UF IFAS Extension UNIVERSITY of FLORIDA

ENH287

Castanea mollissima: Chinese Chestnut[1]

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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. 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.



Figure 1. Mature *Castanea mollissima*: Chinese Chestnut
Credits: Ed Gilman

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: 5A through 8B (Fig. 2)
Origin: not native to North America
Invasive potential: little invasive potential
Uses: specimen; fruit; shade; street without sidewalk; urban tolerant
Availability: somewhat available, may have to go out of the region to find the tree

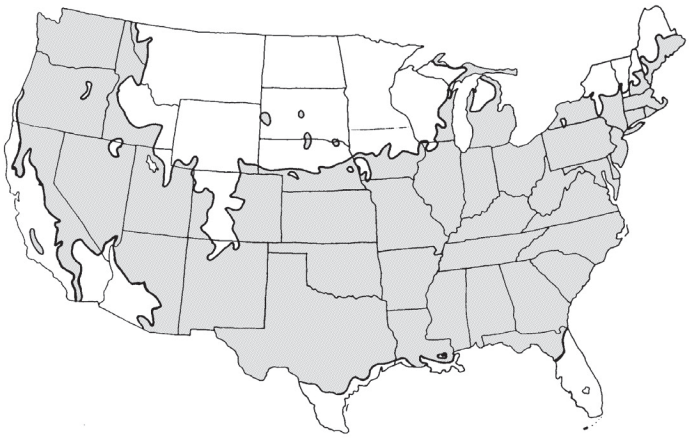


Figure 2. Range

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Description

Height: 35 to 40 feet
Spread: 40 to 50 feet
Crown uniformity: symmetrical
Crown shape: round
Crown density: moderate
Growth rate: moderate
Texture: coarse

Foliage

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

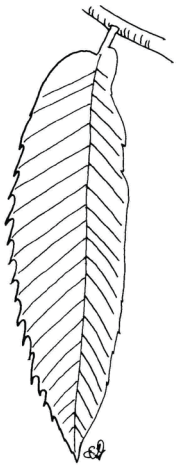


Figure 3. Foliage

Flower

Flower color: yellow, white/cream/gray
Flower characteristics: showy

Fruit

Fruit shape: oval, round
Fruit length: 1 to 3 inches
Fruit covering: dry or hard
Fruit color: green
Fruit characteristics: attracts squirrels/mammals; showy; fruit/leaves a litter problem

Trunk and Branches

Trunk/bark/branches: branches droop; not showy; can be trained to one trunk; thorns
Pruning requirement: needed for strong structure
Breakage: resistant
Current year twig color: brown
Current year twig thickness: medium
Wood specific gravity: unknown

Culture

Light requirement: full sun
Soil tolerances: sand; loam; clay; acidic; slightly alkaline; well-drained
Drought tolerance: moderate
Aerosol salt tolerance: moderate

Other

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

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.