

Castanea mollissima Chinese Chestnut¹

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INTRODUCTION

Chinese Chestnut reaches a height and spread of about 40 feet in a sunny, open exposure and a well-drained soil (Fig. 1). It usually branches close to the ground making it a good candidate for a specimen or as a tree to climb. The tree is hard to transplant, perhaps due to a coarse root system. The chief ornamental feature is yellowish white catkins, present in early summer, and a coarse foliage. A very striking tree. The odor given off by the flowers for a short period may be considered offensive to some people. The nuts are edible but not as sweet as the American Chestnut. The soft, spiny nut could become a hazard on sidewalks (pedestrians could roll on the fruit and fall), so locate them accordingly. But it is also fun for children to collect. In cold climates the growing season may not be long enough for the nuts to mature.

GENERAL INFORMATION

Scientific name: *Castanea mollissima*

Pronunciation: kass-TAY-nee-uh maw-LISS-sim-uh

Common name(s): Chinese Chestnut

Family: *Fagaceae*

USDA hardiness zones: 5 through 8 (Fig. 2)

Origin: not native to North America

Uses: fruit tree; shade tree; specimen; 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

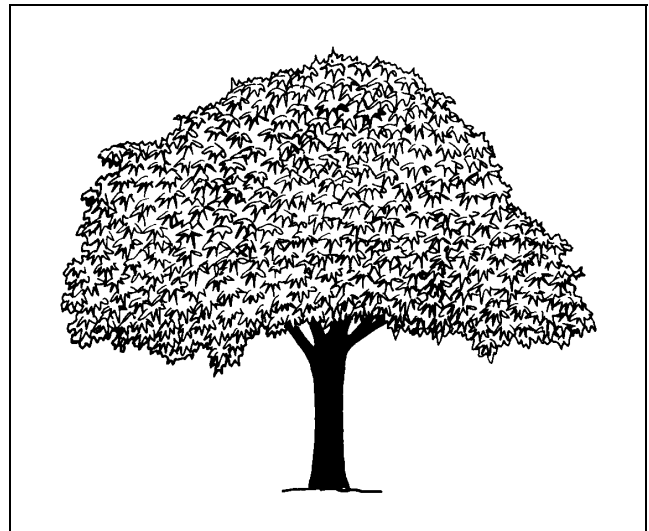


Figure 1. Mature Chinese Chestnut.

