Zelkova

Zelkova Serrata

Street/Curb Friendly

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Fact Sheet ST-677
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Zelkova serrata
Japanese Zelkova[1]

Edward F. Gilman and Dennis G. Watson[2]

INTRODUCTION

Zelkova is often listed as a replacement for American Elm since it has roughly the same vase shape and grows 90 to 100 feet tall with a 60 to 80-foot spread (Fig. 1). But no tree will truly match the grace and elegance of the American Elm. Zelkova is massive, with the trunk capable of growing to four feet or more in diameter. It has a moderate growth rate and likes a sunny exposure. Branches are more numerous and smaller in diameter than American Elm. Leaves are 1.5 to 4 inches long, turning a brilliant yellow, orange, or burnt umber in the fall.

GENERAL INFORMATION

Scientific name: *Zelkova serrata*
Pronunciation: zell-KOE-vuh sair-AY-tuh
Common name(s): Japanese Zelkova, Saw-Leaf Zelkova
Family: *Ulmaceae*
USDA hardiness zones: 5 through 8 (Fig. 2)
Origin: not native to North America
Uses: Bonsai; large parking lot islands (> 200 square feet in size); wide tree lawns (>6 feet wide); medium-sized parking lot islands (100-200 square feet in size); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; shade tree; 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: generally available in many areas within its hardiness range

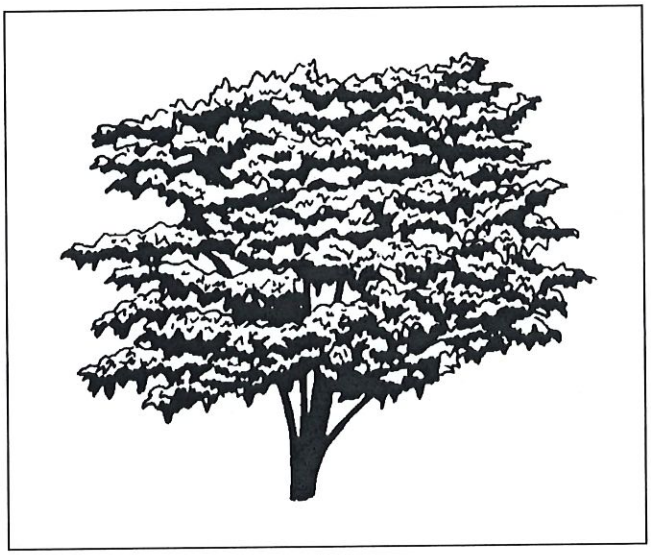

Figure 1. Mature Japanese Zelkova.

DESCRIPTION

Height: 55 to 80 feet
Spread: 50 to 75 feet
Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms
Crown shape: vase shape
Crown density: moderate
Growth rate: medium
Texture: fine

1. This document is adapted from Fact Sheet ST-677, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: October 1994.
2. Edward F. Gilman, associate professor, Environmental Horticulture Department; Dennis G. Watson, associate professor, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.

