**Quercus bicolor:** Swamp White Oak

Edward F. Gilman and Dennis G. Watson

**Introduction**

This deciduous native tree reaches 50 to 70 feet in height with an equal spread, forming a broad, open, rounded canopy and casting dense shade below. The shiny, dark green, 5- to 6-inch-long by 2- to 4-inch-wide leaves have fine white hairs on their underside, and irregular margins. In fall, the leaves turn a showy yellow/brown to red before dropping. The oval, 1-inch acorns are usually found in pairs on 1- to 4-inch-long stems, and are quite attractive to a variety of mammals and birds. Swamp white oak has deeply ridged and furrowed, dark brown bark, and forms an impressive shade tree.

**General Information**

**Scientific name:** *Quercus bicolor*
**Pronunciation:** KWERK-us BYE-kull-er
**Common name(s):** Swamp white oak
**Family:** Fagaceae
**USDA hardiness zones:** 4A through 8B (Fig. 2)
**Origin:** native to North America
**Invasive potential:** little invasive potential
**Uses:** parking lot island > 200 sq ft; street without sidewalk; tree lawn > 6 ft wide; specimen; shade
**Availability:** not native to North America

**Description**

**Height:** 50 to 70 feet
**Spread:** 50 to 70 feet
**Crown uniformity:** irregular

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**Crown shape**: round, oval  
**Crown density**: moderate  
**Growth rate**: moderate  
**Texture**: coarse

**Foliage**

- **Leaf arrangement**: alternate (Fig. 3)  
- **Leaf type**: simple  
- **Leaf margin**: lobed, dentate, sinuate/undulate  
- **Leaf shape**: oblong, obovate  
- **Leaf venation**: pinnate  
- **Leaf type and persistence**: deciduous  
- **Leaf blade length**: 4 to 8 inches  
- **Leaf color**: green  
- **Fall color**: yellow, copper, red  
- **Fall characteristic**: showy

![Figure 3. Foliage](image)

**Flower**

- **Flower color**: brown  
- **Flower characteristics**: not showy

**Fruit**

- **Fruit shape**: round, oval  
- **Fruit length**: .5 to 1 inch  
- **Fruit covering**: dry or hard  
- **Fruit color**: brown  
- **Fruit characteristics**: attracts squirrels/mammals; not showy; fruit/leaves a litter problem

**Trunk and Branches**

- **Trunk/bark/branches**: branches droop; showy; typically one trunk; thorns  
- **Pruning requirement**: needed for strong structure  
- **Breakage**: resistant  
- **Current year twig color**: brown  
- **Current year twig thickness**: medium, thick  
- **Wood specific gravity**: 0.72

**Culture**

- **Light requirement**: full sun, partial sun, or partial shade

**Soil tolerances**: clay; sand; loam; slightly alkaline; acidic; extended flooding; well-drained  
**Drought tolerance**: moderate  
**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**

Found in the wild along streams and in swampy soils, swamp white oak should be grown in full sun to partial shade on acid soils, showing severe chlorosis on alkaline soils. These trees are very long-lived, surviving for more than 300 years. They tolerate soil compaction, drought and some salt exposure. They should be tried more often in urban areas. Transplanting is best done in springtime. Container-grown material can be planted anytime. Propagation is by seed.

**Pests**

Borers, variable oak caterpillar, oak slug caterpillar and other caterpillars are pests although natural enemies usually keep infestations under control. Gypsy moth can cause significant damage. There are many other potential pests on oak.

**Diseases**

Some diseases of this oak are anthracnose, canker, powdery mildew, shoestring root rot and oak wilt. Leaf spot diseases are usually harmless. Leaf blister can cause moderate to severe defoliation. A dormant spray may reduce symptoms.