

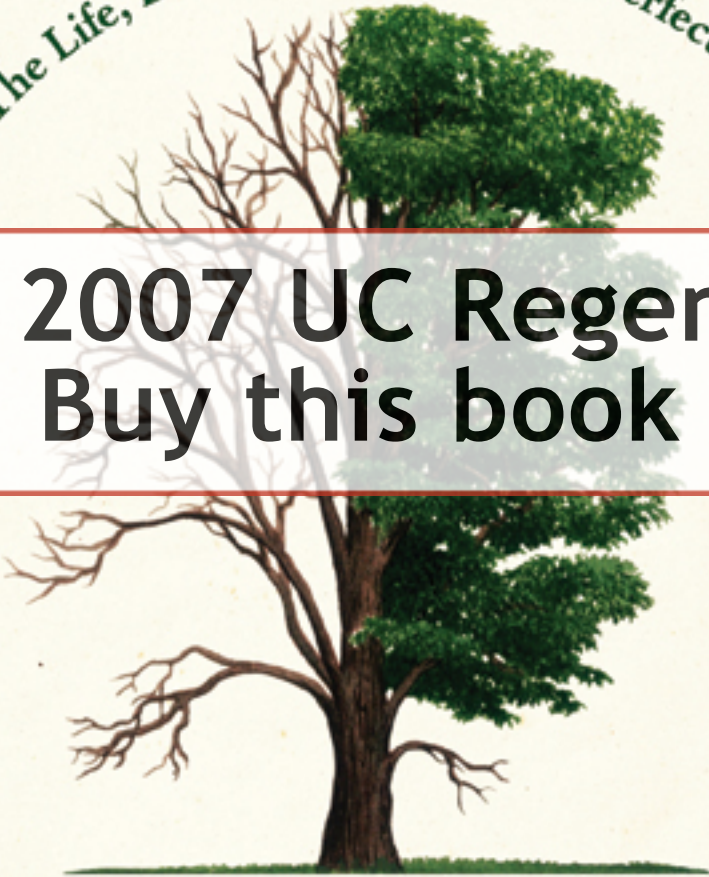
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# American Chestnut

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The Life, Death, and Rebirth of a Perfect Tree

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SUSAN FREINKEL

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“Evil Tendencies Cancel” from

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Frontispiece: Chestnut trees in North Carolina, 1910. Photograph by Sidney V. Streater. Courtesy of the Forest History Society, Durham, North Carolina.

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ONE

## Where There Are Chestnuts

Early McAlexander looks through the window of his granddaughter's car onto a wide open hill fringed by a line of white pines. "All this land used to belong to my father," Early says in a voice that's surprisingly steady for a man of ninety-two. His Virginia accent twists and pulls the vowels like taffy. "I was raised up where that house is now," he adds, looking across the blacktop road to a large, modern, red-brick house with a quasi-colonial portico. It's a far cry from the house in which he and his six brothers and sisters grew up: a four-room log cabin built before the Civil War. In Early's day, the log exterior was covered with clapboard, a common bid by mountain families for respectability. To Early's amusement, the man who bought the cabin from the family moved it to a new lot up the road and stripped off all the clapboard siding to reveal the original rough-hewn logs, this wealthier generation of mountain dwellers' bid for authenticity. Early's family has lived in this area at the crest of the Blue Ridge Mountains, in Patrick County, Virginia, for generations; he's not sure how many. But he knows his great-great-grandfather hailed from here and fought in the Confederate Army until he died of pneumonia in a Richmond hospital. His worn grave marker is in the family cemetery, which still stands near where the cabin once stood.

