



Sophora japonica 'Columnaris' Columnar Scholar Tree¹

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INTRODUCTION

This cultivar of Pagoda Tree probably has a height of about 40 feet and spread of 15 to 20 feet, forming a fine-textured, upright canopy (Fig. 1). It has a rapid growth rate and tolerates polluted city conditions, heat, and drought. The tree prefers a sunny, open location on any light soil. The very showy, greenish-white to yellow flowers are produced in mid to late summer and provide an airy feel to the tree for several weeks. A yellow dye can be made by boiling the dried flowers and buds in water. The young green twigs turn a dark grey with age. It has been reported that the species must be about 10-years-old to bloom, but the cultivar 'Regent' apparently blooms at an earlier age.

GENERAL INFORMATION

Scientific name: *Sophora japonica* 'Columnaris'

Pronunciation: sah-FOR-uh juh-PAWN-ih-kuh

Common name(s): Columnar Scholar Tree,
Columnar Japanese Pagoda Tree

Family: *Leguminosae*

USDA hardiness zones: 5 through 8A (Fig. 2)

Origin: not native to North America

Uses: wide tree lawns (>6 feet wide); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; specimen; sidewalk cutout (tree pit); residential street tree; tree has been successfully grown in urban areas where air pollution, poor drainage, compacted soil, and/or drought are common

Availability: grown in small quantities by a small number of nurseries

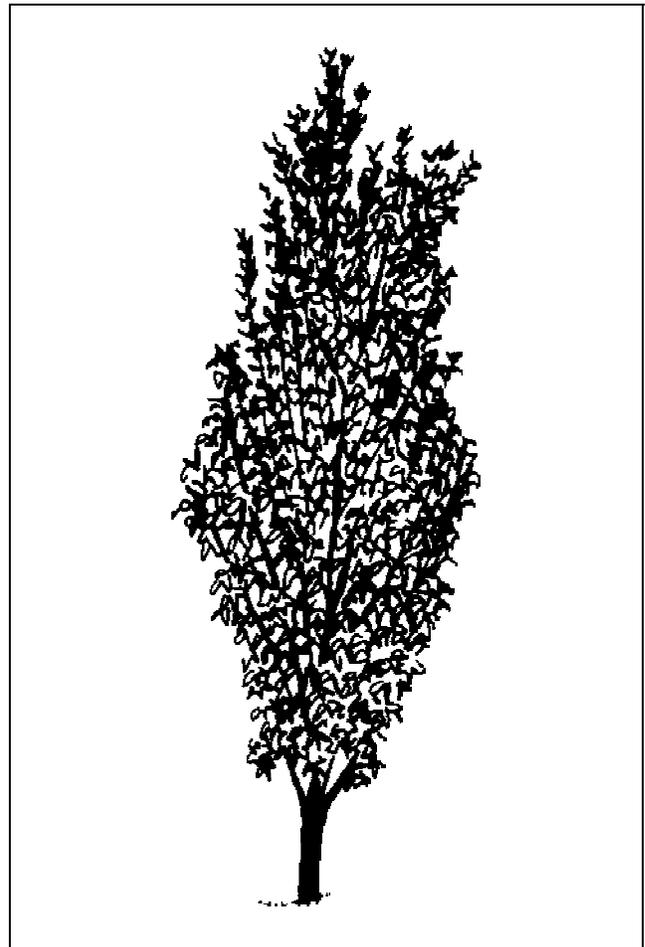


Figure 1. Middle-aged Columnar Scholar Tree.

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Figure 2. Shaded area represents potential planting range.

