The American Chestnut

This essay is largely a summary of the book The American Chestnut: An Environmental History, by Donald Edward Davis, rewritten to highlight what I consider to be the most interesting points and focusing on western North Carolina. I've added an introduction, my own family history, Cherokee uses, and some quotes from a Lenoir newspaper. – Kelly Coffey

The story of the American chestnut (*Castanea dentata*) is an almost unbelievable saga of an almost perfect tree that met a tragic end. The narrative has a Garden-of-Eden-like quality where the archetypical tree was growing in paradise for the benefit of mankind, but a defect entered and the tree was struck down and destroyed, depriving mankind of its manifold usefulness. The world has been mourning ever since. If the story had been written by a fiction writer, it would have been derided as too implausible- a tree couldn't have had so many uses, it couldn't have benefited so much wildlife, and a tree so abundant and strong couldn't have died out completely. The story is a true myth, told and retold so many times that few, if any, have never heard it. It's a part of our Appalachian heritage and identity, it characterizes our region like the giant Sequoia does California or the way the saguaro cactus brings to mind the desert southwest. The difference, of course, is that those giants still live while our defining tree lives only in legend.



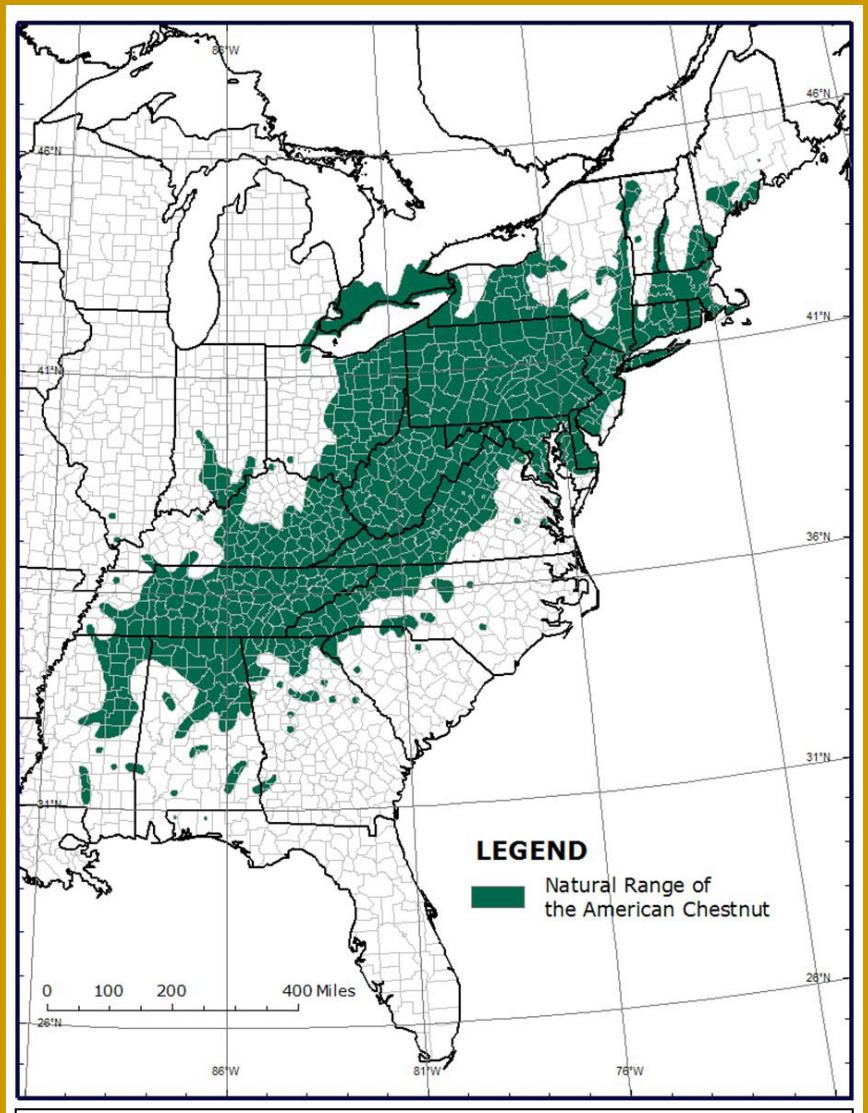
Chestnut foliage sprouting from an old stump on Grandfather Mountain in 2022. Despite the passage of 80 years or more, chestnuts continue to rejuvenate, only to be struck down by blight again before fully mature. *Photo by the author.*

