

Figure 1. Interrelationships of the orders and some families supported by jackknife or bootstrap frequencies above 50% in large-scale analyses of angiosperms. All except five of the clades are supported by the Soltis *et al.* (2000) analysis of 18S rDNA, *rbcL*, and *atpB* sequences from a wide sample of angiosperms. Three clades, Canellales-Piperales, Laurales+Magnoliales, and these four orders together, are supported by analyses of several different gene sequences of phylogenetically basal angiosperms (Qiu *et al.*, 1999; Graham & Olmstead, 2000). One clade, that of all core eudicots except Gunnerales, is supported by analysis of *rbcL* sequences from a wide sample of eudicots (Savolainen *et al.*, 2000). Another clade, that of all asterids except Cornales, is supported by a six-marker analysis of a wide sample of asterids (Bremer *et al.*, 2002). Rosid and asterid families not classified to order are not shown.

la: Lauraceae

A.P.G. II

Lauraceae

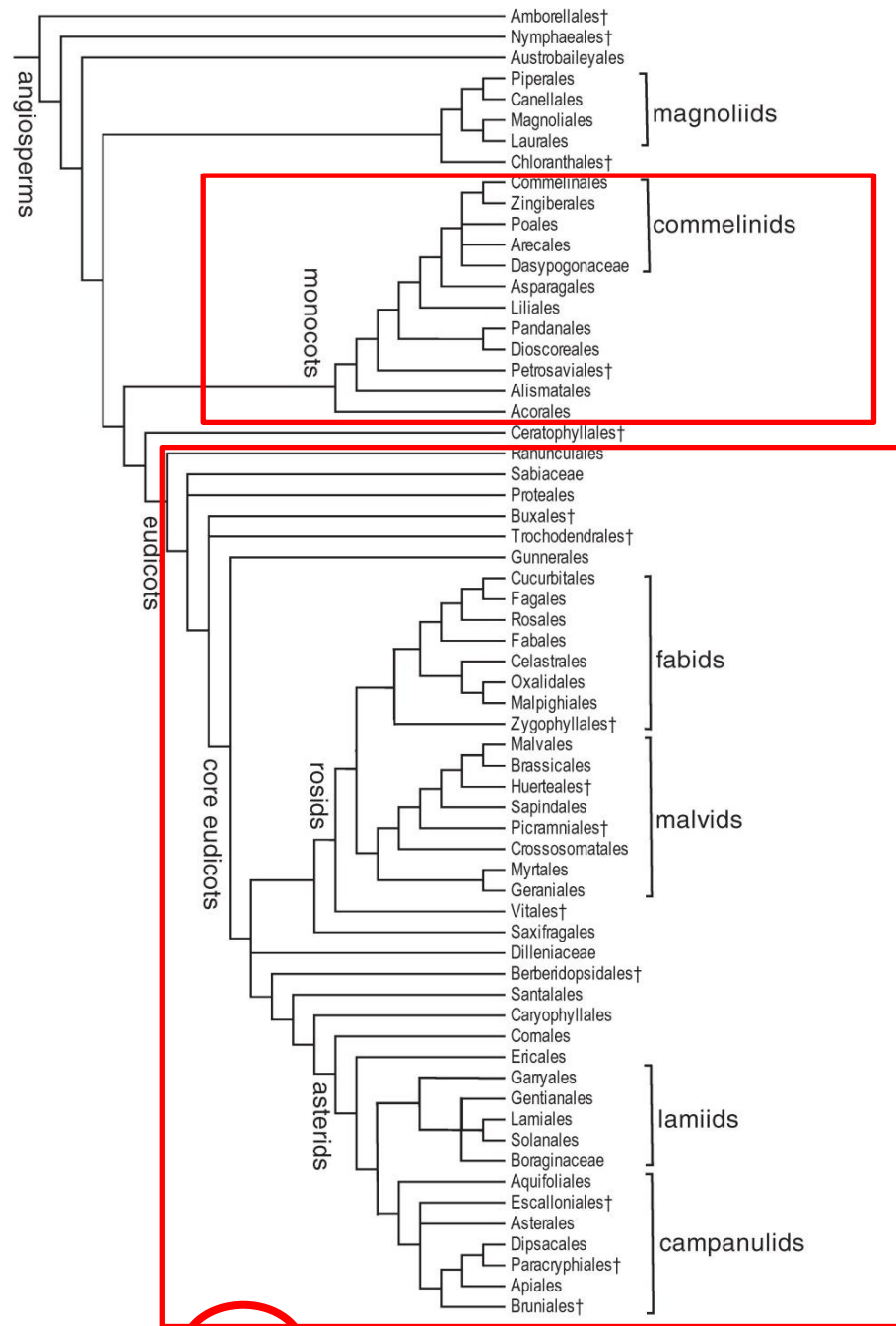
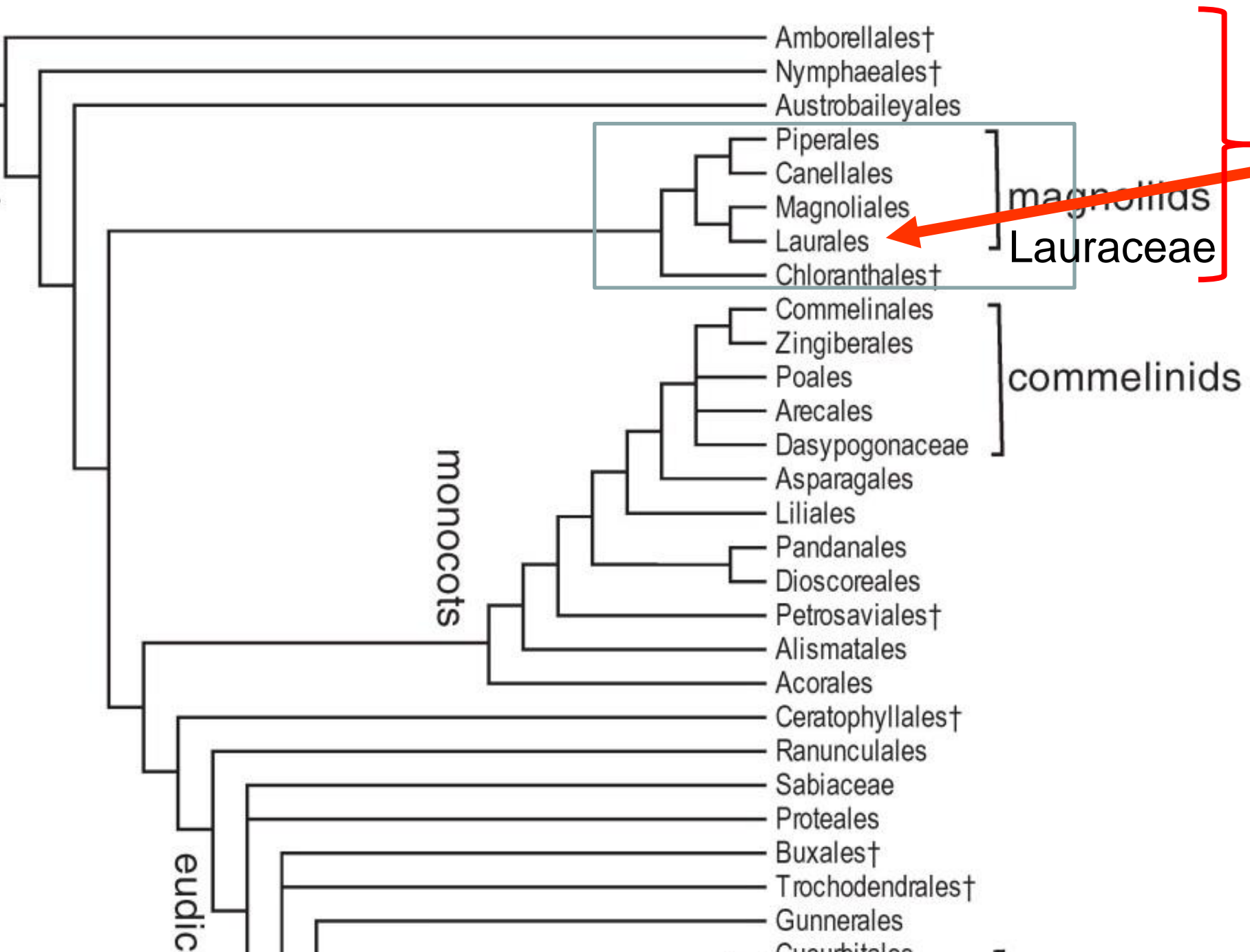


