

"A Right Smart Little Jolt"

Loss of the Chestnut —and a Way of Life



Products of the chestnut tree were versatile and diverse—from nuts to tannin, from musical instruments to poles. As the blight spread southward, and as Appalachia moved from an agrarian to an industrial society, the loss of the tree was one of several lasting changes to the region.

By Robert L. Youngs

Chestnut was uniquely associated with the Appalachians as part of the Oak–Chestnut Forest, although its range extended west to Ohio (Braun 1950; Weidensaul 1994). The story of the loss of the chestnut trees from this diversified re-

gion, and of what that loss took from the lives of those who lived there, is actually several stories. Some of them are especially poignant and personal, some are historical, some are economic, and some are technical and scientific. Many of the stories combine all or most of



Courtesy of The American Chestnut Foundation

An American chestnut before the blight.

these characteristics. Each story differs in the perspective from which it was experienced and told.

Particularly significant, especially in the southern Appalachians, is that these stories took place in the context of a major social, cultural, and economic transition from a highly independent, self-supporting, agrarian society to an externally dependent, industrial society. In this transition, the chestnut was an important element but not the chief determinant of the course

of events. In telling these stories, this article examines the products of the chestnut tree and their uses—nuts, wood, bark—and what they meant to the society that shared them.

Chestnut trees provided clothing, school supplies, lumber, posts, fence rails, and food that were critical to the life of people in the Appalachians. Families that did not have cleared land for crops, often difficult in the mountains, turned to hunting, fishing, picking chestnuts, and making whiskey.

Moonshine and chestnuts were their only source of income. As Walter Hopkins in Patrick County, Virginia, put it, the loss of the chestnut was a “right smart little jolt to a lot of people” (Anonymous, 1983). Chestnut trees provided much of the habitat for game, shaded the fishing streams, and provided the fuel to operate the still, as well as to heat the homes and cook the meals. Logs, lumber, cordwood, poles, posts, rails, and tan bark were sold on a local scale with a substantial local impact, even though the products went off to Philadelphia, Washington, New York, and other major cities (Anonymous 1983). A resident of the chestnut range could literally go through life with chestnut—from cradle to casket.

From another perspective, chestnut lumber, even at the height of its production in 1910 to 1920, contributed only a little more than 1 percent of the nation’s supply of hardwood lumber. Yet, when considered locally, it made up more than a quarter of the hardwood forest of the Appalachians and contributed at least that proportion to the economy of the region (Buttrick et al. 1925; Steer 1948; Moss 1973).

Viewed from still another perspective, chestnuts were eaten eagerly—raw, roasted, or boiled—by the people of the region, as they had been by their ancestors and predecessors on the land. However, they were not a major ingredient in the overall diet of those people, the early settlers, or the native Americans (Blackmun 1977; Bass 1978; Edgar 1998). They were eaten by wildlife, often before humans could reach them, but were not an essential element in the diet of these animals (Martin et al. 1993; Baldassarre and Bolen 1994). Many species of insects fed on the leaves, flowers, and nuts of chestnut trees, but there is no record of any insect becoming extinct because of the blight (Drooz 1985). Therefore, between the right smart little jolt experienced by Walter Hopkins and others, and the disturbances in trade and in the ecology of the forest, there are wide gaps and many stories.

Chestnuts

Walter Hopkins grew up in the Buffalo Ridge area of Patrick County in

southwest Virginia. The chestnuts he picked up in the fall each year bought shoes and other clothes and school supplies. His experience and feelings were shared by many (Anonymous 1983). Zetta Hamby (1998) told of falling asleep in her home on the Virginia–North Carolina border, listening to the chestnuts falling, and dreaming of the ground covered with chestnuts. She gulped down her breakfast the next morning and headed for the closest big chestnut tree, calling out to her father to be sure to write an excuse for her tardiness at school.

Nuts were gathered in the fall as they ripened and fell, or were shaken or blasted with charges of gunpowder, from the tree (Griffin 1995). They were collected in fertilizer bags and transported by wagon to a local store, then by rail to markets in the major cities. In 1900 a bushel of chestnuts retailed for \$12 (Weidensaul 1994). However, the mountain people who collected them received only a few cents per pound—10 cents per pound early in the season, declining to 1 or 2 cents as the market became saturated (Anonymous 1983).

