**Ulmus alata**: Winged Elm

Edward F. Gilman and Dennis G. Watson

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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. 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.

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**General Information**

- **Scientific name**: *Ulmus alata*
- **Pronunciation**: UL-mus uh-LAY-tuh
- **Common name(s)**: Winged elm
- **Family**: Ulmaceae
- **USDA hardiness zones**: 6A through 9B (Fig. 2)
- **Origin**: native to North America
- **Invasive potential**: little invasive potential
- **Uses**: street without sidewalk; shade; specimen; parking lot island < 100 sq ft; parking lot island 100-200 sq ft; parking lot island > 200 sq ft; sidewalk cutout (tree pit); tree lawn 3-4 feet wide; tree lawn 4-6 feet wide; tree lawn > 6 ft wide; urban tolerant; highway median; reclamation
- **Availability**: somewhat available, may have to go out of the region to find the tree

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**Figure 1. Young Ulmus alata: winged elm**

_Credits: Ed Gilman, UF/IFAS_

**Figure 2. Range**

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**Description**

**Height:** 45 to 70 feet  
**Spread:** 30 to 40 feet  
**Crown uniformity:** irregular  
**Crown shape:** pyramidal, vase, oval, upright/erect  
**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:** less than 2 inches, 2 to 4 inches  
**Leaf color:** green  
**Fall color:** yellow  
**Fall characteristic:** showy

**Flower**

**Flower color:** green  
**Flower characteristics:** not showy

**Fruit**

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

**Trunk and Branches**

**Trunk/bark/branches:** branches don’t droop; not showy; typically one trunk; thorns  
**Pruning requirement:** needed for strong structure  
**Breakage:** resistant  
**Current year twig color:** gray, brown  
**Current year twig thickness:** thin

**Wood specific gravity:** unknown

**Culture**

**Light requirement:** full sun, partial sun, or partial shade  
**Soil tolerances:** clay; sand; loam; alkaline; acidic; extended flooding; well-drained  
**Drought tolerance:** high  
**Aerosol salt tolerance:** moderate

**Other**

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

**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.