Figure 1. Interrelationships of the APG III orders and some families supported by jackknife/bootstrap

2009

angiosperms



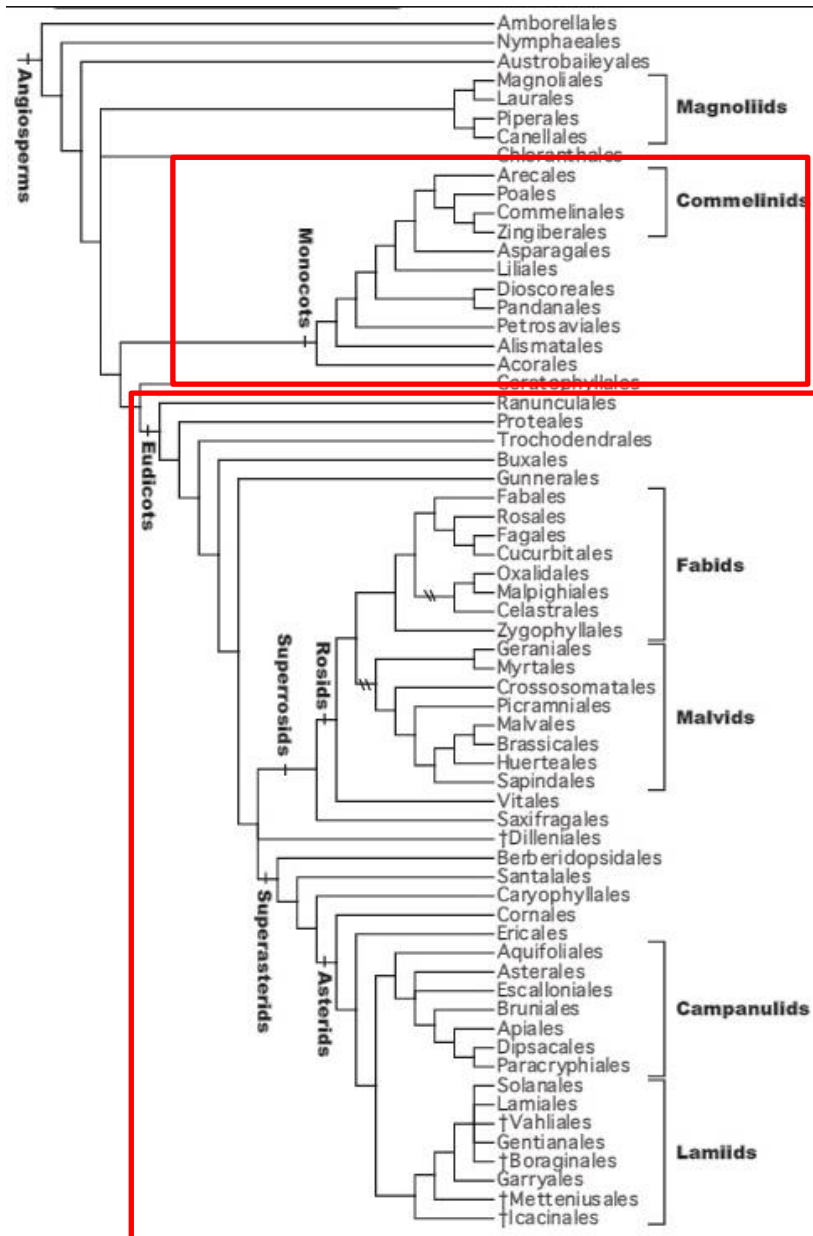
magnoliids
Lauraceae

commelinids

monocots

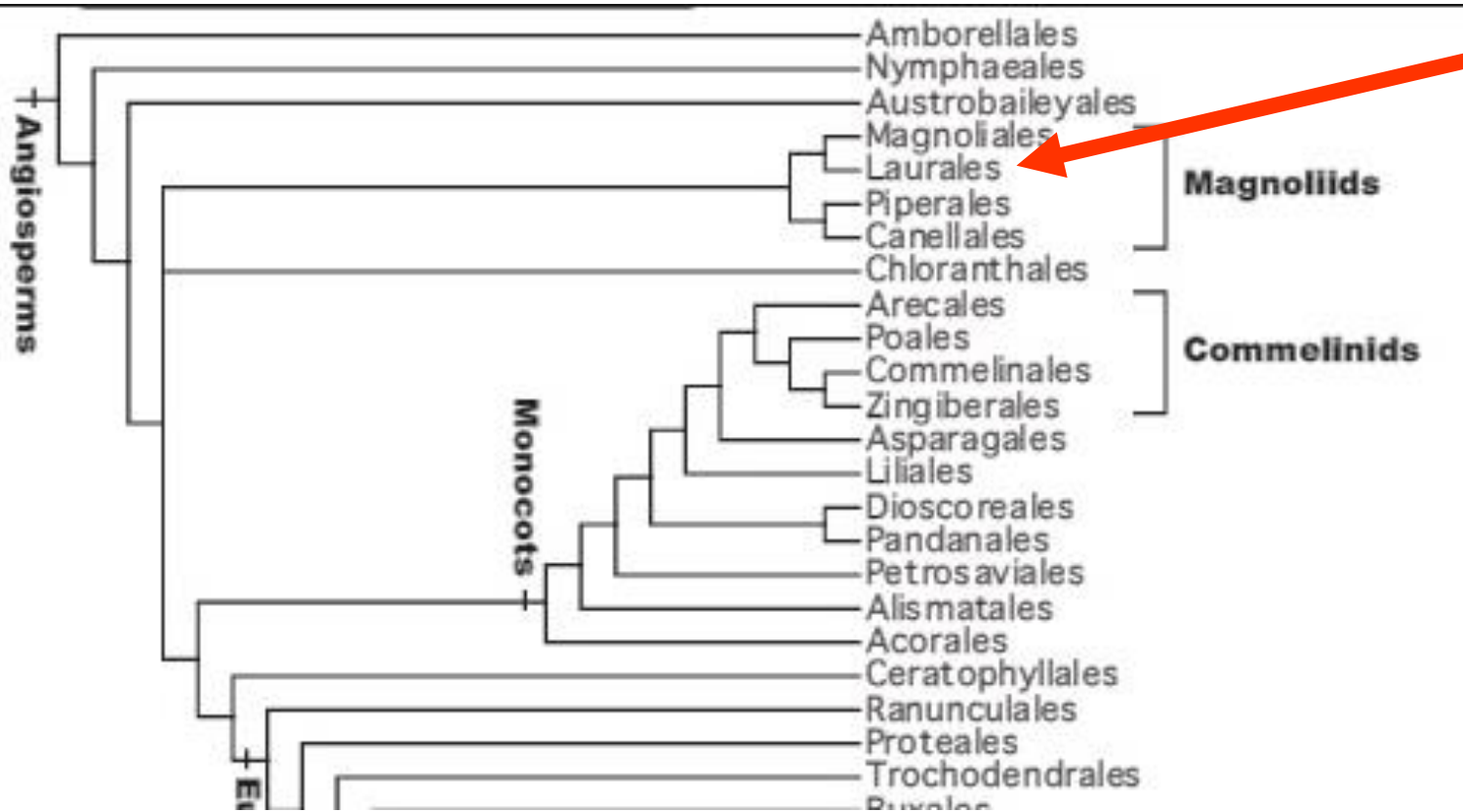
eudic

APG IV (2016)



Lauraceae

APG IV
(2016)



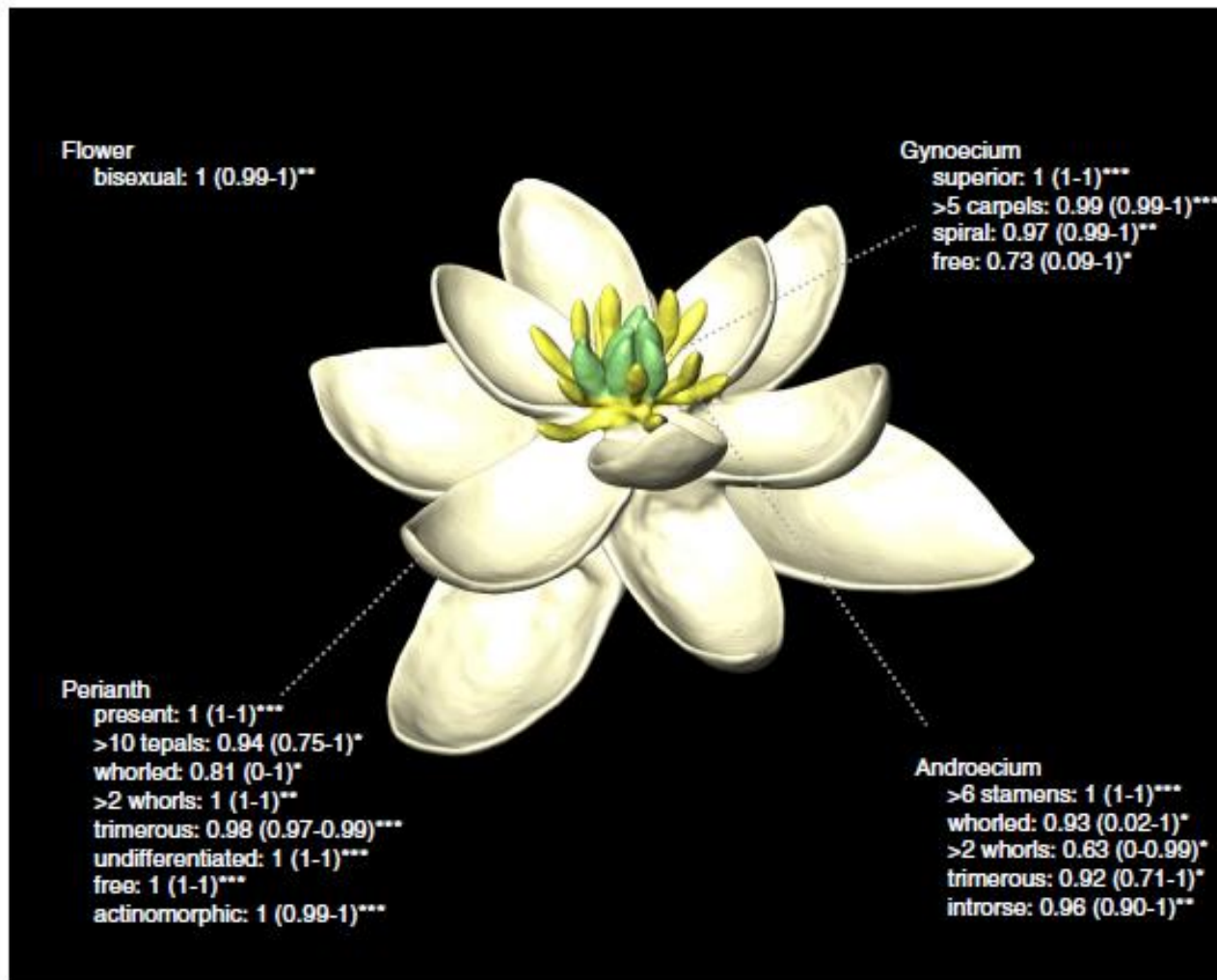


Figure 1 | Three-dimensional model of the ancestral flower reconstructed from our analyses. Here we provide the states with highest mean posterior probability and their associated credibility intervals from the reversible-jump Bayesian analysis of the C series of trees, which takes into account all forms of uncertainty (parameters, tree, branch times, model). States marked with three asterisks (***) indicate high confidence and consistency across methods of reconstruction (for example, perianth present, undifferentiated and actinomorphic). Other states need to be interpreted with caution as their reconstruction

