



Quercus muehlenbergii Chinkapin Oak¹

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INTRODUCTION

Chinkapin Oak is seen at 70 to 90 feet in height when found in the wild but is more often seen at 40 to 50 feet in height with an equal or greater spread when grown in cultivation (Fig. 1). It grows at a moderate rate when young but slows considerably with age, eventually developing into a broad, rounded canopy with strong branches. Young trees often exhibit a straight central leader with numerous branches originating at the same node. The yellow/green, deciduous, lobed leaves turn shades of red, yellow, orange and brown before dropping in fall. Veins are distinctly prominent on the undersides of the coarse-textured leaves. The acorns which are produced are edible.

GENERAL INFORMATION

Scientific name: *Quercus muehlenbergii*

Pronunciation: KWERK-us mew-len-BER-jee-eye

Common name(s): Chinkapin Oak, Chestnut Oak

Family: *Fagaceae*

USDA hardiness zones: 3 through 9A (Fig. 2)

Origin: native to North America

Uses: large parking lot islands (> 200 square feet in size); wide tree lawns (>6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; reclamation plant; shade tree; residential street tree; no proven urban tolerance

Availability: somewhat available, may have to go out of the region to find the tree



Figure 1. Middle-aged Chinkapin Oak.

DESCRIPTION

Height: 40 to 60 feet

Spread: 50 to 60 feet

Crown uniformity: irregular outline or silhouette

Crown shape: round; spreading

Crown density: moderate

Growth rate: fast

Texture: medium

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Figure 2. Shaded area represents potential planting range.

Foliage

Leaf arrangement: alternate (Fig. 3)

Leaf type: simple

Leaf margin: dentate; undulate

Leaf shape: elliptic (oval); lanceolate; oblong; obovate

Leaf venation: pinnate

Leaf type and persistence: deciduous

Leaf blade length: 4 to 8 inches

Leaf color: green

Fall color: yellow

Fall characteristic: showy

Flower

Flower color: brown

Flower characteristics: inconspicuous and not showy; spring flowering

Fruit

Fruit shape: oval; round

Fruit length: .5 to 1 inch

Fruit covering: dry or hard

Fruit color: brown

Fruit characteristics: attracts squirrels and other mammals; inconspicuous and not showy; fruit, twigs, or foliage cause significant litter

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns

Pruning requirement: needs little pruning to develop a strong structure

Breakage: resistant

Current year twig color: brown

Current year twig thickness: medium; thin

Culture

Light requirement: tree grows in full sun

Soil tolerances: clay; loam; sand; acidic; occasionally wet; alkaline; well-drained

Drought tolerance: high

Aerosol salt tolerance: moderate

Soil salt tolerance: poor

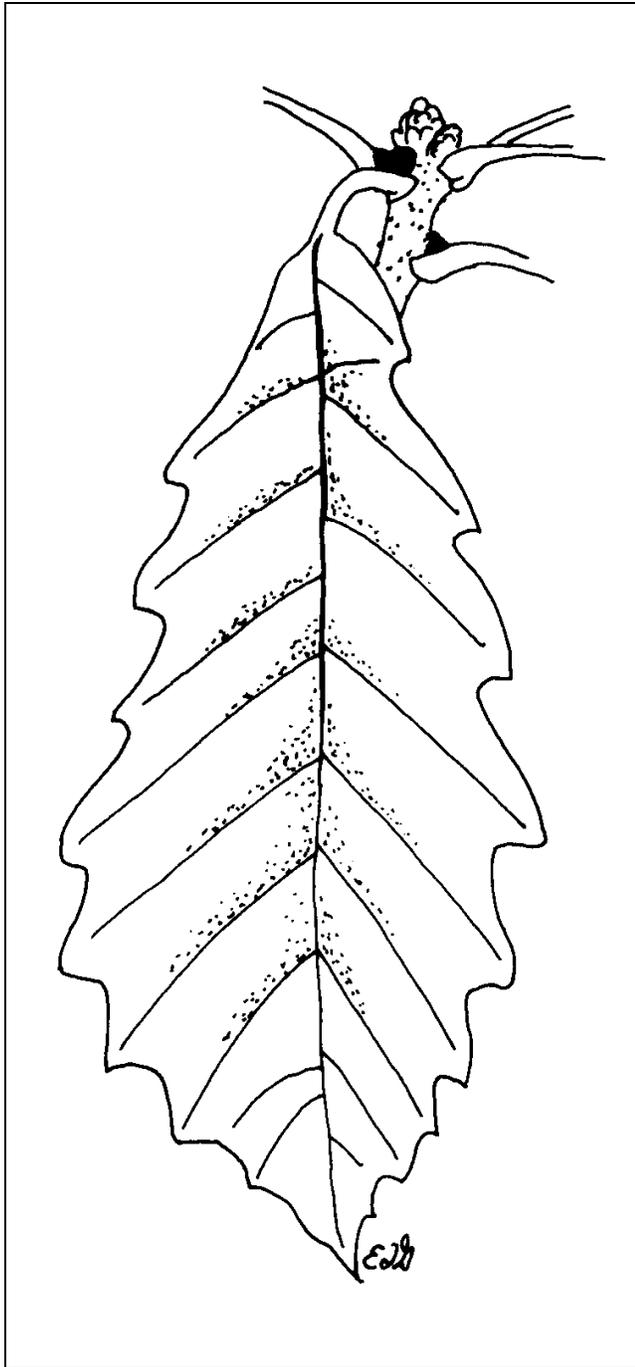


Figure 3. Foliage of Chinkapin Oak.

USE AND MANAGEMENT

Small specimens are often grown with an upright, oval habit. Older trees develop a more open, rounded form. This oak should be grown with a single trunk and widely-spaced branches to mimic its growth habit in the wild. The first permanent branch can be located three to five feet from the ground if the tree will be planted in an open lawn area and allowed to develop a wide crown. For those planted as street trees or in areas requiring clearance for vehicles or pedestrians, the first permanent branch should be higher on the trunk.

Chinkapin Oak should be grown in full sun on well-drained soil. It reaches its greatest size on loose, bottomland soils and is well adapted to alkaline soils. This is an adaptable oak which has been planted often in the central part of the country where soils are often clayey and alkaline. It will grow quite nicely in other areas of the country as well.

Propagation is by seed but plants have been considered difficult to transplant. There are a number of root-promoting techniques developed for nursery production which should improve the branching of the root system, and this should improve the transplantability of this oak.

Pests and Diseases

No pests or diseases of major concern.

Other

Roots: surface roots are usually not a problem

Winter interest: no special winter interest

Outstanding tree: not particularly outstanding

Invasive potential: little, if any, potential at this time

Verticillium wilt susceptibility: not known to be susceptible

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