Ulmus alata
Winged Elm

Edward F. Gilman and Dennis G. Watson

INTRODUCTION

Usually seen at 40 to 50 feet high, Winged Elm can reach 90 feet in height in the woods with a 30 to 40-foot spread (Fig. 1). Canopy form is variable from pyramidal to vase or rounded. A North American native, this fast-growing deciduous tree is quickly identified by the corky, winglike projections which appear on opposite sides of twigs and branches. Branches rise through the crown, then bend in a sweeping manner toward the ground. The size of the wings varies greatly from one tree to another. Because it is found growing in wet sites as well as dry, rocky ridges it is a very adaptable tree for urban planting.

GENERAL INFORMATION

Scientific name: Ulmus alata
Pronunciation: UL-mus uh-LAY-tuh
Common name(s): Winged Elm
Family: Ulmaceae
USDA hardiness zones: 6 through 9 (Fig. 2)
Origin: native to North America
Uses: 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; reclamation plant; shade tree; small parking lot islands (< 100 square feet in size); narrow tree lawns (3-4 feet wide); 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: somewhat available, may have to go out of the region to find the tree

DESCRIPTION

Height: 45 to 70 feet
Spread: 30 to 40 feet
Crown uniformity: irregular outline or silhouette
Crown shape: oval; pyramidal; upright; vase shape

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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.
Crown density: moderate  
Growth rate: fast  
Texture: fine  

Foliage  
Leaf arrangement: alternate (Fig. 3)  
Leaf type: simple  
Leaf margin: double serrate; serrate  
Leaf shape: elliptic (oval); ovate  
Leaf venation: pinnate  
Leaf type and persistence: deciduous  
Leaf blade length: 2 to 4 inches; less than 2 inches  
Leaf color: green  
Fall color: yellow  
Fall characteristic: showy  

Fruit  
Fruit shape: oval  
Fruit length: < .5 inch  
Fruit covering: dry or hard  
Fruit color: brown  
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; 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: brown; gray  
Current year twig thickness: thin  

Culture  
Light requirement: tree grows in part shade/part sun; tree grows in full sun
USE AND MANAGEMENT

Winged Elm will easily adapt to full sun or partial shade, growing relatively quickly on any soil. It is an extremely sturdy and adaptable tree and is well-suited as a shade or street tree. It grows very well in urban areas and is suited to parking lot islands and other confined soil spaces. It must be pruned regularly at an early age to eliminate double and multiple trunks. Select branches which form a wide angle with the trunk, eliminating those with narrow crotches. Strive to produce a central trunk with major lateral limbs spaced along the trunk. This trunk will not be straight (unless it is staked) but this is fine. Purchase trees with good form in the nursery and be selective since form varies greatly from one tree to the next.

It is not an easy tree to train and prune, requiring perhaps three or four prunings in the first several years after seed germination. Trees look very open and lanky following proper pruning and this may be one reason the tree has not been very popular with nursery operators, architects, and urban foresters. But after this initial training period, trees fill in nicely to make a well-adapted, beautiful shade tree.

Propagation is by seed which, when sown immediately after harvest, germinate quickly and easily.

PESTS AND DISEASES

The biggest problem is Dutch elm disease which can kill trees. To protect the community from widespread tree loss, do not plant a large number of these trees. Some trees are susceptible to powdery mildew, causing varying degrees of leaf color changes in fall, right before leaves drop. Mites can yellow the foliage but usually cause no permanent damage. Scale insects can infest Winged Elm along branches. Scale infestations are often missed due to the thick, corky bark along the twigs.