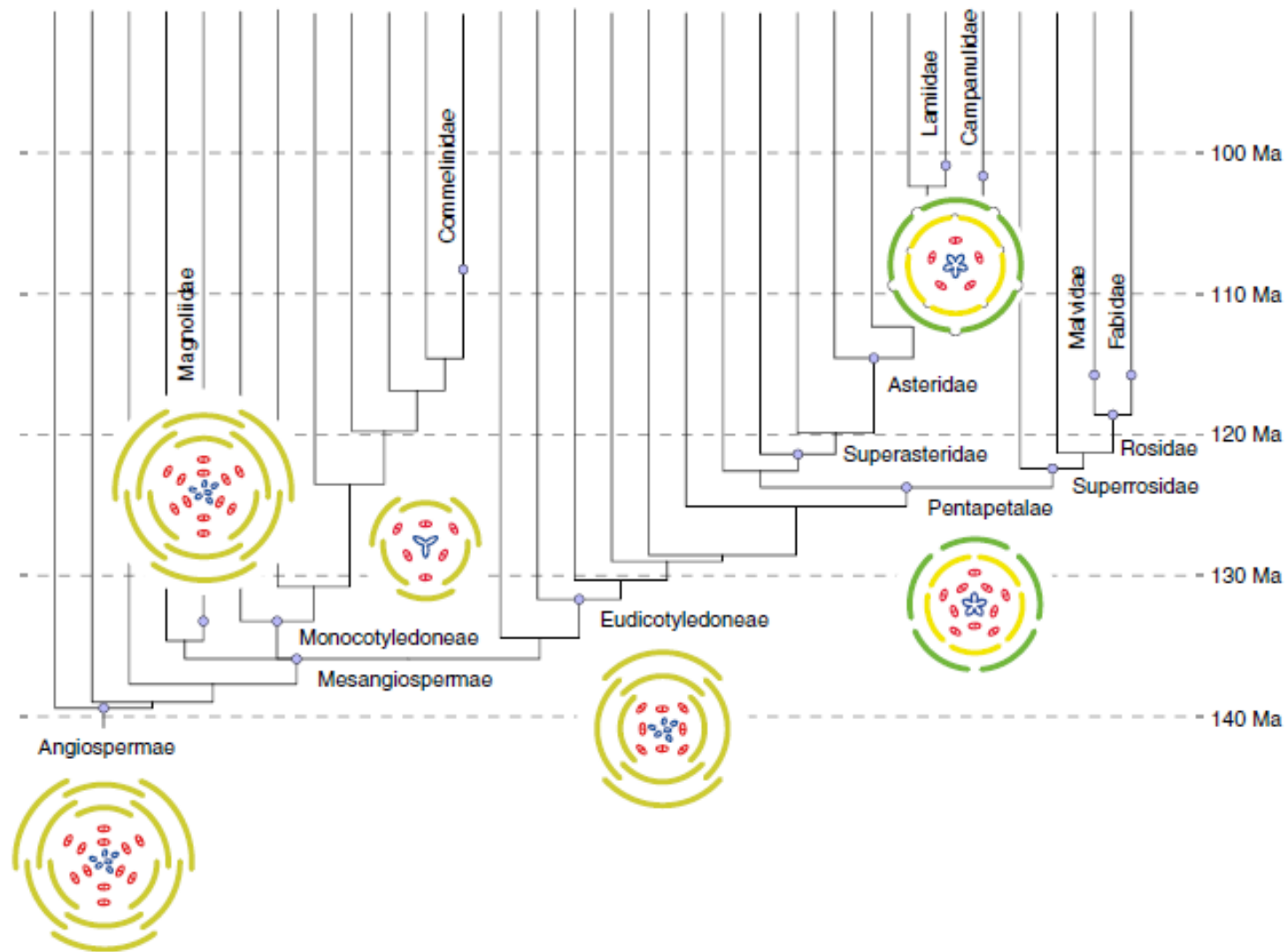
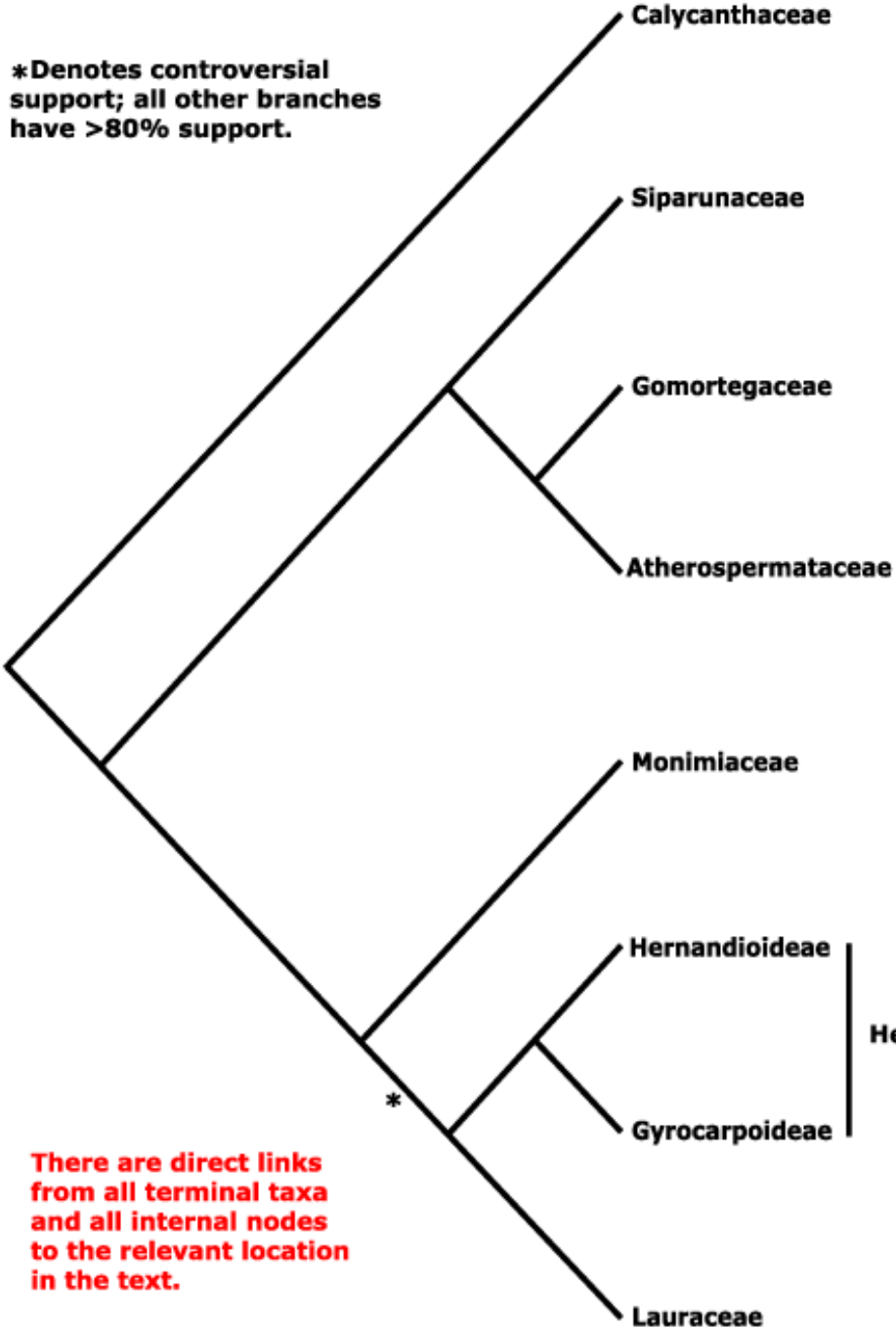