Payment was in goods such as shoes, clothing, school supplies, or scrip (due bills); for many people, chestnuts were the only way to acquire these goods. Claudia Wood told of picking enough chestnuts after she was married to buy an eight-day mantel clock and at another time a pair of high-top shoes for her stepson (Anonymous 1983). A family could typically pick 100 pounds in an evening, and often more. However, the chestnut harvest lasted only a few days each year. Other crops, such as corn, filled in during most of the year as both food and trading stock. Chestnuts were a supplement to other foods, such as squash, corn, pumpkin, and beans. With the loss of the chestnuts, many mountain farmers were denied food and livestock feed that might have helped them weather the depression (Thomas 1998).

Wood

The wood of the chestnut has a narrow, whitish to light brown sapwood and grayish brown heartwood that darkens with age. The wood does not



Courtesy of Shenandoah National Park and The American Chestnut Foundation



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Top: Civilian Conservation Corps workers roof a cabin with chestnut shingles. **Bottom:** A log cabin paneled with chestnut in Grayson Highlands State Park, Virginia.

have a characteristic odor, but is mildly astringent in taste because of its 6 to 11 percent tannin content. It is straight grained and moderately light, with average specific gravity of 0.40, as compared to red oak at 0.52 to 0.61 and yellow-poplar at 0.38. It is moderately hard and moderate in strength. It works well with tools, glues well, and finishes nicely. It has moderate shrinkage and little tendency to warp or check in drying. Its heartwood, be-

cause of its high tannin content, is resistant to decay (Brown and Panshin 1940; Forest Products Laboratory 1999). Its extensive use, both locally and in commercial applications, can be attributed to these properties, to its dominating presence, and to its high degree of versatility.

Even though chestnut lumber was not a major contributor to the national hardwood lumber trade, it was a major player in the Appalachians and eastern

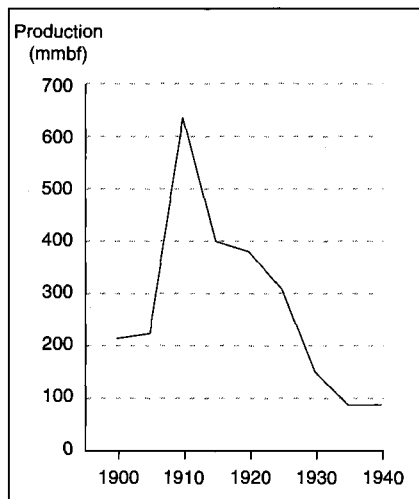


Figure 1. US production of chestnut lumber, 1899–1940. SOURCE: Steer 1948.

markets. In the early 1900s it made up about a quarter of the hardwood lumber production in New England and 15 to 18 percent of the production in the Appalachians. Chestnut production peaked in 1907 (*fig. 1*), when 653 mmbf of lumber was recorded (Steer 1948). This number had increased from about 200 mmbf at the turn of the century, with the most abrupt increase occurring after 1905. Production then declined gradually over the next two decades to less than 100 mmbf, before dropping off the record books entirely in the mid-1940s.

Pierson (1913) reported that chestnut was used more than any other hardwood in Connecticut. The annual sawmill output of chestnut in that state exceeded that of all other hardwoods. The chief use was for pianos, which accounted for almost as much chestnut as all other wood industries combined. Pierson's list of uses covers about 50 categories, from agricultural implements to window frames.

At the peak of its production from 1907 to 1910, chestnut contributed more than \$10 million annually to the economy of the Appalachian region. However, its maximum contribution was in 1920, during a period of high lumber prices when less-than-peak production returned about \$16 million in sales (Steer 1948). The remaining dead timber was being harvested at this time as well.

The financial return from most lumber operations went to the large

timber companies that moved into the Appalachian forests early in the 20th century. Individuals benefited primarily through employment at the mills, although several of the people still living in mountain communities earned money by cutting and hauling logs for delivery to the mills. Gravatt and Marshall (1926) recommended that poles be given priority in marketing, because they were easy to sell and brought high prices.

By the time of its peak production, it was clear that the chestnut was doomed in the North. Because of chestnut's natural durability, dead trees stood for several years on the stump and their wood, particularly that of wormy chestnut, was much sought for furniture and paneling. Plans and guidelines were prepared for use of the wood in Pennsylvania, New England, and other northern parts of the range (Record 1912; Anonymous 1913; Pennsylvania Chestnut Tree Blight Commission 1913). A bulletin issued in Pennsylvania described methods and specifications for use of the dead wood for poles, cross ties, cord wood, and extract wood for tannin production. Cross-tie production soon began to shift to oak and other woods (Wiggin-ton 1980).

