**Zelkova serrata** ‘Green Vase’: ‘Green Vase’ Japanese Zelkova

Edward F. Gilman and Dennis G. Watson

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**Introduction**

‘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’ Zelkova. Zelkova is often listed as a replacement for American Elm since it has roughly the same vase shape and grows 70 to 80 feet tall with a 50 to 60-foot spread. 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. Major branches grow very upright and provide easy clearance for tall vehicles below making it quite suitable as a street tree. Leaves are 1.5 to 4 inches long, turning a brilliant burnt umber in the fall.

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**General Information**

**Scientific name:** Zelkova serrata  
**Pronunciation:** zell-KOE-vuh sair-AY-tuh  
**Common name(s):** ‘Green Vase’ Japanese Zelkova, ‘Green Vase’ Saw-Leaf Zelkova  
**Family:** Ulmaceae  
**USDA hardiness zones:** 5B through 8B (Fig. 2)  
**Origin:** not native to North America  
**Invasive potential:** little invasive potential  
**Uses:** urban tolerant; highway median; street without sidewalk; shade; parking lot island 100-200 sq ft; parking lot island > 200 sq ft; sidewalk cutout (tree pit); tree lawn 4-6 feet wide; tree lawn > 6 ft wide  
**Availability:** not native to North America

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### Description

**Height:** 60 to 80 feet  
**Spread:** 50 to 60 feet  
**Crown uniformity:** symmetrical  
**Crown shape:** vase  
**Crown density:** moderate  
**Growth rate:** fast  
**Texture:** fine

### 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:** red, copper  
**Fall characteristic:** showy

### Flower

**Flower color:** unknown  
**Flower characteristics:** not showy

### Fruit

**Fruit shape:** oval  
**Fruit length:** less than .5 inch  
**Fruit covering:** dry or hard  
**Fruit color:** unknown  
**Fruit characteristics:** does not attract wildlife; not showy; fruit/leaves not a litter problem

### Trunk and Branches

**Trunk/bark/branches:** branches don't droop; showy; typically one trunk; thorns  
**Pruning requirement:** needed for strong structure  
**Breakage:** susceptible to breakage  
**Current year twig color:** brown  
**Current year twig thickness:** thin  
**Wood specific gravity:** unknown

### Culture

**Light requirement:** full sun  
**Soil tolerances:** sand; loam; clay; acidic; slightly alkaline; occasionally wet; well-drained  
**Drought tolerance:** high  
**Aerosol salt tolerance:** moderate

### Other

**Roots:** not a problem  
**Winter interest:** no  
**Outstanding tree:** yes  
**Ozone sensitivity:** unknown  
**Verticillium wilt susceptibility:** resistant  
**Pest resistance:** resistant to pests/diseases

### 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: ‘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.