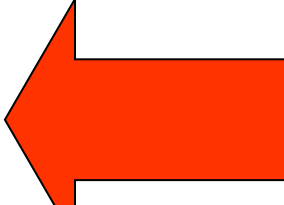
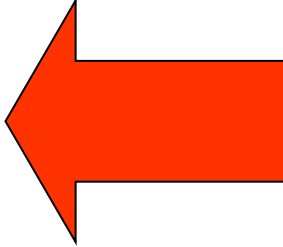
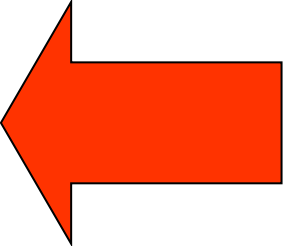
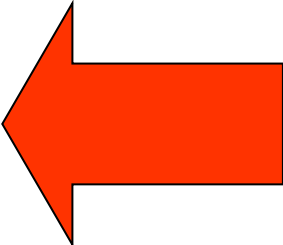
Figure 4 | Simplified scenario for the earliest phase of floral diversification as inferred from our analyses. Each floral diagram summarizes the main features of our reconstructed ancestors for key nodes of the tree (for details, see Supplementary Discussion and Supplementary Figs 2-7). This figure only depicts the presumed first 40 million years of floral evolution, without exhaustively representing every new morphology that arose during that time. The

Lurales

*Denotes controversial support; all other branches have >80% support.