Early is a dapper, spry man with a full head of snow-white hair, a hearing aid in each ear, and liver-spotted hands that are still steady enough to wield a chain saw or guide a tractor-mower (much to his protective granddaughter's horror). On this windy day in early April, he's dressed in a navy blue blazer, striped tie, and crisp white shirt—his Sunday best. We've spent the morning the same way he has spent most Sunday mornings for the past sixty years: at the Baptist church in this tiny mountain community, Meadows of Dan (population 1,934). Though the white-steepled church can hold at least two hundred congregants, there were only about fifty present on this day. Most were elderly. They came in carrying well-thumbed bibles and asking about one another's health. Many have known each other for decades, since they were schoolchildren together in another time and another world, when this land was laced with dirt roads linking family farms, the hillsides were dotted with fragrant haystacks, and children knew the woods flanking the fields as well as they knew their own home. Many date the end of that world to the late 1920s, when the American chestnut trees all began to die.

Patrick County sits on the southern edge of Virginia, snug against the North Carolina border; it is a wedge-shaped, 470-square-mile area that stretches from the rocky edge of the Blue Ridge Mountains in the north to the rolling clay lands of the Piedmont in the south. According to the official county history published in 1999, Patrick County's southern border "is about the same distance from the equator as the Rock of Gibraltar, the southern part of the Caspian Sea and Death Valley, California." In a further effort to fix the county's coordinates, the authors note that the county seat, Stuart, lies 2,530 miles north of the equator and 3,670 miles south of the North Pole. What the official history doesn't note is that Patrick County also lies in the heart of the historic chestnut belt and that it was once one of the biggest producers of chestnuts and chestnut products in the region.

Only a handful of artifacts scattered around the county testify to the chestnut's former presence. They include the split-rail chestnut fences

bordering the Blue Ridge Parkway, which winds along the county's northern border; the chestnut paneling that lines the walls and ceiling of the Methodist church in the village of Woolwine; and the jar of slightly moldy nuts on display in the Patrick County Historical Society Museum.

Like much of the south, the county luxuriates in its history. Officially formed in 1791, the county was named for Patrick Henry, the firebrand orator—"Give me liberty or give me death!"—of the Revolutionary War. The county seat was named for the confederate war hero J. E. B. Stuart. Silver-colored square historical markers frequently appear along the two-lane roads that crisscross the county: here is Stuart's birthplace; here, the site of the Frontier Fort; here, the homestead of tobacco king R. J. Reynolds. Local family histories and genealogies fill a whole bookshelf in the modest county library. "You know," one woman explained, "that's a Southern hobby." Yet there's a whole other history unnoticed and unremarked on by either texts or roadside markers, a history intimately bound up with the tree that once covered the mountains of this region. "Up here there was a world of chestnuts," one elderly resident recalled. His words speak not only to the abundance of the trees in the region, but also to the role they played in the community and culture. Just as chestnut wood once served as the unseen solid backing for the veneered furniture that used to be manufactured here, so the tree itself once provided the unsung foundation of the lives of the county's poorest residents. Its story is also their story.



The American chestnut belongs to a storied clan of trees known as *Castanea*—a branch of the beech family—which flourishes in temperate zones across the northern hemisphere. Consider the genus a diaspora, its far-flung population a legacy of an ancient time, tens of millions of years ago, when the land masses of North America and Eurasia were joined in a single supercontinent known as Laurasia. Chestnuts,

or rather their remote ancestors, grew all over Laurasia. Eventually the land masses pulled apart, the oceans widened, and the multitude of plants, insects, and animals on each new continent were left to pursue their own distinct paths of development. The chestnuts of China became a different species from the chestnuts of North America. Their ancestral links would later prove the American chestnut's undoing—and the potential source of its salvation.