The annual chestnut bloom created an awesome sight and smell. As the blooms matured, they turned from yellow to white, covering mountainsides in what looked like snow, which is the origin of geographic names like Whitetop Mountain or Yellow Mountain. The blooms had a very strong odor that some found disagreeable. Chestnut trees produced more nuts than all other species (like oak and hickory) combined; about 320 lbs per acre. Very large mature trees yielded as much as nine



Chestnut blooms. *Courtesy of the American Chestnut Foundation*

bushels. It was not unusual for trees to reach seven feet or more in diameter.[1] The large size of the trees and the tendency for some to become hollow (but remain alive) due to disease and fire led to extraordinary tales. For example. a moonshiner installed a still inside one such tree near Asheville in 1904. A family was documented as living inside a hollow chestnut log. A man lost his cattle during a snowstorm but found them inside a hollow chestnut.[2] The range of the chestnut diminished after Europeans arrived, but about the year 1500, the range formed an oval that reached east to Raleigh, west to the Mississippi River, south almost to the gulf, and north to Maine. Note that the core of its range was the Appalachian Mountains, where grew the largest trees and densest groves.[3]



Courtesy of the American Chestnut Foundation

Chestnut leaves had more nutrients than other trees, which resulted in a richer soil from leaf litter. Aquatic insects that fed on fallen chestnut leaves were larger and produced more offspring, which in turn benefited fish that fed on them. Chestnuts trees and limbs that fell into streams lasted for decades, creating pools which reduced flooding and soil erosion, The benefit of chestnuts to land-based wildlife was legendary. Wildlife were fatter and raised more offspring. Squirrel, turkey, deer, and bear lived off chestnuts, which in turn sustained people who ate wild game. There is evidence

[1] Davis, Donald Edward, The American Chestnut: An Environmental History, 2021, p. xiii, 4, 31, 38
[2] Ibid, 163-164.
[3] Ibid, 39.

that the decline of some predators, such as raptors, panthers, and bobcats was due in part to the loss of chestnut. Predators didn't eat chestnuts, but they preyed on animals that did.[4]

Humans have made use of chestnut for thousands of years. Archaic (8,000 – 1,000 BC) and Woodland (1,000 BC – 1,000 AD) Indians consumed the nuts, but archaeologists disagree on how vital the chestnut was to their diet; some say that the acorn and the hickory were more important. As time passed, chestnuts became more significant. By the Late Archaic, Native Americans were storing the nuts and making them into meal. Chestnut bread became an Indian staple. Early Woodland Indians chose to live in locations where there was lots of chestnuts. Besides the nuts, natives used the wood for dugout canoes and poles for framing buildings. By the 1700s, the Cherokee built log cabins and covered the entire building with chestnut bark. The chestnut plays a role in many Cherokee folk tales.[5]



A chestnut worm fence.
Source: Open Parks Network

The number one export in the first half of the 1700s was furs and skins. Chestnuts were a major food source for wildlife at the time, and as such, "supplied the natural capital upon which the frontier economy was based." Deer, for example, ate nuts as well as young trees.[6]

In the late 1700s, chestnut was used by pioneers for buildings, but it was mostly turned into fencing. Worm fences were common at the time, and 4,500 rails were needed to enclose a 10-acre field. Such an enclosure required 40 large chestnut trees. Chestnut fences were popular because they would last up to 70 years. Around the same time, iron forges began to appear in the backcountry. Charcoal was essential to making iron and a tremendous amount of wood went into making charcoal. A small iron furnace took 400 acres of forest in a year to make the needed charcoal. A variety of species was used, but chestnut was omnipresent.[7] Chestnuts were being cut in large numbers, but the tree has the ability to regrow vigorously after being harvested. There is a story of a man who cut down a

[4] Ibid, 183, 188-189, 191.
[5] Ibid, 28, 37, 45, 48, 49, 60
[6] Ibid, 59, 64.
[7] Ibid, 65-66, 70-71.

chestnut tree to shingle a barn, and 30 years later he cut the tree that regrew from the stump to completely replace the original shingles.[8]

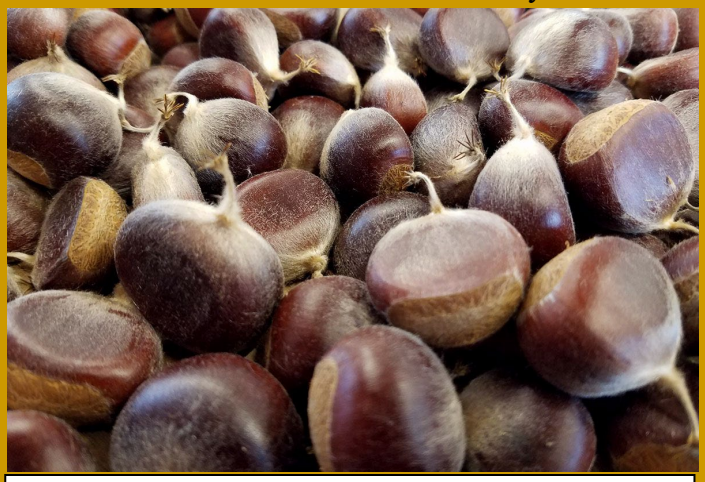
In houses, chestnut was used for flooring, paneling, and furniture. Household items like broom handles, picture frames, cradles, and pianos were made from chestnut. It was favored for Windsor chairs, a style common around the Revolution. There were several medicinal remedies in use made from various parts of the chestnut tree, likely borrowed from Indians. For example, the Cherokee used chestnut for the following purposes:[9]

