



Ulmus alata Winged Elm¹

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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,

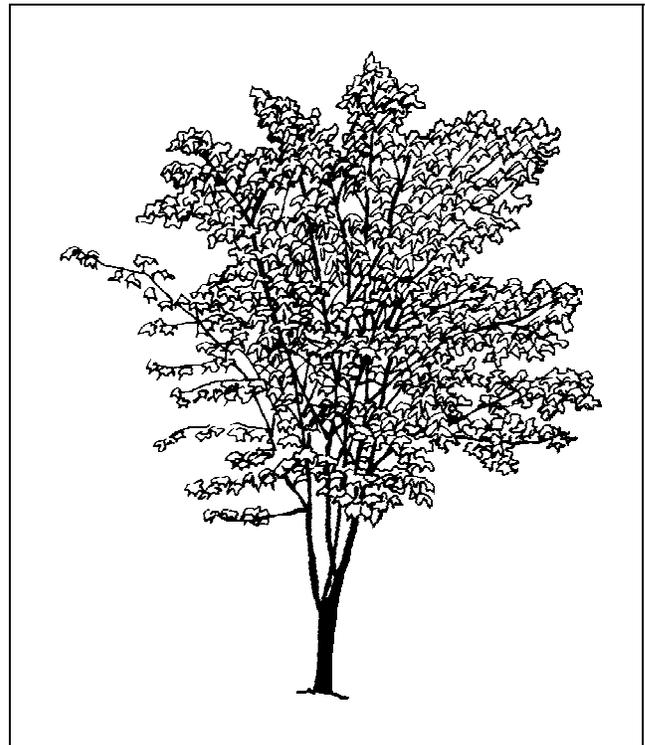


Figure 1. Young Winged Elm.

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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Figure 2. Shaded area represents potential planting range.

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

Flower

Flower color: green

Flower characteristics: fall flowering; inconspicuous and not 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

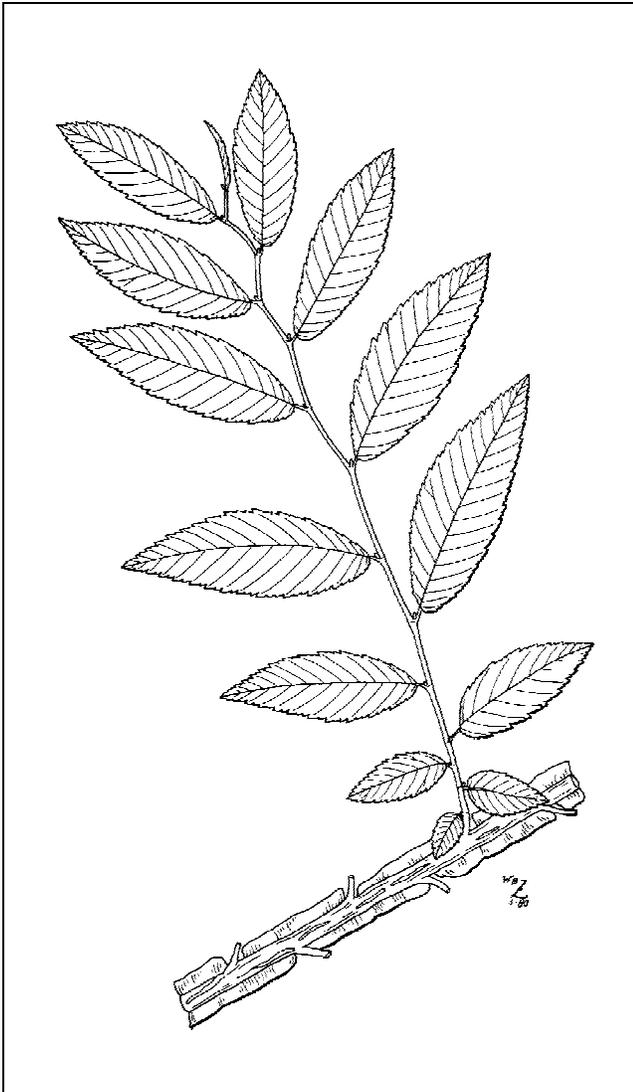


Figure 3. Foliage of Winged Elm.

Soil tolerances: clay; loam; sand; acidic; alkaline; extended flooding; well-drained

Drought tolerance: high

Aerosol salt tolerance: moderate

Other

Roots: surface roots are usually not a problem

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

Ozone sensitivity: tolerant

Verticillium wilt susceptibility: susceptible

Pest resistance: long-term health usually not affected by pests

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.