Although botanists quibble over the precise number, most count at least seven distinct species of *Castanea*. (The name refers to the region of Kastanea in what is now Turkey, where Bronze Age humans are thought to have first started cultivating the tree.) The Caucasus Mountains of southern Russia gave rise to the European chestnut, or *Castanea sativa*, which closely resembles the American tree. Four more members of the family emerged in Asia: the Japanese chestnut (*Castanea crenata*), the Chinese chestnut (*Castanea mollissima*), the dwarf Chinese chestnut (*Castanea seguini*), and the treelike Chinese chinquapin (*Castanea henryi*). Meanwhile, a Mutt-and-Jeff pair of trees emerged in North America: the often shrublike Allegheny chinquapin (*Castanea pumila*) and its grand towering cousin, the American chestnut tree (*Castanea dentata*, so-called because the edges of the leaves look like a row of sharp teeth). Even the untrained eye can spot some of the differences distinguishing the species. The leaves of Japanese chestnuts look like a thin spearhead, for instance, while American chestnut leaves look more like a canoe. Asian species have fine hairs on the leaves (hence the Chinese chestnut's nickname, hairy chestnut); American chestnut leaves are relatively bald. Chinquapin burs contain just one nut, while Europeans usually have three fat seeds to a bur. Other distinguishing details, such as the shape of the buds or precise shade of the twigs, demand a practiced eye or even a botanist's hand lens. Even so, mistaken identities are common.

Despite the differences, all *Castanea* members share certain traits. They all bear nuts that are flavorful nuggets of nutrition (high in fiber, protein, vitamin C, and carbohydrates; low in calories and fat), and they can be cultivated with relatively little care—so little that some



nineteenth-century critics complained that raising chestnuts induced peasants “to laziness.” The trees are fast growing, and if you cut down a chestnut, dozens of stems will sprout as abundantly as weeds from its roots—a system of regeneration known as coppicing. Such qualities have endeared the trees to people across time and place. The Romans considered the chestnut one of the pillars of civilization, along with the olive, the grape, and grain. Wherever imperial legions planted the empire’s flag, they also planted chestnuts. Thus the chestnut trees that shade old Roman roads in England and the orchards that flank the craggy mountainsides of the southern Mediterranean. Visiting Corsica in the early 1900s, American geographer J. Russell Smith asked one villager how long the local chestnut orchards had been going. “Oh a hundred years, five hundred years, a thousand years—always!” the man replied. Likewise, in the hilly regions of Japan and China, farmers have cultivated the trees for millennia.

In most parts of the world, the prized chestnut was a cultivated tree, raised in areas where cereals would not easily grow by peasants who recognized that a family with a chestnut orchard would never go hungry. But in North America, devotion centered on a tree that was never tamed, a wild forest king whose dominion sprawled over more than two hundred million acres. American chestnuts spread along the length of the eastern seaboard and west to Ohio, Kentucky, and Tennessee.\* Legend has it that a squirrel could travel the chestnut canopy from Georgia to Maine without ever touching the ground. Along the way it would pass over at least 1,094 places with *chestnut* in their names. The chestnut was in many ways the quintessential American tree: adaptable,

\*Ironically, the best-known chestnut reference—Longfellow’s famous poem “The Village Blacksmith,” which begins, “Under a spreading chestnut tree/the village smithy stands”—does not refer to a chestnut at all. The tree to which Longfellow paid tribute was a horse chestnut—a wholly different genus (*Aesculus*) from the American chestnut (*Castanea*). Longfellow was well aware of that fact, but decided to sacrifice botanical precision—“under the spreading *horse* chestnut tree”—for poetic meter.

resilient, and fiercely competitive. Given the right conditions, no other hardwood could beat out the American chestnut in the race to the forest canopy.

Despite, or because of, the trees' abundance, they were rarely corralled into formal cultivation. One reason may be that the nuts, while sweeter than other types of chestnut, were also far smaller: little acorn-size kernels that were difficult to peel. When colonial Americans began planting chestnut orchards, they ignored the native trees, turning instead to the Old World trees that produced bigger, plumper nuts. Thomas Jefferson, for instance, imported European cultivars for his orchards at Monticello. When another wave of interest in chestnut cultivation hit in the late nineteenth century, breeders such as Luther Burbank again disregarded American chestnuts in favor of imports from Japan. It was a development that would have dire consequences for the native trees.