Ocorrência Brasil

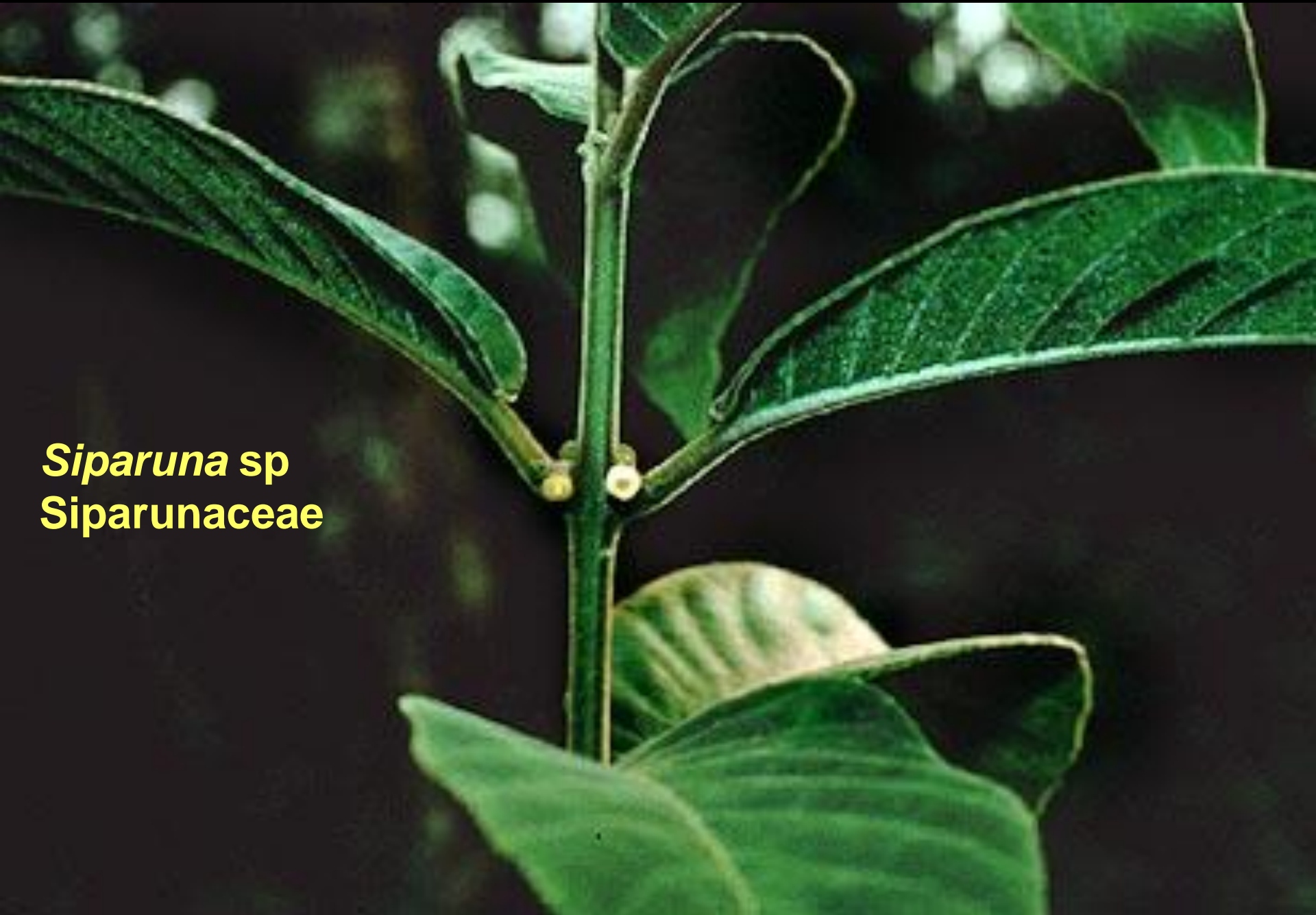


There are direct links from all terminal taxa and all internal nodes to the relevant location in the text.

Lurales

- 4 famílias no Brasil:
 - Siparunaceae
 - Monimiaceae
 - Hernandiaceae
 - Lauraceae

Siparuna sp
Siparunaceae



***Siparuna* sp**
Siparunaceae





***Mollinedia* sp**
Monimiaceae



Hernandia sonora
Hernandiaceae



Hernandia sonora
Hernandiaceae

Lauraceae



- Plantas tropicais e subtropicais
- =~50 gen (22 Brasil) e =~2500 spp (400 Brasil). Ocorrem em todas as formações florestais brasileiras, com destaque para a Floresta Ombrófila mista (Fl. Araucária)
- **Árvores, arvoretas ou arbustos**, raro outras (*Cassyta filiformis*- parasita- Cipó chumbo), com taninos. Ramos e folhas aromáticas;
- Folhas **simples, alternas espiraladas, sem estípulas, oderíferas**,
- Flores Diclamídeas, homoclamídeas ou heteroclamídea, actinomorfas, **trímeras**, pétalas livres, geralmente de cor clara;

- Androceu com estames numerosos (polistêmones), em 1-4 ciclos de 3 estames cada, às vezes estaminódios, estames com **anteras de deiscência valvar** (janelinhas), comum apêndices nectaríferos nos estaminódios;
- **Gineceu com 1 carpelo** (unicarpelar, por redução dos demais carpelos livres- gineceu dialicarpelar), ovário súpero, apenas **1 óvulo no único carpelo**, de placentação apical, estígma lobado ou capitado;
- Fruto cupuliforme, geralmente baga com cálice cupuliforme (cúpula) persistente no fruto e engrossada, junto com pedicelo engrossado e geralmente coloridos, de cor diferente do fruto (atração do dispersor). Cúpula pode envolver todo o fruto (*Cryptocharia* e outros);
- Exemplos:
- Nativas;: **Aniba roseodora** (pau rosa), **Ocotea porosa** (Imbuia), **Cryptocharia moschata** (canela batalha), **Nectandra megapotamica** (Canelinha), **Ocotea odorifera** (Sassafrás), **Nectandra oppositifolia** (Canela amarela), **Endlicheria paniculata** (Canela do brejo) etc
- Exóticas: **Laurus nobilis** (louro), **Cinnamomum zeylanicum** e **C. verum** (Canela verdadeira), **C. camphora** (Cânfora), **Persea americana** (Abacateiro), etc.



