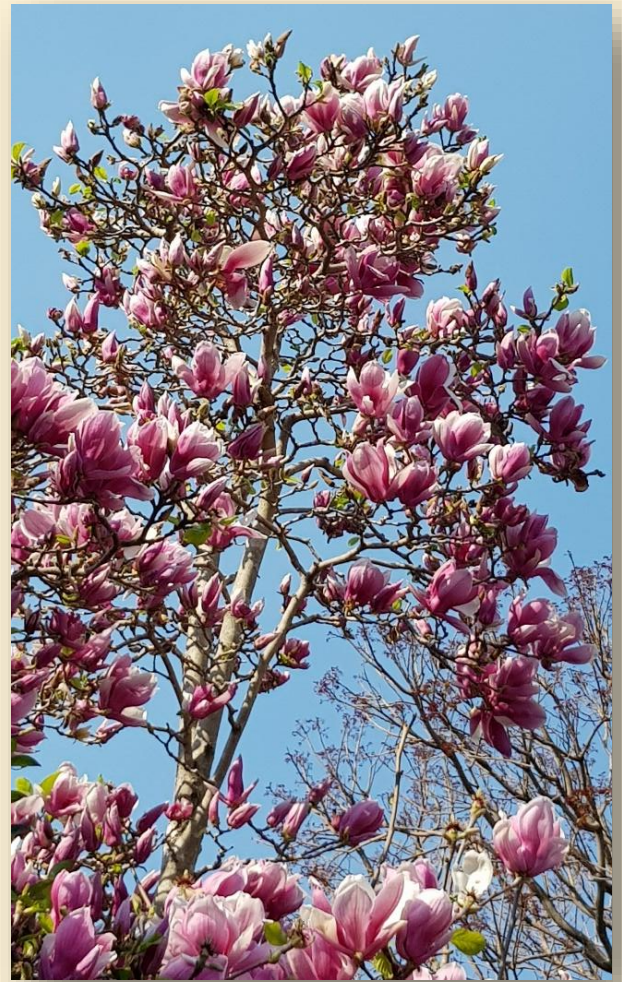


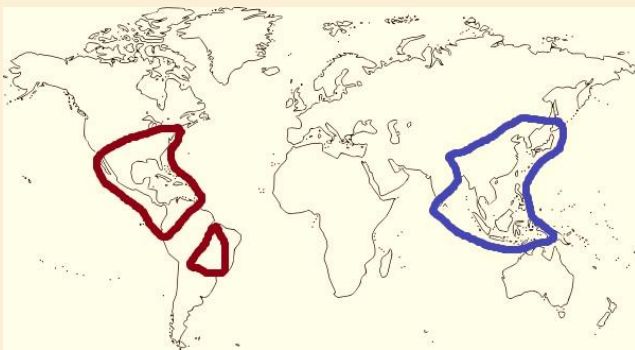
# Magnolia

Japan might have Cherry Blossom Festivals for a few weeks in their northern spring but in Sydney we have the pleasure of many weeks of magnolias flowering luxuriantly from late winter well into spring. Probably the most conspicuous are varieties of *Magnolia* × *soulangeana* and the smaller *M. stellata* (Star Magnolia)

There are possibly about 350 species of *Magnolia* with a disjunct distribution; one group centred in North and Central America (the presumed origin of the genus) including some in the West Indies, plus a few in South America; another group is found in eastern and southeastern Asia. *Magnolia* is an ancient genus as flowering plants go, with fossils dating back 20 million years. Magnoliaceae, the family that includes *Magnolia*, dates back 95 mya. Even bees had not evolved at this time, leading to the theory that beetles were the primary pollinators of ancient magnolias.

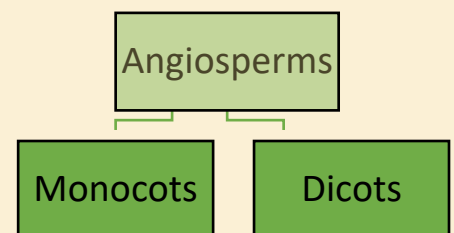


*Magnolia* × *soulangeana*



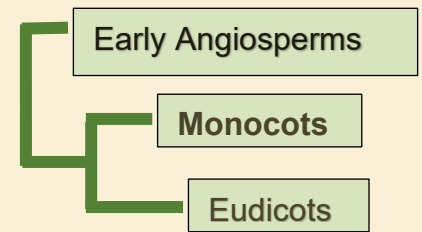
Taxonomy is the grouping of living organisms that share common origins and characteristics. In the case of the Magnoliaceae, there has historically been controversy about how to group the many putative genera and sections within the family. However, molecular biology, together with morphological and biogeographic evidence, now identifies only *two genera*—*Magnolia* and *Liriodendron*.

Classification of the family Magnoliaceae illustrates the revolutionary impact of molecular biology on modern taxonomy. In 1682, botanist John Ray published *New Method of Plants*, in which he separated flowering plants (**Angiosperms**) into two readily identifiable groups, **monocots** (typically grasses, lilies, palms) and **dicots** (such as gum trees, roses, daisies, peas and beans). John Ray's was the accepted wisdom until the advent of molecular biology late last century, when remarkable new techniques demonstrated that the evolutionary relationship between these two groups is far more complex than previously understood.





A revised evolutionary tree shows the **dicots** should be divided into two groups: the *Early Angiosperms* and the ‘modern angiosperms’ (*Eudicots*). *Magnolia* was then given its new status as an *Early Angiosperm*, although it still had many characteristics in common with *Eudicots*.



In 2016, the **Angiosperm Phylogeny Group (APG)** further modified the taxonomy of flowering plants (angiosperms) using even more recent knowledge to form the current classification of *Magnolia* as a *Magnoliid*; this places it amongst the most ancient angiosperms. The clade is characterised by flower parts (e.g. petals) in multiples of three, pollen which has only one pore, and, *usually*, branching-veined leaves.



*Magnolia stellata*, the Star Magnolia.

However, don't allow the complexity of plant classification to put you off your enjoyment of our glorious Magnolias.

*In Cornwall, when seven famous Magnolia trees in seven great gardens of Cornwall have each produced fifty flowers, it is said that Spring has arrived in England!*

Alison Downing, Brian Atwell, Karen Marais, Roger Hiller, Kevin Downing

Bernhardt P. 2000. Convergent evolution and adaptive radiation of beetle-pollinated angiosperms. *Plant Systematics and Evolution*. 222(1–4): 293–320.

Cornwall's Spring Story: <https://www.youtube.com/watch?v=Y9QpXT2Y6UM&feature=youtu.be>

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Wikipedia: <https://en.wikipedia.org/wiki/Magnolia>

Wang Y B, Liu B B, Nie Z L, Chen H F, Chen F J, Figlar R B, Wen J. 2020. Major clades and a revised classification of *Magnolia* and Magnoliaceae based on whole plastid genome sequences via genome skimming. *Journal of Systematics and Evolution*, 58(5): 673–695. <https://doi.org/10.1111/jse.12588>



*Magnolia denudata*



*Magnolia figo*



*Magnolia x soulangeana*



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