Although untamed, American chestnuts were a boon to all who dwelled in their vicinity. Unlike other nut-bearing trees, chestnuts are perennial and prodigious producers. (It's said that this predictability is the source of the expression "a chestnut" to mean an often-told tale.) Oaks, which shared the chestnut's forest niche, might offer a huge crop of acorns one year, then nothing the next. Because chestnuts are late bloomers, flowering beyond the reach of even the latest frost, the trees could be counted on for nuts every year, and lots of them: a single tree might bear as many as six thousand nuts. Such bounty supported an abundance of wildlife: bears, elk, deer, squirrels, raccoons, mice. The huge drives of wild turkeys that thrived in pre-Columbian Appalachia—estimated to be as many as ten million birds—feasted on the nuts, as did the enormous flocks of passenger pigeons that once blackened the skies in mass migrations.

The Native American tribes that shared the forests with American chestnuts were equally reliant on the trees. Here was a source of food that, unlike acorns, didn't need to be boiled for hours to be palatable; these nuts were sweet right off the tree. It is small wonder the Chero-

kees developed rough chestnut orchards in the woods by burning competing trees. The trees also were a rich source of remedies. One account advised: “Tea of year old trees for heart trouble; leaves from young sprouts [to] cure old sores, cold bark tea with buckeye to stop bleeding after birth; apply warmed galls to make infant’s navel recede; boil leaves with mullein and brown sugar for cough syrup; dip leaves in hot water and put on sores.”

The Iroquois celebrated the sustaining gifts of the tree in the story “Hodadenon and the Chestnut Tree.” Hodadenon lived alone with his uncle; the rest of their family had been killed by a group of seven evil witches. Their only food was a cache of dried chestnuts that was magically replenished at every meal. One day, Hodadenon foolishly destroyed the last of the magical nuts. His uncle cried that they would starve, so Hodadenon resolved to steal more chestnuts from a grove of trees jealously guarded by the seven witches. After many tries, he managed to get into the grove and take the nuts he needed, an act that broke the witches’ curse and restored his family to life. Hodadenon gave each of his relatives a chestnut and told them to plant the seeds everywhere. The nuts, he declared, were a sacred food, to be shared forevermore with all who wanted them. In that spirit, perhaps, the Iroquois, as well as other Native Americans, sold chestnuts to the European settlers who arrived and surely showed them how to take advantage of this most useful tree.

But it was in Appalachia, in places like Patrick County, Virginia, where the ties between the chestnut and people were most tightly bound. “If ever there was a place defined by a tree, it was Appalachia,” says folk historian Charlotte Ross, of Appalachian State University. The American chestnut “was our icon. We loved that tree.”

On the steep slopes and in the cool, moist hollows of the southern Appalachian mountains, chestnuts grew so abundantly that they accounted for as many as one in four forest trees, and in some places, even more. Chestnuts were big trees everywhere, but this land gave rise to giants—trees a dozen feet wide and ten times as tall. One Goliath in

Francis Cove, North Carolina, measured seventeen feet across. In spring, the trees bloomed long bushy catkins of cream-colored flowers that filled the woods with a pungent perfume and made the forests look, from a distance, “like a sea with white combers plowing across its surface,” as the naturalist Donald Culross Peattie wrote.

Until the early eighteenth century, few whites had ever laid eyes on the Appalachian region’s oceanic forests. The first European settlers had hugged the coasts, reluctant to venture too deep into the rough unknown mountains to the west. But by the mid-1700s, population pressures and rising land prices in the coastal communities forced many residents across the Appalachian divide in search of new homelands. Scots-Irish, English, Germans, and Scandinavians began migrating south from Pennsylvania, across the Alleghenys, through the gently rolling hills of the Virginia Valley, and into areas such as present-day Patrick County. The lucky first arrivals got to claim the rich bottomlands; their children and new arrivals staked farms higher up the hills, with each succeeding generation climbing farther up the ridges to where “the bare bones” of the mountains poked through the thin skin of soil. To clear the land, residents burned the brush, girdled the trees, and planted their crops—corn, wheat, barley, rye, and oats—among the remaining stumps. The Scots-Irish in particular were skilled highland farmers. They brought with them farming customs well-suited to the mountains, such as the use of common grazing lands. They also brought a taste for corn whiskey and a stringent brand of Presbyterianism that gradually morphed into the fundamentalist “hard-shell” Baptist sects whose tiny chapels are still scattered throughout Patrick County.

