#### SPECIES DESCRIPTION

# Ginkgo biloba

(Maidenhair Tree)







#### **Notes**

A moderate sized columnar tree that can adapt to a range of growing conditions has a high tolerance of drought. Slow to Moderate growth rate and long-lived.

Above: Detail of fan shaped leaves

Above: Ginkgo trees used as street trees New York.

### Origin

Widespread fossil evidence of *Ginkgo* dating back 270 million years have been found in Asia, Europe, Nth America and even in Australia. It is part of an evolutionary link between plants that lived in the water and plants that came to live on the land and is a link between the Cycads and Conifers and the later angiosperms (flowering plants) and the genus *Ginkgo* itself is the oldest of any seed plant. Thought to be extinct until ancient specimens were found in temple gardens in China in 1691 by Engelbert Kaempfer of the Dutch East India company. He returned to Holland with *Ginkgo* seed and one of the first *Ginkgos* was planted in the mid 1700's Utrecht and can still be seen today. *Ginkgo biloba* is alone in its subclass (Ginkgoidae Engler 1897), order (Gingkgoales Gorozh. 1904), family (Ginkgoaceae Engler 1897), and genus (Ginkgo Linnaeus 1771).

# Habit

Medium to large sized deciduous tree. Columnar form with oval or upright canopy comprising recognisably irregular branch length and pattern with some short branches, some long and some crossing over the trunk. It is long lived with an early moderate growth rate in juvenile stages that can slow down in semi maturity.

Mature size ranges between  $20-30m \text{ high} \times 10-20m \text{ wide on a slender trunk that becomes stout in maturity; can be greater than 100cm diameter. Being dioceous, it has been observed that the male trees tend to develop taller narrower form in comparison to the female which can be wider than it is tall.$ 



Description	Leaves are fan shaped with a central division that forms two lobes. They have a dichotomous venation with two veins that enter the leaf from the stalk and keep dividing into pairs, rarely intersecting of fusing. Dull green to yellow green, concolorous, turning bright yellow in autumn.
	Female specimen can bare small yellow fleshy fruit approximately 20-25mm in diameter containing a single nut like seed within a hard casing. The nut can be dried and eaten but the fleshy outer becomes rancid smelling when ripe. The male tree bares pollen cones like catkins about 2cm long in clusters of 3 to 6 on the shoot from which the leaves arise.
	Bark is a light grey, with almost silver figuring in young to semi-mature specimens becoming darker grey to brown in older specimens.
Tolerances	Traditionally grows near riverbanks in forests and valleys on acidic, well drained soils
	(pH5-5.5) below 2,000m. It has proven to be tolerant of adverse growing conditions such as compacted soils, confined growing sites, air pollution and is resilient to drought and pest and disease.
	Highly adaptable, it will grow in almost any temperate or Mediterranean climate. It will tolerate temperatures down to -30°C and up to $\pm 40$ °C and is found growing from Iceland to southern Australia.
Root space	Based on early mature size of approximately 15m x 14m and a trunk diameter between 40cm to 50cm, the tree would require approximately 30m³ to 45m³ root volume (Urban, 2008) or 92m³ root volume (crown projection method).
Availability	Readily available at most tree nurseries. Seek the sterile varieties or male specimens, such as <i>Ginkgo biloba</i> 'Princeton Sentry' for high traffic areas where the fruit are likely to be a slip hazard and the rancid smell would be objectionable. In garden areas the female specimen can be used and the fruit may provide an additional point of interest.
Uses & management	One of the oldest yet most resilient exotic trees to grow in cities, dry climates and on a range of soil types. Provides delicate summer shade and does not impede winter sunlight. It's slow to moderate growth rate and its columnar form means it can be selected and used in relatively constrained sites as well being planted as a feature specimen in parks, gardens and streets. Long-lived tree with good tolerances, particularly to drought and city pollution means this tree is well suited to the urban environment.
	Can be transplanted successfully with appropriate preparation size appropriate lifting gear.

## Reference

Ginkgo biloba as seen: http://www.conifers.org/gi/Ginkgoaceae.php

Spencer, R., (1997), Horticultural flora of south-eastern Australia, University of New South Wales Press LTD, Australia.

 $The\ Ginkgo\ Pages:\ http://kwanten.home.xs4all.nl/thetree.htm$ 

 $Urban, J.\ (2008)\ \textit{Up by roots}.\ Healthy\ soils\ and\ trees\ in\ the\ built\ environment.\ International\ Society\ of\ Arboriculture.$ 

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