



# TACF Fact Sheet

THE  
AMERICAN  
CHESTNUT  
FOUNDATION®

## American Chestnut vs. Horse Chestnut: *How to Differentiate between “Chestnut” Trees*

### A Tale of Two Chestnuts...

American chestnut (*Castanea dentata*) and horse chestnut (*Aesculus hippo-castanaum*) are both deciduous trees that share the same short name – “chestnut”. But this short name is where the major similarities end. American chestnut is in the beech family (Fagaceae), along with beeches and oaks, while the horse chestnut is in the soapberry family (Sapindaceae), and most closely related to our native buckeyes.

So how do you know which ‘chestnut’ you have?

### Leaves

The leaves of American chestnut are simple, meaning one leaf blade per leaf stalk. The leaves are typically long and narrow, with deeply-toothed edges. The teeth curve towards the tip of the leaf, making a breaking ocean wave pattern along the edge of the leaf. In contrast, the leaves of horse chestnut are compound, meaning that one leaf is made up of several leaf blades (called leaflets) per leaf stalk. Horse chestnut typically has 5-7 leaflets. The leaflet margins are also toothed, but the teeth are much smaller and do not make an ocean wave pattern.

### Flowers

The flowers of American chestnut bloom late, typically around the 4th of July. American chestnut produces both male and female flowers, usually in the same cluster, though it is not uncommon for a cluster to consist of male flowers only. The male flowers are long catkins that hang down and look like white or cream colored pipe cleaners when they bloom. The female flowers are much smaller and look like tiny green pineapples, about the size of a pencil eraser. The flowers of a horse chestnut bloom earlier in the spring and produce a large, white cone-shaped cluster of flowers that grow up from the branch tip. The flowers are very noticeable and attractive, and as a result horse chestnuts are often planted as land-scape trees.

### Burs and Nuts

The American chestnut bur, which houses the nuts, is entirely covered in sharp needles and looks like a small green sea urchin when fully developed in the fall. The bur splits along two seams to open in the middle, exposing an average of three nuts. The nuts, if pollinated (American chestnut is self-infertile and requires a second tree to produce viable nuts) will be plump, shiny and round, with a small point at one end. The nuts of American chestnut are quite edible – they are crunchy and sweet. The bur of a horse chestnut is smooth with long spines, and looks a bit like a spiny golf ball. The bur splits in half along one seam and houses one large, shiny nut, which is often more irregularly shaped. The nut of a horse chestnut is not edible, and tastes quite bitter.

American chestnut



USDA-NRCS PLANTS  
Database / Britton, N.L., and  
A. Brown. 1913. An illustrated  
flora of the northern United  
States, Canada and the British  
Possessions. Vol. 1: 615.

Horse chestnut



USDA-NRCS PLANTS  
Database / Britton, N.L., and  
A. Brown. 1913. An illustrated  
flora of the northern United  
States, Canada and the British  
Possessions. Vol. 2: 498.

# Germplasm Agreements:

## *Acknowledging TACF's Ownership of Plant Material*

### Common Diseases

American chestnut is highly susceptible to chestnut blight, caused by the fungus *Cryphonectria parasitica*. Chestnut blight attacks the living tissues just below the bark of the tree and causes girdling stem cankers. The cankers are usually sunken or swollen, and when the fungus is active it will be bright, salamander-orange. There are no foliar symptoms of chestnut blight, beyond drought symptoms on parts of the tree that have been cut off from water and nutrients by blight canker.

The canker will eventually girdle the entire tree and kill it. Horse chestnut is prone to a foliar disease called anthracnose, caused by the fungus *Glomerella cingulata*. Anthracnose appears as brown, scorched looking spots on the leaves and can be detrimental to the tree if a serious infection causes defoliation for a few years in a row. Horse chestnut does not usually die from anthracnose infection.



The burs and nuts of horse chestnut (Left) and American chestnut (Right).  
Photo courtesy of Sara Fitzsimmons.

### Expected Sites

American chestnut was primarily a forest tree, prized for its timber and wildlife value. American chestnut sprouts readily from old rootstocks and is often found in the forest as root-collar sprouts. American chestnut will grow in the shade, but prefers sun, and it is very common to find them sprouting in recently cleared areas or along right-of-ways. Horse chestnut is more of a landscape tree and is often found planted along city streets and in yards. If your town has a Chestnut Street, it was likely named for the more ornamental horse chestnut.

### What to do if you find an American chestnut

The American Chestnut Foundation® (TACF®) is always interested in reports of native American chestnuts. If you believe you have found one, please go to our website, print off a Tree Locator Form and submit it with a leaf and twig sample to the ID contact closest to your area: [http://www.acf.org/find\\_a\\_tree.php](http://www.acf.org/find_a_tree.php)