DESCRIPTION

Height: 35 to 40 feet

Spread: 40 to 50 feet

Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms

Crown shape: round

Crown density: moderate

Growth rate: medium

Texture: coarse

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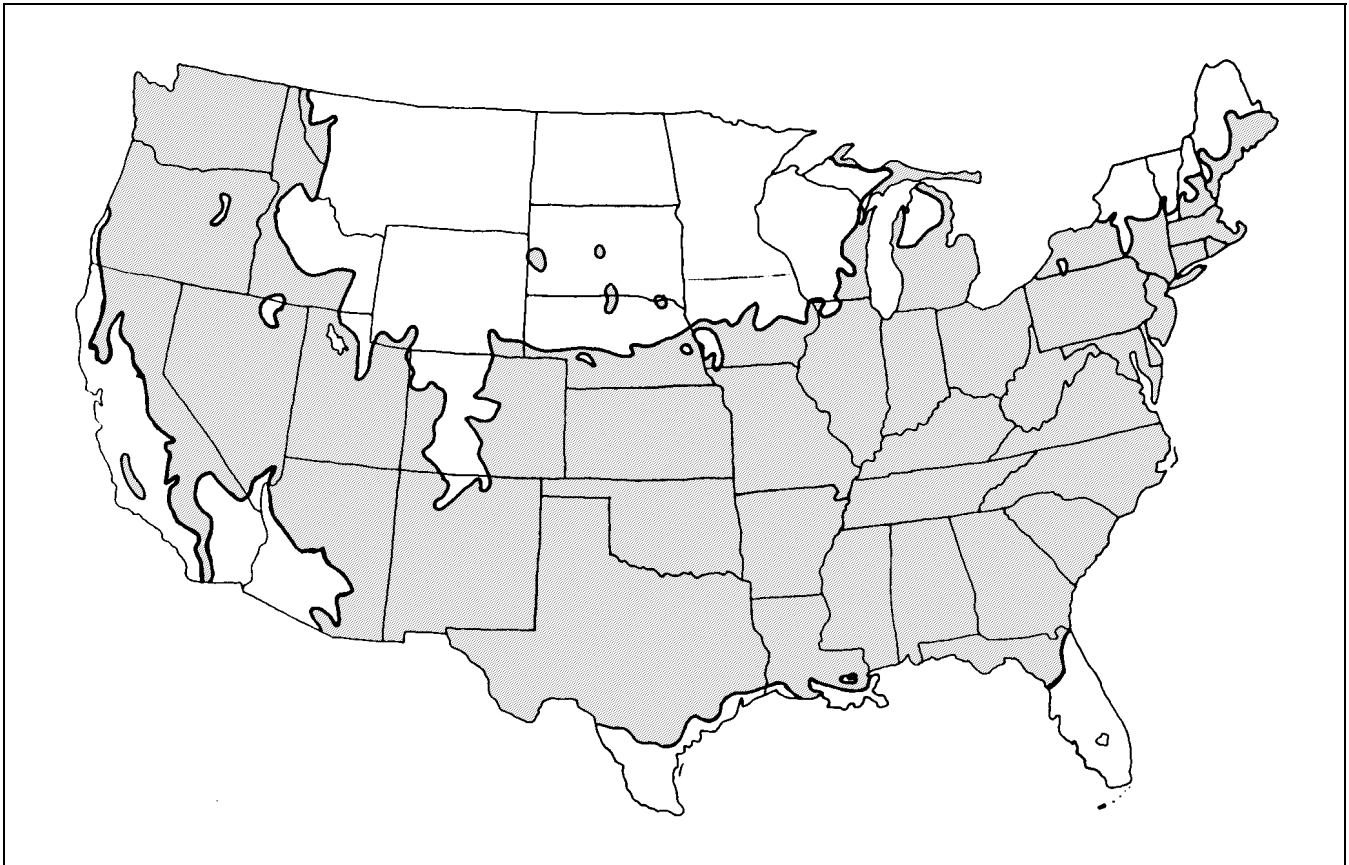


Figure 2. Shaded area represents potential planting range.

Foliage

- Leaf arrangement:** alternate (Fig. 3)
- Leaf type:** simple
- Leaf margin:** serrate
- Leaf shape:** lanceolate; oblong
- Leaf venation:** pinnate
- Leaf type and persistence:** deciduous
- Leaf blade length:** 4 to 8 inches; 2 to 4 inches
- Leaf color:** green
- Fall color:** copper; yellow
- Fall characteristic:** showy

Flower

- Flower color:** white; yellow
- Flower characteristics:** pleasant fragrance; showy; summer flowering

Fruit

- Fruit shape:** oval; round
- Fruit length:** 1 to 3 inches
- Fruit covering:** dry or hard
- Fruit color:** green

Fruit characteristics: attracts squirrels and other mammals; suited for human consumption; fruit, twigs, or foliage cause significant litter; showy

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; routinely grown with, or trainable to be grown with, multiple trunks; not particularly showy; tree wants to grow with several trunks but can be trained to grow with a single trunk; no thorns