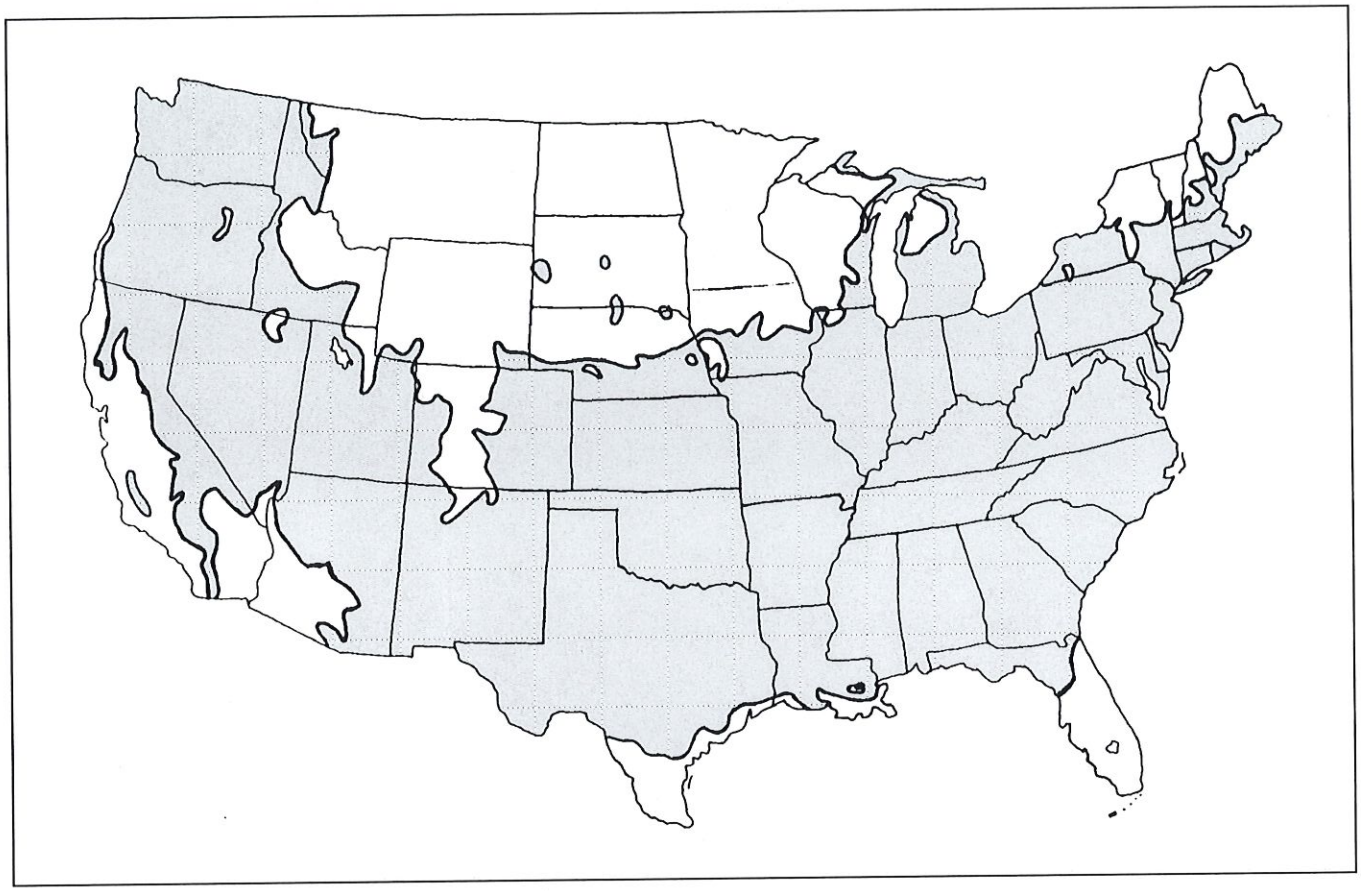

Figure 2. Shaded area represents potential planting range.

Foliage

Leaf arrangement: alternate (Fig. 3)
Leaf type: simple
Leaf margin: serrate
Leaf shape: oblong; ovate
Leaf venation: pinnate
Leaf type and persistence: deciduous
Leaf blade length: less than 2 inches
Leaf color: green
Fall color: copper; orange; red; yellow
Fall characteristic: showy

Flower

Flower characteristics: inconspicuous and not showy; spring flowering

Fruit

Fruit shape: oval
Fruit length: < .5 inch
Fruit covering: dry or hard
Fruit characteristics: does not attract wildlife; inconspicuous and not showy; no significant litter problem

Trunk and Branches

Trunk/bark/branches: grow mostly upright and will not droop; 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 full sun
Soil tolerances: clay; loam; sand; slightly alkaline; acidic; occasionally wet; well-drained
Drought tolerance: high
Aerosol salt tolerance: moderate