DESCRIPTION

Height: 35 to 45 feet

Spread: 15 to 20 feet

Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms

Crown shape: columnar; upright

Crown density: moderate

Growth rate: medium

Texture: fine

Foliage

Leaf arrangement: alternate (Fig. 3)

Leaf type: odd pinnately compound

Leaflet margin: entire

Leaflet shape: ovate

Leaflet venation: pinnate

Leaf type and persistence: deciduous

Leaflet blade length: less than 2 inches

Leaf color: green

Fall color: yellow

Fall characteristic: not showy

Flower

Flower color: white; yellow

Flower characteristics: showy; summer flowering

Fruit

Fruit shape: elongated; pod

Fruit length: 6 to 12 inches; 3 to 6 inches

Fruit covering: dry or hard

Fruit color: brown; yellow

Fruit characteristics: does not attract wildlife; fruit, twigs, or foliage cause significant litter; persistent on the tree; showy

Trunk and Branches

Trunk/bark/branches: grow mostly upright and will not droop; not particularly showy; should be grown with a single leader; no thorns

Pruning requirement: requires pruning to develop strong structure

Breakage: resistant

Current year twig color: green

Current year twig thickness: medium; thin

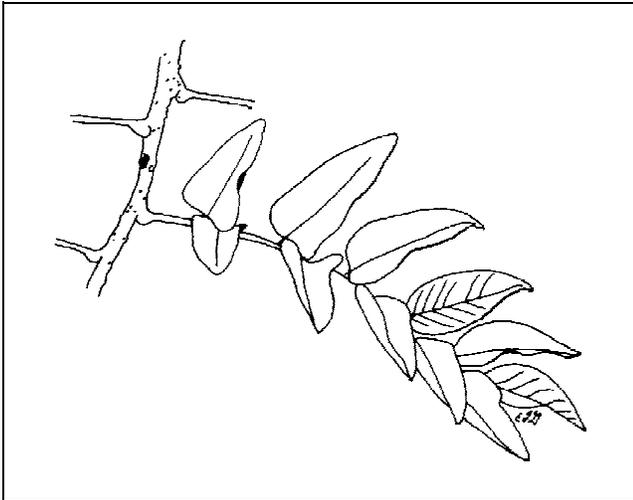


Figure 3. Foliage of Columnar Scholar Tree.

Culture

Light requirement: tree grows in full sun

Soil tolerances: clay; loam; sand; acidic; occasionally wet; alkaline; well-drained

Drought tolerance: high

Aerosol salt tolerance: moderate

Other

Roots: surface roots are usually not a problem

Winter interest: no special winter interest

Outstanding tree: not particularly outstanding

Invasive potential: little, if any, potential at this time

Pest resistance: long-term health usually not affected by pests

USE AND MANAGEMENT

The tree drops flower petals creating a creamy white carpet for several weeks on the ground, but they can temporarily stain sidewalks. The yellow fruit pods form in late summer and are quite showy, dropping later in the winter and could be a nuisance to some people. But they are small and fairly easily washed away. The leaflets are small, creating light shade beneath the tree and are mostly washed away with rain or fall into shrub beds or between the grass blades.

Some trees come from the nursery with multiple trunks or branches clustered together at one spot on the trunk. Buy those with one central trunk growing up the center of the tree or prune the tree to a central leader to create a strong, durable structure. Space branches along the central leader to ensure good branch attachment. It may take several prunings to train the tree to the proper form.

This urban-tough tree is highly recommended for urban planting. It adapts to restricted soil spaces, tolerates salt spray, and tolerates drought in reasonable soil but not wet soil. Best when planted in full sun.

Sophora species has a few other cultivars: 'Pendula' - weeping habit; 'Princeton Upright' - upright form suitable for narrow sites, somewhat smaller than the species; 'Regent' - oval crown and blooms at an early age, has glossy leaves which shed soot and dirt, readily available in nurseries.

Pests

Potato leafhopper kills young stems causing profuse branching or witches broom on small branches. It usually is not a problem on larger trees.

Diseases

Sophora species is generally pest- and disease-free.

Occasionally, Scholar Tree will get a fungus canker about two-inches or less across, have raised reddish brown margins and light brown centers. The infected stem is killed when the fungus girdles the stem. Another fungus is sometimes found on dead branches on *Sophora* species. Frost injury may give both fungi an entrance into the tree. Prune out dead, damaged, or diseased branches.

Twig blight or dieback can be a problem occasionally. Prune out infected branches and avoid unnecessary wounding. Keep trees vigorous by regular fertilization.

Powdery mildew forms a fungus mat which looks like a white coating on the leaves. The disease is usually not serious.