Persea americana
Lauraceae
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abacateiro







Cassytha filiformis

Cassytha filiformis
Lauraceae
R. L. Stemmermann

Cipó- chumbo





Cipó- chumbo

Cassytha filiformis
Lauraceae
G. K. Linney

Cassytha filiformis
Lauraceae
G. K. Linney

Cipó- chumbo

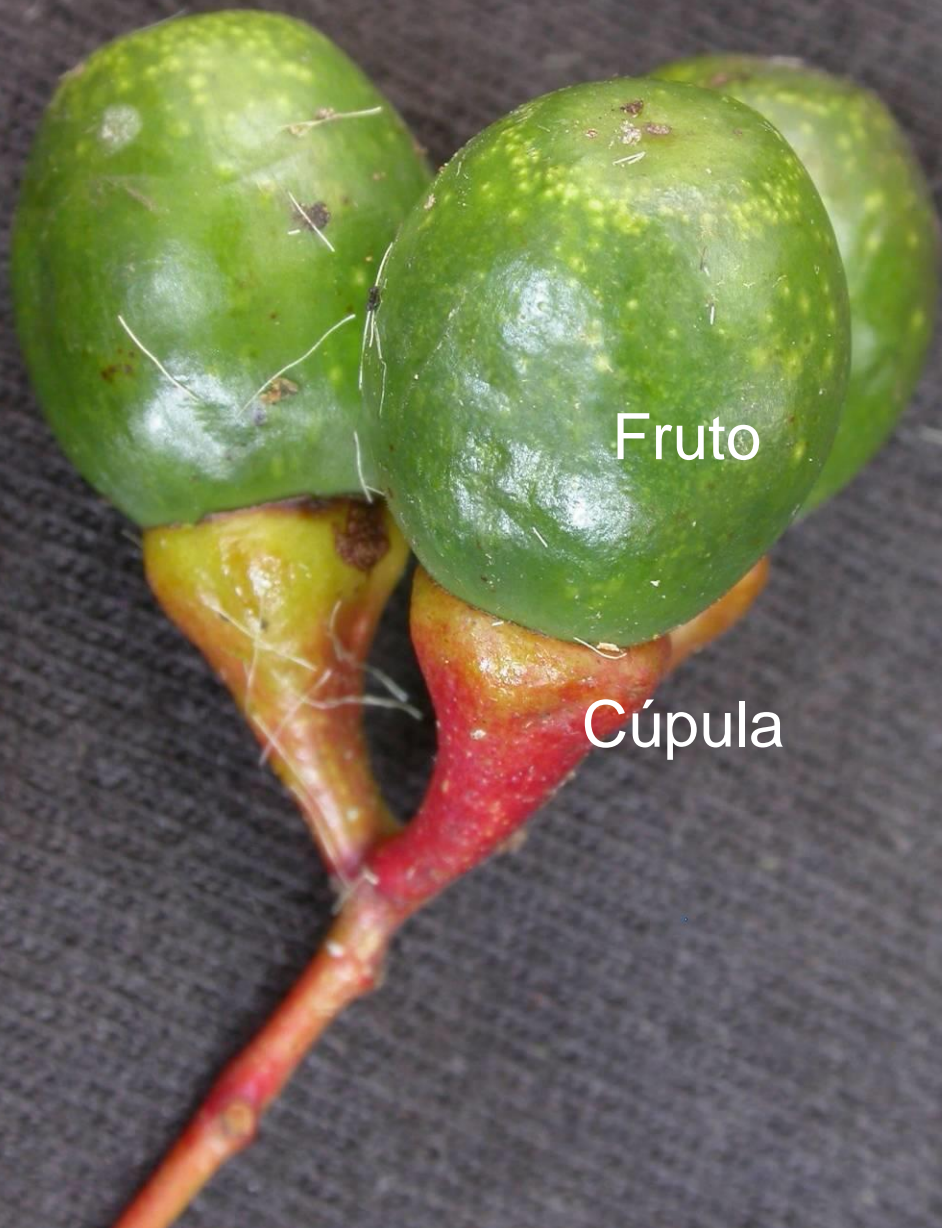




Cinnamomum burmannii

Lauraceae

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Fruto

Cúpula

Nectandra megapotamica Ness & Mart. canelinha



Canela verdadeira



Cinnamomum
zeylanicum
Lauraceae
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Ocotea sp