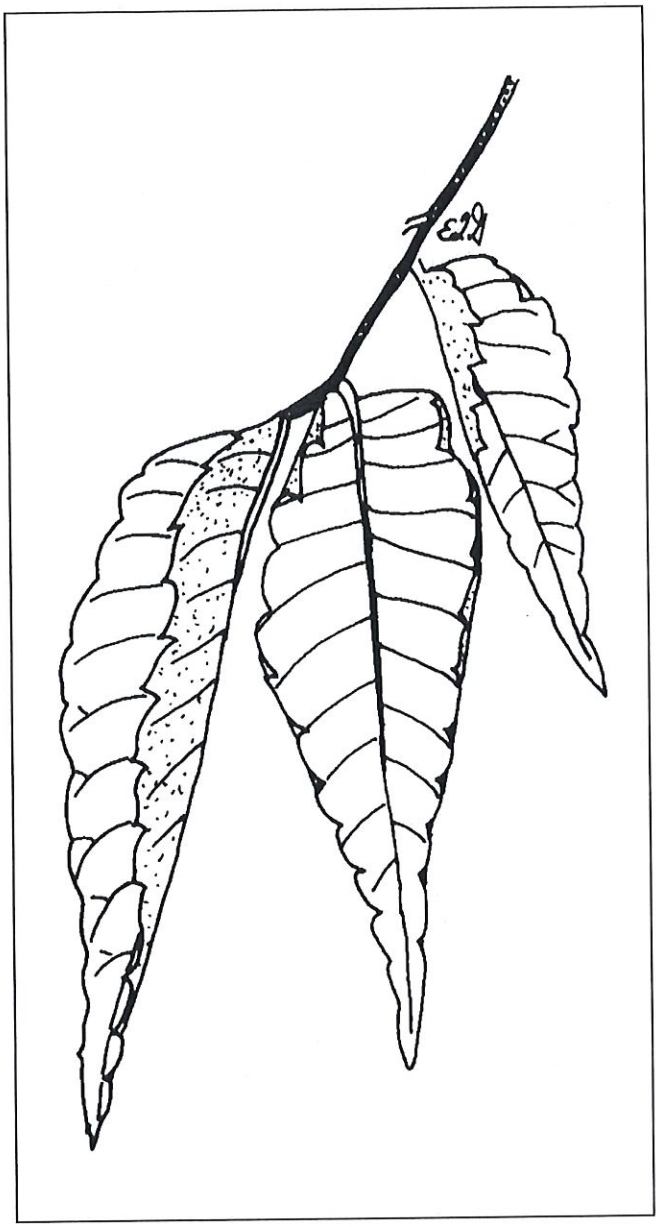

Figure 3. Foliage of Japanese Zelkova.

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
Ozone sensitivity: sensitive or moderately tolerant
Verticillium wilt susceptibility: not known to be susceptible
Pest resistance: long-term health usually not affected by pests

USE AND MANAGEMENT

Unfortunately, the branches on Zelkova are often clumped together on the trunk at one point. Double and multiple trunks or leaders with embedded bark are also common. This is not a desirable form for planting in urban areas and needs to be prevented, or corrected, on existing trees. Purchase trees with branches spaced along the trunk so they can develop a secure hold onto the trunk. These will be hard to find but insist on it! Be sure that branches remain less than about half the diameter of the trunk to maintain a strong, durable form. Encourage nurserymen to grow trees with good trunk and branch structure.

The tree will tolerate most soil types, including those with a pH to about 7.5, but prefers a moist deep loam. It is reportedly risky to transplant in the fall. Established trees are fairly drought-tolerant, requiring little irrigation unless located in sandy soil. It makes a wonderful street tree even in restricted-soil tree pits, and is almost pest free. The crowns will eventually grow together if trees are planted on 30-foot-centers, forming a wonderful shaded street. This is a tough, urban tree which is often planted along streets in downtown and residential areas.

Cultivars include: 'Green Vase' somewhat resembles the vase shape of American Elms, is more upright in habit and tolerant of pollution, makes a great city street tree and produces a taller and narrower tree than 'Village Green;' 'Village Green' also resembles the shape of the American Elm and is more winter hardy than 'Green Vase', and may have a straighter trunk.

Diseases

Normally disease-free as it resists Dutch Elm disease and Elm leaf beetle.

Zelkova is subject to canker diseases particularly if the trunk is repeatedly wounded. Avoid wounding and maintain tree health.