- Tea of year old leaves for heart trouble
- Dip leaves in hot water and put on sores
- Cold bark tea with buckeye to stop bleeding after birth
- Boil leaves with mullein and brown sugar for a cough syrup
- Tea for typhoid and stomach ailments
- Bark is used to make a brown dye
- Parched nuts used as a coffee substitute

Even though the uses of chestnut expanded, it was still valued for its nuts. By the end of the Revolution, "most families in the original 13 colonies consumed a bushel or more of nuts annually."[10]

In the 1800s, like William Lenoir, people began growing chestnuts in their own orchards, hoping that by selecting seeds from the best trees, they could get higher yields and larger and more flavorful nuts. Others didn't plant trees, but rather didn't cut down the best natural-growing ones near their home, thus creating a sort of natural orchard.[11]

Chestnuts were a significant form of sustenance during the Civil War. *Flora and Fauna of the Civil War* author Kelby Ouchley says, "Chestnuts and chinquapins were the most common wild flora mentioned as food by Confederate soldiers." They also received chestnuts in the mail from relatives.[12]



Courtesy of the American Chestnut Foundation

In the 19th century, roasted chestnuts became very popular in cities, and most of these chestnuts came from the southern Appalachians. "By the mid-1880s, Appalachian communities were known as major suppliers of chestnuts, with some shipping entire carloads to wholesale distribution centers in Wheeling, Richmond, Baltimore,

[8] Ibid, 67.
[9] Cherokee Plants: Their Uses, Paul B. Hamel & Mary U. Chiltoskey, 1975, p. 29.
[10] Ibid, 74, 109, 104.
[11] Ibid, 87.
[12] Ibid, 99.

Philadelphia, and New York City."[13] Chestnut sales were extremely profitable, especially for wholesalers. Chestnuts were so valuable that they were used as money. Families would buy groceries with them at country stores. People would gather chestnuts to have cash to pay their taxes.[14] The chestnut trade blossomed in the late 1800s and peaked in the 1920s. It wasn't just street vendors selling snacks that drove the trade, "chestnuts were by the early 1880s key ingredients in main courses, soups, side dishes, and desserts. Cookbooks of the period devote considerable space to their preparation."[15]

Lenoir was a significant market for chestnuts. The October 22, 1884 edition of *The Lenoir Topic* had this to say,

> *Although there has for several weeks been a considerable trade in mountain produce, the boom began last week. A great many of our Watauga friends came down with apples, cabbage, chestnuts, and other produce and, almost without exception, they sold out in Lenoir where the prices rule high on account of the order system.[16] One feature about Lenoir which makes it almost without rival as a market for country produce is the fact that, with the exception of Statesville, it is the only Western North Carolina town that is a market for roots and herbs.*

A later article dated October 7, 1913 hints at the broader market for the nuts, "Chestnuts are fast finding their way into the local markets and some are being shipped to different points. The chestnut crop this year seems to be plentiful and they are now opening, and hunting them will be the diversion for a while."

After 1920, road building had improved to where it was more feasible and profitable to transport chestnuts out of the mountains. One of the largest markets was Hickory, "where no fewer than 25,000 pounds of chestnuts were sold to Charlotte buyers the first week of harvest." These nuts came from Avery, Watauga, Ashe, and Alleghany Counties.[17] But Lenoir remained a viable market too. My great grandfather, Grant Hodges, and his wife and children, who lived in Watauga County, would gather chestnuts every fall and transport them to Lenoir by wagon where they would be sold. This occurred in the 1910s and 1920s.

