Cladrastis kentukea
American Yellowwood

Edward F. Gilman and Dennis G. Watson

INTRODUCTION

Yellowwood is so-named because the freshly-cut heartwood is a muted to brilliant yellow color, and the wood is known to yield a yellow dye (Fig. 1). This seldom-used, native, deciduous tree makes a very striking specimen or shade tree, reaches 30 to 50, rarely 75 feet in height, with a broad, rounded canopy, and has a vase-shaped, moderately dense silhouette. Smooth, grey to brown bark, bright green, pinnately compound, 8 to 12-inch-long leaflets, and a strikingly beautiful display of white, fragrant blossoms make Yellowwood a wonderful choice for multiple landscape uses.

GENERAL INFORMATION

Scientific name: Cladrastis kentukea
Pronunciation: kluh-DRASS-tiss ken-TUCK-ee-uh
Common name(s): American Yellowwood, Virgilia
Family: Leguminosae
USDA hardness zones: 4 through 8 (Fig. 2)
Origin: native to North America
Uses: recommended for buffer strips around parking lots or for median strip plantings in the highway; shade tree; specimen; residential street tree
Availability: somewhat available, may have to go out of the region to find the tree

DESCRIPTION

Height: 30 to 50 feet
Spread: 40 to 50 feet
Crown uniformity: irregular outline or silhouette
Crown shape: round; vase shape

Foliage

Leaf arrangement: alternate (Fig. 3)
Leaf type: odd pinnately compound
Leaflet margin: entire
Leaflet shape: elliptic (oval); ovate

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Leaflet venation: banchiodrome; pinnate
Leaf type and persistence: deciduous
Leaflet blade length: 2 to 4 inches
Leaf color: green
Fall color: copper; yellow
Fall characteristic: not showy

Flower
Flower color: white
Flower characteristics: pleasant fragrance; summer flowering; very showy

Fruit
Fruit shape: elongated
Fruit length: 3 to 6 inches; 1 to 3 inches
Fruit covering: dry or hard
Fruit color: white
Fruit characteristics: does not attract wildlife; no significant litter problem; persistent on the tree; showy

Trunk and Branches
Trunk/bark/branches: bark is thin and easily damaged from mechanical impact; droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; showy trunk; should be grown with a single leader; no thorns
Pruning requirement: requires pruning to develop strong structure
Breakage: susceptible to breakage either at the crotch due to poor collar formation, or the wood itself is weak and tends to break
Current year twig color: brown
Current year twig thickness: thin

Culture
Light requirement: tree grows in part shade/part sun; tree grows in full sun
Soil tolerances: clay; loam; sand; acidic; occasionally wet; alkaline; well-drained
Drought tolerance: moderate
Figure 3. Foliage of American Yellowwood.

Other

**Roots:** surface roots can lift sidewalks or interfere with mowing  
**Winter interest:** tree has winter interest due to unusual form, nice persistent fruits, showy winter trunk, or winter flowers  
**Outstanding tree:** not particularly outstanding  
**Invasive potential:** little, if any, potential at this time  
**Verticillium wilt susceptibility:** susceptible  
**Pest resistance:** no pests are normally seen on the tree

USE AND MANAGEMENT

The one-inch-wide, fragrant flowers appear in dense, showy, pendulous, terminal panicles, 12 to 14 inches long, in early summer and are set off nicely against the lush foliage. Flowers are visited by a large number of bees. Trees may not flower until they are 10-years-old and then seem to give outstanding displays only in cycles of every two to five years but the gorgeous display is well worth the wait. The flowers are followed by showy, three to four-inch-long, whitish-grey pods which persist through the winter.

Unpruned trees fall apart in 30 to 40 years. Yellowwood should be pruned when young to develop branches having a wide angle with the trunk and a ‘U’-shaped crotch. These should be pruned back so that they are not allowed to grow larger than half the diameter of the trunk. Develop 7 to 10 major lateral limbs spaced along the trunk, not clustered together. Good luck! This will help them develop strong attachments to the trunk and provide for a longer-lived tree than one which is not pruned in this way. Weakly-attached branches with embedded bark are susceptible to breakage and may be a problem as the tree grows older. Any pruning should be done in summertime because excess bleeding may occur if done in the winter or spring. It could be used as street tree if properly pruned to avoid weak crotches. It is often planted as a specimen or shade tree for smaller properties due to its flowers and medium size.

Yellowwood grows slowly in full sun on moist, well-drained soils but growth may be more rapid if provided with some shade in the southern part of its range and in the plains states. It grows slowly on poor soil but looks fine, responding to better soil with moderate growth. It tolerates alkaline (it is native to dry limestone outcroppings as well as along stream banks) or acidic soil and urban conditions. It performs well with only occasional irrigation once established, even in poor, compacted soils. It adapts to wet soils by growing a shallow root system. There are several very large, coarsely-branched roots dominating the root system which makes care following transplanting very crucial. But planting from containers is no problem.

The cultivar ‘Rosea’ has pinkish flowers.

Propagation is by seed or cuttings.

Pests and Diseases

No pests or diseases are of major concern. Verticillium wilt may occasionally be a problem.