Farm conditions along the Blue Ridge were hard. But in the abundant chestnut trees settlers found a singular source of wealth. Those tough enough or desperate enough to brave the hardships of carving out a homestead in the middle of the wilderness were rewarded by a companionable ally: a tree of seemingly limitless largesse. Here, they found chestnut trees so enormous that just a few supplied all the logs a man

needed to build a cabin for his family. The wood was light, strong, and so easy to split that to make a rail fence, one man marveled, one could just cut the length needed, “stick a wedge in it an’ it’d just pop open.” However much was cut down, the tree would quickly replace, the stumps resprouting with a speed and vigor unmatched by any other hardwood. “By the time the white oak acorn makes a baseball bat the chestnut stump has made a railroad tie,” wrote J. Russell Smith. A family could gather enough nuts in a single autumn month to help stave off hunger all winter long. “There was one time of year when we had food,” recalled one man who grew up on Buffalo Mountain in Patrick County. “That was in the late fall after the gusty winds of a chestnut storm left the ground strewn with nuts. Pa and Ma would take us out by lantern light to beat the hogs to them, for the hogs knew every tree as well as the humans did. [My brother] Hasten said that the chestnut were like the manna that God sent to feed the Israelites.” Chestnut leaves, farm women soon learned, could be brewed into a broth to loosen a deep cough; they could be packed into a poultice that soothed burns; they could even be stuffed into mattresses, though the bedding rustled so loudly folks called them “talking beds.”

No one needed to buy land to pasture cattle or hogs when the forests supplied such a wealth of forage. Farmers would simply notch their mark in the ears of their livestock and turn the animals loose to roam the woods until they were to be butchered or sold. A pig could grow stout as a barrel on chestnuts, acorns, and hickory nuts. That ample carpet of nuts, sometimes inches thick, allowed drovers to move huge herds of hogs, cattle, and even turkeys across the slopes of the southern mountains to supply food for laborers on the plantations to the Southeast. The wildlife that also feasted on the nuts ensured a steady supply of game for the dinner table. “There wasn’t no kind of game that roamed these mountains that didn’t eat the chestnuts,” Georgia native Jake Waldrop recalled. “The chestnut supported everything.”

Folklorist Ross believes the chestnut not only supported settlement in the Appalachians but invited it. The early Scots-Irish settlers wrote

letters home describing the riches the woods offered. “The chestnut mast is knee-deep,” one man boasted, referring to the heavy accumulation of nuts. “C’mon over cousin,” another wrote to his family in Ulster, Ireland. “This is the best poor man’s country.” And their countrymen followed. Over time the mountains filled with enclaves of tough, independent-minded people who were used to wrestling a living out of the poorest farmland.

Few ever bothered to actually cultivate the trees—who needed to when the trees grew so plentifully? In general, mountain families treated the chestnuts as a community resource, a bounty to be shared by all, like the abundant wild game, valuable ginseng, or juicy summer blackberries. But many also had their own chestnut “orchard”—a grove of trees they had saved from the plow or discovered deep in the woods. They’d tend the trees as if they’d grown them themselves, carefully clearing away underbrush to make it easier to collect the nuts when they began to fall. Such a grove, one Patrick County farmwoman declared, “is a better provider than any man—easier to have around, too.”