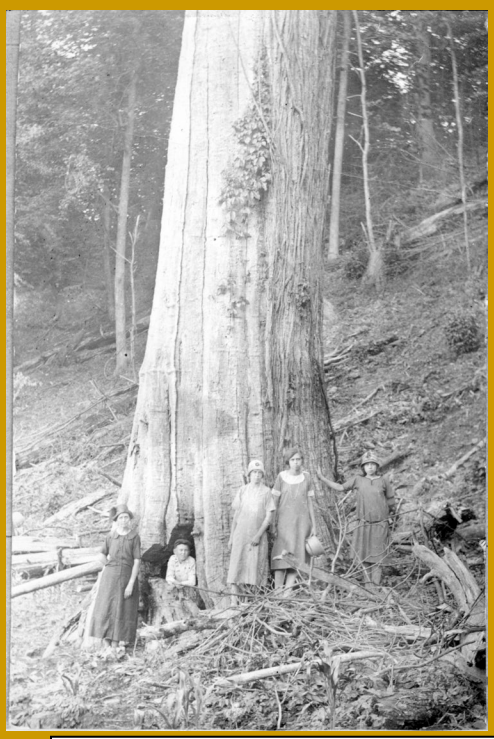


My great grandparents, Grant & Mamie Hodges, and their children. Despite having an automobile, they hauled chestnuts to Lenoir from Watauga County in a wagon. This photo was taken in the 1920s, about the time they were selling chestnuts.

Chestnuts was a cash crop for mountain people for over a hundred years. The loss of chestnut severely hindered

[13] Ibid, 110, 113, 114.
[14] Ibid, 115.
[15] Ibid, 117.
[16] The article doesn't explain :"the order system." Perhaps merchants pre-order or contract with sellers?
[17] Ibid, 175.

their ability to obtain store-bought goods. Chestnuts were food for livestock who had free range in the woods. It cost nothing to fatten hogs on chestnuts, and thus the nut was an important indirect source of sustenance for mountain families.[18]



A large chestnut specimen in the 1920s. Source: Open Parks Network

In the late 1800s, ten million chestnut trees were sacrificed for telephone and telegraph poles. But even that didn't compare to the number used to build railroads. Railroad building removed more trees from American forests than any other use. In addition to railroads and telephone and telegraph poles, 50,000 acres of chestnut was annually cut for other uses. In North Carolina, the furniture industry was a big consumer of chestnut. Manufacturers of burial caskets also used an extraordinary amount.[19] After 1890, an extract was produced from chestnut to tan leather. "By 1925, the leather industry had relocated almost entirely to the southern Appalachians, making it the geographic center for the production and consumption of chestnut extract." Another use was paper. Champion Paper Company in Canton "maintained an insatiable appetite for chestnut" using 275 cords per day.[20]



Chestnut tree killed by the blight.
Source: Open Parks Network

A misconception is that worms infested chestnut after the blight killed them, hence wormy chestnut wood that was used for furniture, paneling, and other uses. Actually the chestnut timber worm was quite common well before the blight hit. They were beetles whose larvae tunneled into trees but did not kill them. The chestnut timber worm was not considered a major problem because the damage was cosmetic, not structural. The holey look became popular and desirable, such that by the late 1890s,

[18] Ibid, 180-181.
[19] Ibid, 152, 154-155.
[20] Ibid, 166, 169 - 170

lumbermen created a new grade of lumber called “sound wormy chestnut.” Thus, wormy chestnut was being used to build things many years before the trees were killed by the blight.[21]

The construction of narrow gauge railroads into the mountains hastened the cutting of chestnuts. In 1907, for the first time, more chestnut timber was harvested from southern Appalachia than any other region.[22]

In 1904, American chestnuts at the Bronx Zoo were found to be infected with a fatal disease. The fungus, later named *Cryphonectria parasitica*, was discovered to have originated with imported Japanese chestnuts. Commonly called chestnut blight, it began spreading farther and farther, efficiently killing all chestnuts in its path.[23] However, it took some time before the blight reached our part of the country. “In many parts of the southern Appalachians, large, healthy stands of chestnut survived well into the 1940s.”[24] Nevertheless, the mountains were not spared and eventually all died. Given the many uses of chestnut and its economic and subsistent importance to mountain families, the loss of the tree took a psychological toll on individuals. The emotion was best summarized by a man named Joe Tribble, “Man, I had the awfulest feeling about that as a child, to look back yonder and see those trees dying. I thought the whole world was going to die.”[25]

Efforts are underway to overcome the blight and bring back the American chestnut. The American Chestnut Foundation is working to cross American chestnut with Chinese chestnut to achieve blight resistance. The trees are 94% American. Another approach is to breed the very few surviving American chestnut trees that exhibit blight resistance. A controversial effort underway is to genetically engineer American chestnuts with a wheat gene that renders them blight resistant.[26]

---

[21] Ibid, 139.
[22] Ibid, 161.
[23] Ibid, 132, 137.
[24] Ibid, 161.
[25] Ibid, 183.
[26] Ibid, 201, 203.