Pruning requirement: requires pruning to develop strong structure

Breakage: resistant

Current year twig color: brown

Current year twig thickness: medium

Culture

Light requirement: tree grows in full sun

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

Drought tolerance: moderate

Aerosol salt tolerance: moderate

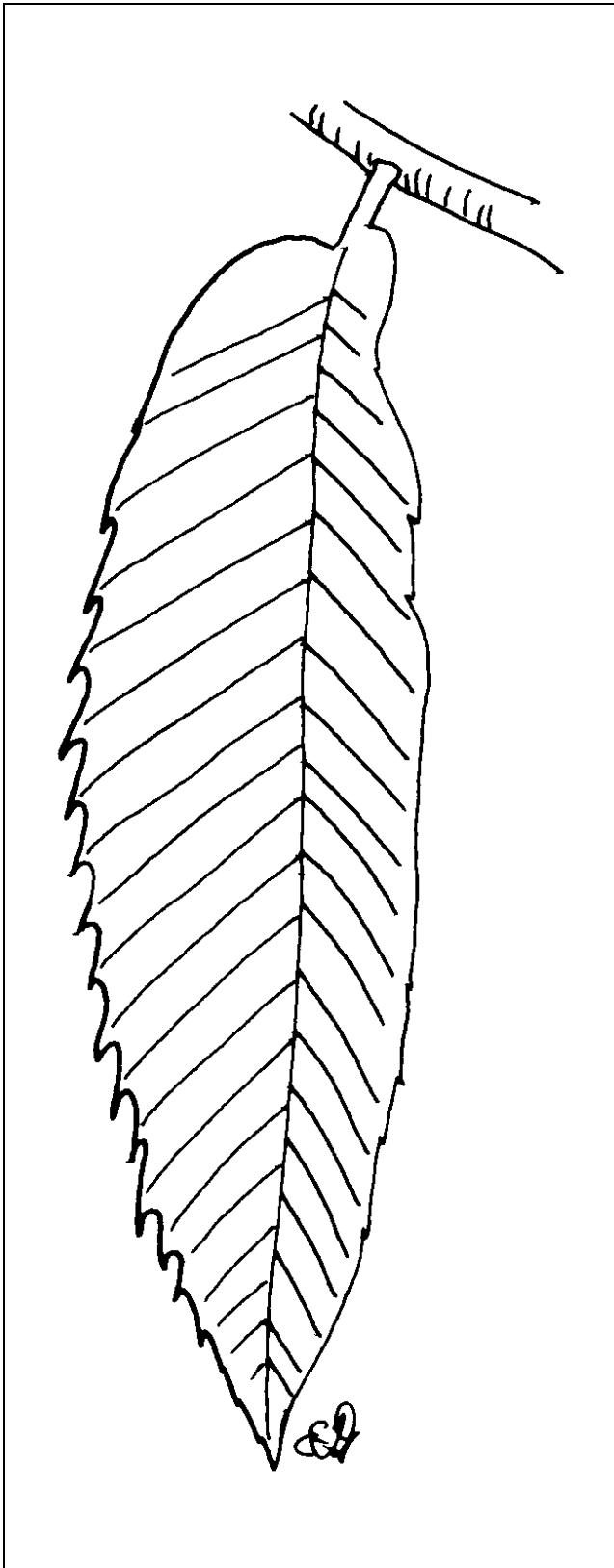


Figure 3. Foliage of Chinese Chestnut.

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

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

USE AND MANAGEMENT

This is an urban-tough tree which may not be a suitable tree for street or parking lot locations but it can make a nice shade tree. Any advantages of using this tree may be overshadowed by the potential disease problems (although it is moderately resistant to chestnut blight), so plant it in limited numbers. Makes a nice tree to line entry roads or along walks to create a low-canopy shade tree. The fruit attracts wildlife, and could be used in natural areas or other non-traffic situations, away from pedestrian traffic. This is a novelty tree which should be planted occasionally rather than a staple for urban planting.

Best growth is in full-day sun. Chinese Chestnut is tolerant of some drought but prefers good soil which is loose, not dry, and not too wet.

The following four cultivars have been selected for their nut production: 'Abundance', 'Meiling', 'Nanking', and 'Kuling'. Others include: 'Estate-jap' - highly resistant to chestnut blight; 'Sleeping Giant' - grows larger than species; 'Kelsey' - smaller tree with good nut quality.

Diseases and Pests

Usually pest-free.

Blight of chestnut has virtually eliminated the American Chestnut from the landscape, but Chinese Chestnut is moderately resistant to the disease, not immune. The disease caused cankers on the branches then moved into the trunk killing the tree. There is no chemical control for the disease. Most chestnuts now grown are asiatic types and are resistant (but not immune) to the disease caused by the chestnut blight fungus.

Twig canker is a problem on asiatic chestnuts. The symptoms are a brown discoloration on a twig. The disease girdles the twig and moves down to a larger branch. The leaves on the girdled branch wilt, turn brown and die. The canker is obvious due to

callus formation at the canker margin. The disease attacks seedlings, very old trees, or unhealthy trees of any age. No chemical control is available. Prune out diseased branches and prevent the disease by keeping trees healthy.

Leaf spots caused by various fungi can be a problem. These are not serious so no chemical controls are listed. Clean up and dispose of diseased leaves.

Powdery mildew causes a white powdery growth on the leaves.