Extract Wood and Tan Bark

Because of its high tannin content, for several years chestnut was the major source of tannin for leather production. Wood and bark were soaked in water and the extract solution was then evaporated to yield the tannin. Melvin Taylor told of the woods in the Carolinas and northern Georgia being full of dead chestnut trees, three or four sawlogs to the first limb. People cut the trees and sawed and split them for acid wood, then loaded them on boxcars. They also peeled bark from the trees, living and dead, to sell as tan bark (Reynolds et al. 1993).

In 1919, at the peak of chestnut lumber production in North Carolina, production of acid wood was more than double that of lumber, although its contribution to the economy was about two-thirds that of the lumber (Buttrick et al. 1925). The tannin went to tanneries in various parts of the Ap-

palachians, but especially to Massachusetts, the leading leather-producing state. As new fabrics were developed, the market for leather decreased. At about this same time, acid wood and tan bark from chestnuts were becoming less available and so were considered valuable. Other tannin-containing woods, such as oak and hemlock, replaced chestnut for this purpose (Ashe 1911).

The neutral sulfite semichemical pulping process was developed in the 1920s at the Forest Products Laboratory in Madison, Wisconsin, as an efficient technique to pulp chestnut chips from which the tannin had been extracted (Youngs 1999). The technique later became instrumental in pulping other hardwoods for products such as corrugated fiberboard containers.

Fuelwood

Chestnut wood was commonly used as fuel in areas where it was plentiful. In terms of calorific value, chestnut was inferior to the denser oak, beech, and hickory. It sparked while burning and so could not be used in open fires or fireplaces. However, it split and kindled easily, burned with a hot flame, and was readily available. For these reasons, the wood of chestnut heated many homes and stills and its charcoal fueled the brass factories and brickyards until the supply dwindled and other woods—and other fuels such as coal, gas, and oil—took over the heating function (Hawley and Hawes 1912). Markets for fuelwood were not as favorable as those for ties, piling, and poles, because of the relatively high cost of transportation (Hawes 1906)

A Way of Life, Changed Forever

As the chestnut blight spread in the Appalachians from the northeast toward the southwest, its effects on the social, cultural, and economic life of the people varied from one part of the region to the next. However, the truly massive change to the region was caused by industrialization (Eller 1992). Industrialization developed earlier in the North than in the South, and the chestnut's demise occurred sooner in the North as well. The role of the chestnut blight in the move to an in-

dustrialized society differed by location.

By the time the chestnut was disappearing from the North, most communities and farms had already become part of the industrial society, economy, and culture. The move to industrialization had begun half a century earlier. Patterns of employment had changed, and residents of communities most directly associated with the forest had become workers in the milltowns that sprang up along the rivers and other natural avenues of transportation. Use of the chestnut in the wood industries gradually shifted to other species. For example, in 1913 the 1 million-plus residents of Connecticut lived near at

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least 20 manufacturing centers and depended directly on industrial employment for a living (Pierson 1913). This scenario was typical of most of the chestnut region in New England at that time.

By the time the chestnut blight reached the South, the small, independent farms that were the bedrock of the agrarian mountain culture had begun to fail. Major timber and mining companies were reaching south to the rich timber and mine resources of the southern Appalachians with massive transfers of capital, technology, and know-how from the North (Williams 1989). Mountain agriculture, on which the independent residents depended for the essentials of daily living, went into steep decline. Farm productivity and income fell; farmland shrank substantially as timber and mining companies bought up land.

During the late 19th and early 20th century, practically all of the timberland in the non-coal counties of West Virginia, Kentucky, and southwest Vir-

ginia, and in the Blue Ridge counties of Tennessee, North Carolina, and Georgia, were taken over by outside ownership. Company towns sprang up, often existing only as long as the timber resource was easily available and inexpensive. The major source of income shifted from farming to mining or logging (Eller 1992). The rapid depletion of forests in such an economy removed not only the remaining chestnut, but other species as well. Industrial depletion of the resource eventually brought the national forest and national park movements, begun in the West, to the eastern mountains. The effective loss of the chestnut was part of this movement, although in many ways independent of it; the loss was submerged in the great tide of change away from a highly adaptive agricultural system that depended on the forest (Lewis 1998).

The mountain communities of independent, cooperative, family-oriented people were deserted as their residents left to find work in the urban centers, sawmills, and mines. The outside world pulled them to its economy, culture, and society, but left them with poor land and few resources on which to build a new life.

Thus passed the chestnut and a way of life for millions of people who had lived close by it in the Appalachians. With the continued transition of life in the Appalachians (Glenn 1970), that way of life probably never will return, even if the chestnuts eventually do.

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