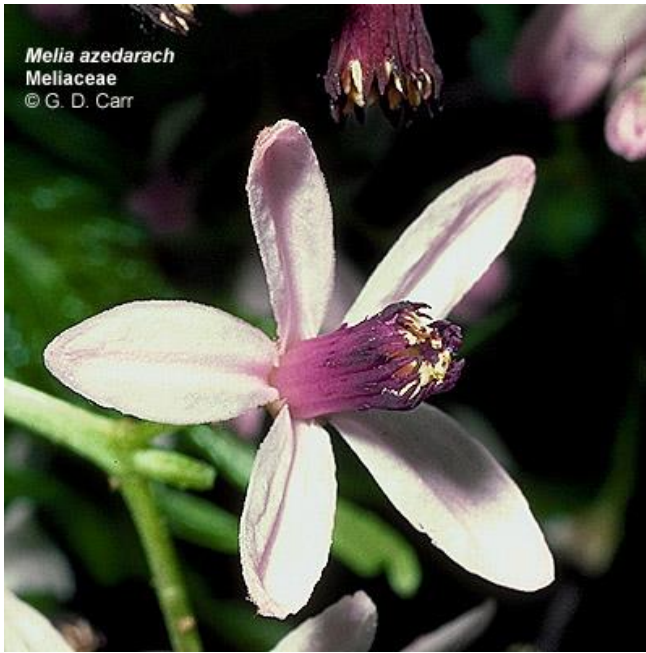
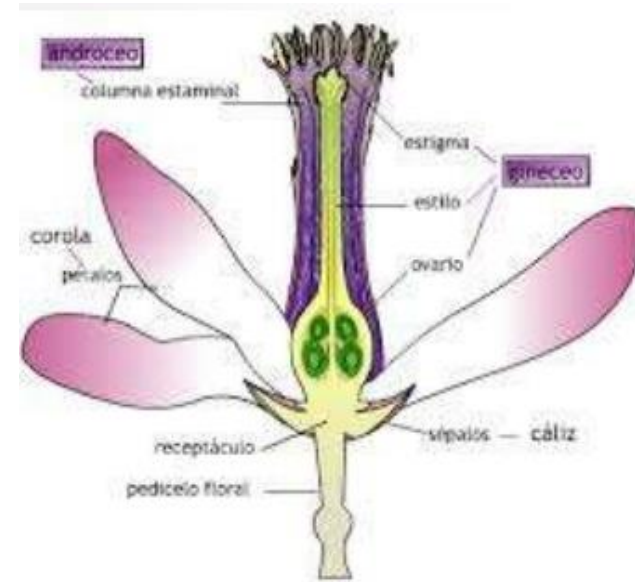
-Cálice gamossépalo, corola **dialipétala** (às vezes **gamo**)

-O androceu geralmente **diplostêmone**, às vezes isostêmones, geralmente unidos pelo filete (**monadelfos**), raro livres.

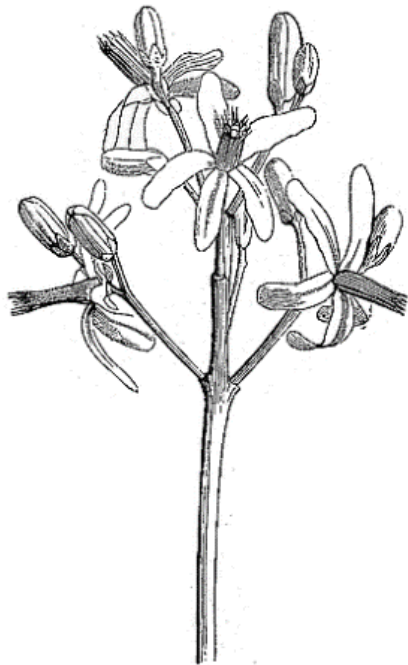
-O gineceu de **ovário súpero**, gamocarpelar, de 2-6 carpelos e 2-6 lóculos, placentação axilar, com **1-muitos óvulo/lóculo**. Disco nectarífero **presente**.

