



## Is Emerald Ash Borer the Next Chestnut Blight?

"Chestnuts roasting on an open fire, Jack Frost nipping at your nose...." We're all familiar with this popular holiday song, but have you ever wondered how to roast chestnuts? Or exactly what a chestnut tree looks like? Why don't we see them growing in our neighborhoods?



Once, American chestnut was a major component of eastern forests from Maine to Michigan and south to Alabama and Mississippi. Called the 'Redwood of the East' because of the tremendous size of mature trees, American chestnuts made up approximately 25% of forests in the eastern United States. When chestnuts bloomed in spring, the Appalachian mountains appeared covered in snow. The trees were an important part of the rural economy, as a source of highly rot-resistant lumber, and the nuts a major food source for wildlife. Trainloads of chestnuts were sent to eastern cities to be roasted and sold by street vendors during the holidays. However, today the American chestnut has been reduced to merely an under-story shrub in eastern forests.

So what happened to this great tree? Chestnut canker or blight, *Cryphonectria parasitica*, was the culprit, an Asian fungus to which American chestnut had, and to this day has, little resistance. It is likely plant enthusiasts inadvertently brought the fungus into the United States in the late 1800's on imported plants. The disease was first spotted by sharp-eyed groundskeepers in 1904 killing chestnut trees at the Bronx Zoo in New York City. Over the next 50 years, the disease swept through eastern forests destroying native tree stands. Spread by fungal spores, the disease causes branch cankers that girdle and kill the stems. Everything above the canker dies. Often infected trees re-sprout from the base, but the new shoots only live for a few years before they are re-infected.

Efforts are underway by the American Chestnut Foundation, founded in 1983, to breed trees with resistance to the disease. To accomplish this, American chestnuts are backcrossed with Chinese chestnuts, which do have resistance to the blight. Seedlings that show resistance are repeatedly backcrossed to American chestnut to eliminate more and more of the Chinese chestnut characteristics, except for disease resistance. For more information on chestnuts and chestnut blight, visit the [American Chestnut Foundation](http://www.acf.org), <http://www.acf.org>.

### The Next "Chestnut Blight"

The loss of chestnuts is one of the greatest tragedies in the history of American forestry and unfortunately a similar slow-motion tragedy has been unfolding in North America since 2002 with the introduction of emerald ash borer (EAB). Millions of native ash trees have died in the last 16 years across 35 states due to this small insect. With Nebraska EAB confirmations in Omaha (2016), Greenwood (2016) and Lincoln (2018) - along with additional suspect trees in the Fremont area (2018) - these insects are beginning their march across our state.

What can we do to avoid tragedies like this? One important strategy is to always maintain good diversity in the trees you chose to plant. Don't plant all one species or genus on your property. For example, as Scotch pine trees died from pine wilt in the last 10-12 years, many landowners replaced them entirely with spruce. This is a very bad idea, setting the stage for complete tree loss if some new disease or insect appears that attacks spruce trees.

As we lose ash trees, many homeowners may choose to replace with maple. Why not, they're pretty trees, right? Yes, they are when they're healthy, but many maple cultivars don't grow well in Nebraska. And as a



genus, maples are overplanted. Don't select trees based solely on ornamental characteristics. Whether your property is big or small, look at the trees in your area and create a good mix with those you choose to add. This increases the resilience of your tree stand and minimizes the impact of tree loss. For suggestions on trees to plant to replace ash trees, visit Trees to Replace Ash, <https://nfs.unl.edu/ash-replacements>.

Finally, as you travel this holiday season keep in mind that the restrictions on bringing plant material into the United States is an important effort of the United State Department of Agriculture Animal and Plant Health Inspection Service (USDA APHIS) to prevent another devastating disease or insect pest, like chestnut blight, from damaging our forests and crops.

### Roasting Chestnuts

On a happier note, although American chestnuts are not available nuts from European chestnut, *Castanea sativa*, can still be found in specialty grocery stores.

So how do you roast chestnuts? With a sharp knife, make an incision through the smooth outer skin and textured inner skin on the rounded side of each nut. This allows steam to escape and prevents the nuts from bursting during roasting. Roast the nuts over an open fire in a wire popcorn basket or special chestnut roasting pan, shaking periodically, for 15-20 minutes. Allow the nuts to cool slightly before peeling and eating. Chestnuts can also be roasted in the oven after scoring, at 375 ° degrees for 15-25 minutes. Place them in a shallow pan, and turn them over mid-way through the roasting time.

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Image from Pixabay of American chestnuts.

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