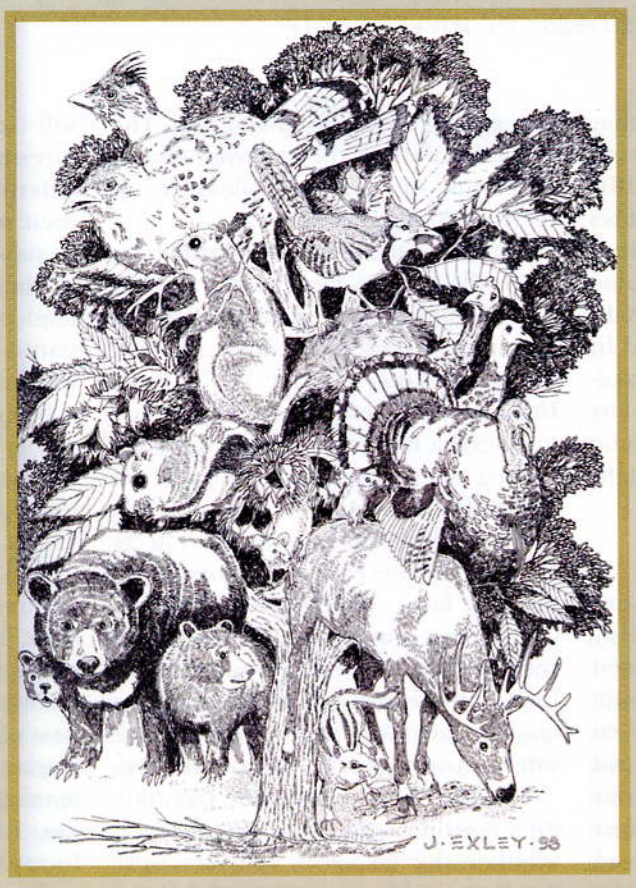

Make Way for the King: The American Chestnut

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It almost seems impossible: a native hardwood tree that grows 30 to 50 percent faster than an oak and produces a reliable crop of nuts every year. And this tree would grow to an enormous size–sometimes 80 to 100 feet tall with trunks that measured 10, 12, and even 14 feet in diameter. This is a description of the American chestnut. Its native range once covered an estimated 900 million acres and represented nearly 25 percent of all hardwoods within its range. This tree grew to an immense size and it was often referred to as the "Redwood of the East." Once thought a lost cause due to the chestnut blight that wiped this tree out by the mid-20th century, the American chestnut hopefully is on the verge of a dramatic return to our eastern forests.

The impact of the blight on the American chestnut was swift and lethal. The blight was first observed in 1904 in New York, and by the 50s, these trees were reduced from the dominant hardwood tree species in many eastern forests to a population that hung on to survival as small seedlings that sprouted from the root collars of stumps of trees killed by the blight. Today, you will find the American chestnut as a sapling or small tree, and some of these remnant trees will even bear fruit. While there are still some large surviving American chestnut trees, most of the ones that grow from these stumps will eventually be attacked by blight and die off.

A closer look at what chestnut offered wildlife as a food source provides us a good idea of some of the impact of the loss of the tree. First, chestnuts were a very dependable food source for wildlife and produced nuts every year; oaks produce a bumper crop every five to six years. No doubt, this dependable production of nuts benefited many species of wildlife, especially deer, turkeys, and squirrels. American chestnuts also had a built-in mechanism to protect them from damage from a late freeze. American chestnuts flower in May and June when late hard freezes are unlikely. The first crop of flowers in the spring is pre-formed in the bud and can be frozen by the last spring frosts. The tree can then set a second crop of flowers. In contrast, oaks, with their determinate growth, do not set another crop and are more vulnerable to a late freeze.

Second, the American chestnut provided a food source that is higher in sugars and protein as compared to oaks. Oak acorns, for example, provide about 6 percent protein while chestnuts provided almost double this at 11 percent. The chestnut also is approximately 40 percent carbohydrate (sugar), making the chestnut a superior source of nutrition compared to acorns.

Finally, the American chestnut produced an incredible quantity of nuts. A mature chestnut tree could produce over 6,000 nuts. Oaks, on the other hand, produce from 300 to 1,000 nuts during a good year depending on the species.

The sheer volume of food that this tree provided to wildlife and people was dramatic:

> I remember a tree in New Jersey whose trunk was so large that three persons by taking hold of hands and stretching their arms could barely reach around it. In bearing years it produced bushels of nuts. One day some young friends shook off more than a bushel. The dinner bell rang before all were gathered and about half a bushel was left on the ground. When the young people returned after dinner for the nuts not one could be found. A flock of turkeys had just finished the last of them.
> *—The Congregationalist, October 1896.*

No doubt that wildlife of all sorts relished the nuts from the American chestnut tree. Unfortunately, the science of wildlife management started about the time when most chestnut trees were dead. The true impact that the loss of chestnut mast had on wildlife populations is unknown, but logic suggests that the loss of the American chestnut was a major blow to wildlife populations. Entire species disappeared as the American chestnut quickly succumbed to the blight.

> After I'd been at Emory for 18 years, I moved back up here, and I do notice a lot of difference in the presence [then], and the absence [now], of chestnut. First in the game. We used to be able to get turkeys and squirrels everywhere. I'm not certain that we had as many deer then as we do now, as you know deer forage on other things as well. But there were a lot more squirrels, and a lot more other types of game. Turkeys in particular. I remember getting five turkeys on one hunt. You just don't see that these days. There has been a noticeable decrease in game.
> *—Dr. John Brown, "Memories of the American Chestnut," Foxfire 6*

The future looks bright for the American chestnut. Hopefully within 10 to 15 years we will all be planting blight-resistant American chestnut trees on our properties. That will be a great day. Once again, the king will return to its rightful place in our forests.

Tips on Planting American Chestnuts

- Select site with full sunlight.
- Select site that will allow mowing between trees to control weeds.
- Do a soil test: soil pH between 4.5 and 6.5; amend soil if needed.
- Select well drained soils, especially in the South.
- Plant groups of trees together so they can pollinate.
- Plat trees on roughly a 7-foot by 15-foot up to 10-foot by 20-foot spacing.
- You can either plant bare-root seedlings or plant the actual nuts.
- If planting nuts, plant in late winter or early spring as soon as you can work the soil.
- Plant nut one-inch deep. The nuts may have sprouted. Plant the sprout (called a radical) down in the hole and do not break the radical.
- If no radical is present, plant flat side down.
- Protect seedling or nuts using tree tubes or wire mesh.
- Remember to manage weeds during the summer. Weeds compete for sunlight, nutrients, and water. Mow or use herbicides to manage weeds.

For additional planting tips, visit www.acf.org.

About the American Chestnut Foundation

The American Chestnut Foundation (TACF) with its army of passionate volunteers and partners has been working to develop an American chestnut tree that is resistant to the blight. Using a well-established backcross breeding program, the Foundation has recently produced its first crop of blight-resistant nuts that will be used in test plantings on federal forestland under and agreement with the U.S. Forest Service. Scientists are currently evaluating the first generation of blight-resistant trees and anticipate that it will take another decade of testing and evaluation before these nuts will be available to the general public for restoration efforts on private land.

While not available to the general public, the American Chestnut Foundation offers its members the opportunity to purchase seeds and seedlings as a member benefit. For more information about membership and purchasing 100 percent pure American chestnut seedlings, visit the American Chestnut Foundation website at www.acf.org or call (828) 253-5373. ◆