-**Fruto Drupa** (fruto carnosos com endocarpos lenhoso- caroço), Baga (carnoso sem caroço) ou **Cápsula** (seco, deiscente)

Meliaceae



Flores com androceu monadelfo
(NIM e Santa Barbara)



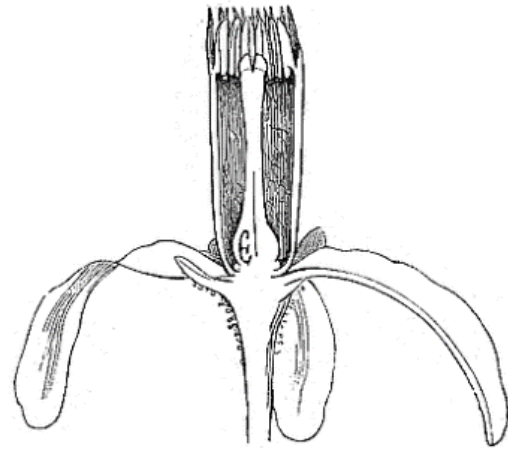
Melia Azedarach.



Melia.
Flower (mag.).



Melia.
Stamen (mag.).



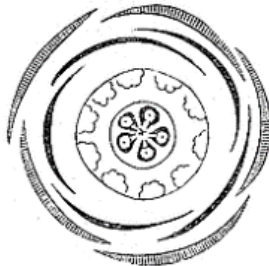
Melia.
Vertical section of flower (mag.).



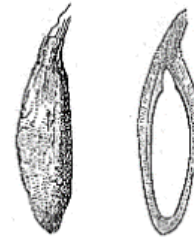
Melia.
Fruit (mag.).



Melia.
Stone (mag.).



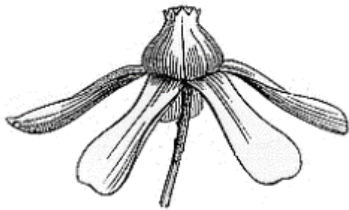
Melia.
Diagram.



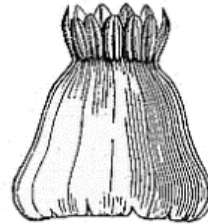
Melia.
Seed, entire and cut longitudinally.



Melia.
Pistil (mag.).



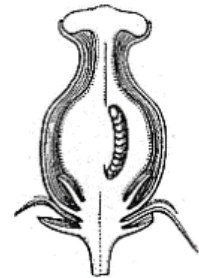
Swietenia.
Flower.



Swietenia.
Part of androecium (mag.).



Swietenia.
Pistil, entire and cut vertically (mag.).





Cedro -*Cedrela fissilis*

Cedrilho- ou cedro do brejo -*Cedrela odorata*



Swietenia mahagoni
Meliaceae
© G. D. Carr



Fruto de mogno- Cápsula (sementes aladas)



Cedro rosa (*Cedrela fissilis*)



Andiroba (*Carapa guianensis*)

Meliaceae



Cedro- *Cedrela fissilis*



Canjerana- *Cabralea canjerana*



Melia azedarach- santa bárbara, cinamomo



Mógno- *Switenia* spp



Espécies de Meliaceae de interesse florestal

Madeiras e outras:

- Mogno (*Swietenia macrophylla*, *S. mahagonii* e *S. humilis*)
- Cedro rosa (*Cedrela fissilis*)
- Cedro do brejo ou Cedrilho (*Cedrela odorata*)
- Canjerana (*Cabralea canjerana*)
- Andiroba (*Carapa guianensis*)
- Catiguá (*Trichilia* spp)
- Marinheiro (*Guarea macrophylla*. *G. guidonea* etc)
- Santa bárbara ou Para raio (*Melia azedarach* - *Exótica*)
- Aglaia (*Aglaia odorata*- *Exótica*)
- Nin (*Azadirachta indica*- *Exótica*)
- Etc