

Ulmus americana: American Elm¹

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Introduction

This native North American tree grows quickly when young, forming a broad or upright, vase-shaped silhouette, 70 to 90 feet high and 50 to 70 feet wide. Trunks on older trees could reach to seven feet across. The five-inch-long, deciduous leaves are dark green throughout the year, fading to yellow before dropping in fall. In early spring, before the new leaves unfold, the rather inconspicuous, small, green flowers appear on pendulous stalks. These blooms are followed by green, wafer-like seedpods which mature soon after flowering is finished and the seeds are quite popular with both birds and wildlife. American elm must be at least 15-years-old before it will bear seed. The copious amount of seeds can create a mess on hard surfaces for a period of time. Trees have an extensive but shallow root system.

General Information

Scientific name: *Ulmus americana*

Pronunciation: UL-mus uh-mair-ih-KAY-nuh

Common name(s): American elm

Family: *Ulmaceae*

USDA hardiness zones: 2A through 9B (Figure 2)

Origin: native to the eastern half of the United States, in addition to adjacent Canadian provinces

UF/IFAS Invasive Assessment Status: native

Uses: reclamation; urban tolerant; specimen



Figure 1. Full Form—*Ulmus americana*: American elm

Description

Height: 70 to 90 feet

Spread: 50 to 70 feet

Crown uniformity: symmetrical

Crown shape: vase

Crown density: moderate

Growth rate: fast

Texture: medium

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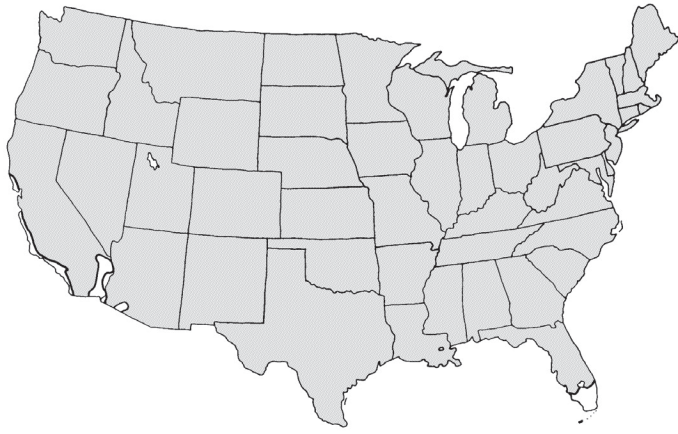


Figure 2. Range

Foliage

Leaf arrangement: alternate

Leaf type: simple

Leaf margin: double serrate

Leaf shape: oblong, ovate

Leaf venation: pinnate

Leaf type and persistence: deciduous

Leaf blade length: 1 to 5 inches

Leaf color: green and smooth to slightly scabrous on top, lighter green and pubescence underneath

Fall color: yellow

Fall characteristic: showy



Figure 3. Leaf—*Ulmus americana*: American elm

Flower

Flower color: green

Flower characteristics: not showy; bell-shaped; emerge in clusters at leaf axils

Flowering: early spring, but before leaves appear



Figure 4. Flower—*Ulmus americana*: American elm

Fruit

Fruit shape: broadly elliptic, thin, flattened samara

Fruit length: $\frac{3}{8}$ to $\frac{1}{2}$ inch

Fruit covering: dry or hard; soft hair around the margin

Fruit color: green

Fruit characteristics: attracts birds; not showy; fruit/leaves a litter problem



Figure 5. Fruit—*Ulmus americana*: American elm

Trunk and Branches

Trunk/branches: branches don't droop; not showy; typically one trunk; no thorns

Bark: ashy gray, narrowly fissured, and flaking or peeling into small, scaly plates

Pruning requirement: needed for strong structure

Breakage: susceptible to breakage

Current year twig color: brown

Current year twig thickness: thin

Wood specific gravity: 0.50



Figure 6. Bark—*Ulmus americana*: American elm
Credits: Gitta Hasing

Culture

Light requirement: full sun to partial shade

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

Drought tolerance: high

Aerosol salt tolerance: moderate

Other

Roots: can form large surface roots

Winter interest: no

Outstanding tree: no

Ozone sensitivity: tolerant

Verticillium wilt susceptibility: susceptible

Pest resistance: sensitive to pests/diseases

Use and Management

Once a very popular and long-lived (300+ years) shade and street tree, American elm suffered a dramatic decline with the introduction of Dutch elm disease, a fungus spread by a bark beetle. The wood of American elm is very hard and was a valuable timber tree used for lumber, furniture and veneer. The Indians once made canoes out of American elm trunks, and early settlers would steam the wood so it could be bent to make barrels and wheel hoops. It was also used for the rockers on rocking chairs. Today, the wood that can be found is used mainly for making furniture.

American elm should be grown in full sun on well-drained, rich soil. If you plant American elm, plan on implementing a monitoring program to watch for symptoms of Dutch elm disease. It is vital to the health of existing trees that a program be in place to administer special care to these disease-sensitive trees.

Propagation is by seed or cuttings. Young plants transplant easily.

Pests

Many pests may infest American elm, including bark beetles, elm borer, gypsy moth, mites, and scales. Leaf beetles often consume large quantities of foliage.

Diseases

Many diseases may infect American elm, including Dutch elm disease, phloem necrosis, leaf spot diseases, and cankers. American elm is a host for ganoderma butt rot.

Reference

Koeser, A. K., Hasing, G., Friedman, M. H., and Irving, R. B. 2015. Trees: North & Central Florida. Gainesville: University of Florida Institute of Food and Agricultural Sciences.