



The Plantsman's Choice

Presenting promising urban trees

Flowering Japanese pagoda trees in Bratislava, Slovakia.

Japanese pagoda tree

A climate-smart tree for the inner-city

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In China, the Japanese pagoda tree (*Styphnolobium japonicum*) is by far the most common street tree because it has the ability to handle warm and periodically dry conditions. In central and eastern Europe, the species is used in inner-city environments because of its rich summer flowering. Such widespread use suggests that the Japanese pagoda tree is a very promising species for tough urban environments in the UK.

The genus *Styphnolobium* once belonged to the former genus *Sophora*. The latter genus is now divided into three separate genera (*Sophora*, *Styphnolobium* and *Calia*) based on the morphological, genetic and chemical differences between the species. The genus *Styphnolobium* comprises nine species and is found in eastern and south-eastern Asia as well as North and Central America. Despite its common name, it does

not naturally occur in Japan but it has been cultivated there for generations and is widely planted around important temples.

The natural distribution of the Japanese pagoda tree is considered to be central and north-eastern China and Korea. Even in China the species is found around temples and other important buildings, which is where one can find the largest and oldest trees today. In the

central Chinese mountain forests, the species is found on south-facing slopes, along with other dry- and heat-resistant trees, such as *Koelreuteria paniculata*, *Ailanthus altissima*, *Cercis chinensis*, *Zelkova serrata* and the evergreen *Quercus baronii* and *Platycladus orientalis*.

The Japanese pagoda tree develops a broad, rounded crown, 15–20m high and 12–18m wide. A distinctive feature of the species is the shiny dark green shoots with light brown lenticels. The dark green leaves (about 20–25cm long) are made up of between 7 and 15 small leaves and turn a beautiful golden yellow in autumn – autumn colours are usually better in a warm microclimate. The leaves develop relatively late in the spring, which makes *Styphnolobium japonicum* suitable for places where you do not want the tree canopy to cool the environment too

early in the season through shading. Even the branch architecture is rather sparse, which means that it does not cast heavy shade during winter. This characteristic makes the species very climate smart and valuable in the compact city where it provides valuable shading when it is needed whilst allowing the sun to warm local environments in the winter – beneficial for areas that have use all year. The species has large, relatively sparse flower clusters in July to September. The flowers are cream-white, so they stand out against the background of the dark leaves. Flowering is aided by heat, so warm microclimates, such as those found in urban areas, often help the tree to perform well in this regard.

When purchasing Japanese pagoda trees, it is important to choose high-quality trees that have been regularly replanted as trees that have had large roots removed are much more difficult to establish. Containerised plants are recommended to help avoid this risk. The species varies a lot in growth and habit. If you want trees with a clear crown structure or if you want to know in advance the final size and shape of the tree, you should choose a cultivar.

Styphnolobium japonicum **'Princeton Upright'**

An American selection derived from Princeton Nurseries in New Jersey. Trees of the variety develop a narrow upright habit, while elderly trees develop an oval crown shape, 12–15m high and 7–10m wide. 'Princeton Upright' has a slightly narrower habit than the variety 'Regent'. It flowers richly in warm microclimates and is a very useful variety for street environments. 'Fleright' is a synonymous cultivar.

Styphnolobium japonicum 'Regent'

One of the older varieties of Japanese pagoda trees, this has been used extensively in the eastern United States as an urban tree. Trees of the variety develop a conical habit when young, whilst older trees tend to develop a broad oval tree canopy. It is narrower than the average true species but compared to the species, it is very fast-growing.



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In China the Japanese pagoda tree is one of the most common street trees where it shows its capacity for coping with warm and dry inner-city environments.

