

Styphnolobium japonicum (=*Sophora japonica*)

Japanese Pagodatree (*Fabaceae* or *Leguminosae*)

Styphnolobium japonicum is a large, rounded, shade tree that doubles as an ornamental tree, profusely flowering in Aug. or early Sept. with creamy-yellow large inflorescences. Japanese Pagodatree has many liabilities that limit the planting of this unusual tree in urban landscapes.

FEATURES

Form



- large shade tree, doubling as a large ornamental tree maturing at about 60' tall x 80' wide, but can get even larger
- upright rounded growth habit in youth, becoming more spreading with age

rapid growth rate in youth and middle age, becoming a medium growth rate with maturity

Culture

- full sun to partial sun
- performs best in full sun in moist, well-drained soils of average fertility, but is very urban tolerant (especially to heat, drought, pollution, compacted soils, and poor soils)
- species form is propagated by seed, and cultivars are budded onto seedling understock
- several potential diseases (including branch and trunk canker [which can lead to wood rot and storm damage] and twig blight [which leads to leaf abscission and stem dieback]) and at least one potential pest (potato leaf hopper [which kills the new growth, leading to the resultant regrowth as witches' brooms])
- low availability, in B&B form

Foliage

- alternate, medium to dark green, with about 9-13 ovate leaflets (with acute apices) per pinnately compound leaf, having faded green to yellowish green autumn color
- trees will often drop a slow but continuous stream of leaflets, rachises, and entire leaves from mid-summer through early-autumn (before the advent of normal autumn leaf abscission), in response to both abiotic and biotic stresses
- trees cast a light dappled shade in youth, but a much more dense shade with maturity

Flowers

- creamy-white to yellowish-green large inflorescences blanket the tree anytime from early Aug. to early Sept., with about a 3-week bloom period
- young seedling trees may not flower for the first 10 or so years unless the cultivar 'Regent', which flowers at a young age, is used

Fruits

- thick green pods mature to yellow-green fruits, with the large beans appearing as knobs within the otherwise thin pods, hanging profusely from the tree



-ripening in Oct.-Nov. and persisting into Dec. or beyond

Twigs

-bright green in spring on the emergent stems, becoming kelly green to medium green in summer, and persisting as a dark green during the winter, remaining so for several years afterwards on the young branches, slowly fading to tan on the mature branches

Trunk

-branches are lightly furrowed and yellowish green-brown, but appear as if they are striated (i.e., having light brown, diffuse, straight lines on the lime green bark)

-trunks have interlacing ridges and are more deeply furrowed, becoming light brown to gray-brown with maturity

-wood is relatively weak, and the branches are prone to storm damage (with or without cankers and wood rot) with their increasing age and weight

-growth habit is very rounded, resulting from the loss of the central leader at an early age (for the species form)

USAGE

Function

- shade, specimen, or summer-flowering focal point

Texture

-medium texture in foliage and when bare

-thick density in foliage and when bare

Assets

- showy creamy inflorescences in mid- to late-summer
- rapid growth rate
- urban tolerance
- dappled shade in youth
- wildlife attraction when in fruit

Liabilities

-fruit abscission (and bird deposition of fruit residue) from Oct. through Dec., a true liability if the tree is sited near parking lots, sidewalks, etc.

-continuous sequence of dropping leaflets, rachises, flowers, fruits, and pedicels from July through Dec., and dead stem abscission year round

-weak wood and brittle stems, often resulting in storm damage with age

-potential for numerous diseases and pests

-species form is slow to flower as a young tree in the northern areas of its range

-poor autumn color

-marginally hardy in severe zone 5 winters, exhibiting twig dieback

Habitat

-Zones 5 to 8

-Native to the Orient

SELECTIONS

Alternates

-medium- or large-sized shade trees with showy flowers in summer (*Koelreuteria paniculata*, *Liriodendron tulipifera*, *Magnolia grandiflora*, etc.)

-urban tolerant shade trees (*Acer platanoides*, *Fraxinus pennsylvanica*, *Gleditsia triacanthos*, *Quercus rubra*, *Zelkova serrata*, etc.)

Cultivars – Variants – Related species

Styphnolobium japonicum 'Regent' - the cultivar of choice, selected for its even more rapid growth rate, relatively straight central leader, earliness to flower (at about 5 years old), and glossy dark green foliage