



The Return of the Chestnut Tree

A western North Carolina revival effort could help bring back those chestnuts roasting on an open fire

Text and photos by Hannah Miller

American chestnut trees used to be the workhorses of eastern U.S. forests. Their nuts, more plentiful than acorns, fed wildlife and humans. Their straight-grained, non-rotting lumber was the stuff of barns, homes and railroad ties. They made up fully 40 percent of the Appalachian forest, and were so imbedded in the American consciousness that songwriters could rhapsodize about “chestnuts roasting on an open fire.”

But that was before a chestnut blight arrived from Asia in the late 1800s. During the early part of the 20th century, it swept through the eastern U.S. mountains, where the trees grew. The bark of practically every mature tree soon bore the telltale reddish stain, and by the 1940s, there was scarcely a tree left standing. Roots remained untouched and sent up shoots, but the young trees that grew from them were also doomed.

Bringing back the American chestnut became the Holy Grail of chestnut-lovers throughout the East. Various avenues of research were, and still are, being pursued, but so far a new chestnut forest has yet to appear.

One could be on the way, however. The American Chestnut Foundation (ACF), founded in 1983, hopes it's

close to successfully crossbreeding the tall, fast-growing American chestnut with the short, squatty but blight-resistant Chinese chestnut.

Some 500 seedlings crossbred to have 15/16th American chestnut characteristics and also blight resistance were planted in national forests in North Carolina, Virginia and Tennessee this past spring. Part of the ACF's most advanced generation of test trees, they'll be left alone to propagate and, hopefully, to create future forests. “I have cautious optimism,” says Fred Hebard, staff pathologist at ACF's Meadowview Research Farm near Abingdon, Va.

They're a small part of the 150,000 to 200,000 trees that ACF and volunteer orchardists have planted over the years. To ensure that trees will thrive in varied growing conditions, trees at various stages of crossbreeding are scattered throughout the chestnut's former range from Maine to Alabama. Western North Carolina has 2,000 trees in 40 orchards, and volunteer orchardists include members of the Blue Ridge, French Broad, Haywood and Surry Yadkin EMCs.

“In North Carolina, we're really well along,” says Louis Acker of Creston in Ashe County, who is tending more than 200 trees.

Finding healthy trees by accident

Louis Acker's most advanced trees, expected to become the grandparents of a “final generation” of trees, are the result of a happy accident and the efforts of Blue Ridge Electric. In 2001, a bulldozer operator was clearing land for a development off the Blue Ridge Parkway in Wilkes County when he spotted a 35- to 40-foot, healthy-looking chestnut that had not yet succumbed to blight. “He stopped the bulldozer in its tracks,” and called the ACF, says Paul Sisco, recently retired as the organization's Southern Appalachian regional coordinator. Realizing there was no way he could get to the blossoms, which are in the top of the tree, Sisco called Blue Ridge Electric, which sent employee Greg Miller in a bucket truck to attach bags of blight-resistant pollen.

Acker, a retired geologist with the N.C. Department of Transportation, and his wife, Allie Funk, a retired professor at Appalachian State University, had long been working to bring back the chestnut. He's a founding member and board member of the Carolinas chapter of ACF. While still roaming the mountains with DOT, “I was the mother tree finder,” he says. “I kept my eyes open.”

Acker planted the nuts from the Wilkes County tree on his sheep farm, and last year he and Sisco deliberately inoculated the trees with blight. After Acker and helper Dewey Mahala culled them down to the seven most blight-resistant ones, Sisco returned last June to pollinate three that had put forth reproductive organs. (Chestnuts have both male and female reproductive organs, so pollinating them involves clipping off slender, fuzzy male parts and surrounding the round, cluster-like female parts with the desired pollen.)

Their nuts were harvested this fall and will be planted next spring. When the resulting trees are seven or so years old, plans are to crossbreed the most blight-resistant to get that hoped-for “final generation.” At that point, Paul Sisco says, crossbreeding will stop and “You have to sort of put them out in the woods and see if they can make it on their own. If they've got enough resistance, that's one celebration. When we see them make babies in the woods, that will be another celebration. That will probably take another 20 years.”

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Remembering Chestnuts

Dewey Mahala (above), 80, has worked on the Ashe County farm where Louis Acker has raised sheep and experimental chestnut trees for nearly 50 years, and he vividly remembers the chestnuts of his childhood.

The blight was raging in Ashe County in the 1930s, but not all the trees died at once. He remembers crushing with his bare feet the chestnut burrs that were left. “We used to go barefoot back then with frost on the ground,” he explains.

The nuts inside the burrs—three to a burr—were so tasty, he says, that “I got up early to pick ‘em before the turkeys got ‘em.”

Thanks to the efforts of Mahala, Acker and other farmers working with The American Chestnut Foundation, a new generation of western North Carolina children and wildlife may someday enjoy that long-lost autumn treat.



Top photo: To keep trial chestnut trees from being accidentally pollinated, volunteer orchardist Louis Acker clips off male reproductive parts—the pale, slender fronds—and encases the remaining female parts in paper bags. To ensure a varied gene pool and also promote blight resistance, those bags will be replaced with bags containing pollen from other crossbred trees.

Above: Blue Ridge Electric employee Greg Miller in 2001 used a bucket truck to pollinate the wild Wilkes County mother tree that may someday be the great-grandparent of a new American chestnut. (Photo by Jule Hubbard, Wilkes Journal-Patriot)

Above right: This tree shows the blight’s unmistakable reddish stain spreading around the spot where Paul Sisco inoculated it and applied tape (pale area) to keep the fungus in.

The Acker sheep farm, Creston, Ashe County.