Chestnuts, like other edibles foraged from the forest, were critical to the subsistence farmers who dominated southern Appalachia until the early twentieth century. Yet, as valuable as the trees were to the region, they “had little or no cash value until it was possible to ship them to areas outside the chestnut’s range,” as Goddard College historian Ralph Lutts points out. By the mid-nineteenth century, the nation’s expanding transportation networks had reached Appalachia: steamships were plowing down the region’s riverways, and roads and railroad lines were being laid across and through the Blue Ridge. The growing web of transportation lines gradually reached the isolated mountain communities, connecting them not only with the towns in their vicinity but with the national economy as well. Chestnuts were one of the few items of currency that the mountain farmers had to offer—along with hogs, moonshine, dried apples, and, most important of all, lumber. The region’s vast untouched timber riches were what brought the railroads and roads in the first place. Having exhausted the pine and hardwood

forests of the East and upper Midwest, lumber barons were now casting their eyes on the billions of board feet to be found in Appalachia.

In Patrick County, it was the arrival of a railroad line in 1884 that opened up what Lutts calls “the chestnut trade.” The Dick and Willie, as residents affectionately called the Danville and Western Line, was just a short stretch of narrow gauge track that ran between Stuart and Danville, two counties to the east. But it supplied the tobacco farmers in the south of the county with a reliable and relatively fast way to get their crops to larger cities and gave the mountain farmers in the north of the county a reason to start treating chestnuts as a viable cash crop. By the beginning of the twentieth century, chestnuts had become one of the most important crops in Patrick County and neighboring counties, according to Lutts, who has painstakingly reconstructed this micro-economy from oral histories and the old account books of the county’s now-gone general stores. Indeed, nut collection had become a major industry throughout the southern Appalachian forests.

For children of the Blue Ridge, chestnut harvest was a magical time. Early McAlexander remembers eagerly awaiting that day in late September or early October when the first hard frost pried open the spiky burs that encased the precious nuts. His mother would grab him and his younger siblings, and with tin buckets in hand they’d set out for their “orchard,” a dozen or so towering trees in the woods bordering the cornfield up the hill from their home. They’d have to get there early to beat the squirrels. They would step carefully over the grassy ground beneath the trees, thick with the glossy brown nuts and half-cracked sharp burs. Sometimes Early would pop a few nuts in his mouth right then and there, savoring the sweet carrotty taste. But most went straight into his bucket.

Back home, his mother would set aside some nuts to be roasted on the hot coals in the wood stove. The rest would be used to acquire the things the family couldn’t make on their own—school supplies and sugar, shoes and long underwear. Typically, farm families either bartered the nuts for merchandise or were paid in “due bills”—scrip issued

by the little stores that dotted the mountainside and served as each community's economic center. Stores like Akins', DeHart's, Hopkins', Pike's each issued their own due bills—small circles of cardboard, tin, or brass that were marked in varying denominations, stamped with the store's name, and redeemable only at that store. Early's family would haul their sacks of nuts to Pike's store in Meadows of Dan. There was a closer store just over the ridge to the west in Mayberry, but Early's grandmother considered that neighborhood godless country because of all the moonshiners operating there. "The crust over hell is just a half-inch thick over there," she'd warn Early. (Despite her admonitions, Early courted and eventually married a Mayberry girl.)

The nuts didn't bring a lot of cash. Families like the McAlexanders might get five to ten cents a pound at the start of the season. But as the market became saturated, prices dropped; after a few weeks, they could expect only two or three cents a pound. (Retailers, on the other hand, were making at least ten times as much on the chestnuts they sold.) Still, even a few dollars made a big difference to struggling mountain families. That's why Early's mother faithfully herded her children out to the chestnut orchard during the harvest season. "Raising seven children," he explains, "it'd take all the money they could get hold of."

It was the same story all over the mountain, indeed, all over southern Appalachia. "I picked up enough in one day to buy me a pair of old rough shoes," one Patrick County resident recalled. Another remembered collecting nuts so she could buy "an eight-day clock" for her mantel. A Georgia man recalled the mountain folk who would appear each fall in his local store with chestnuts to trade. "We'd hardly ever see these people at all, except when they came out to go to the store, and in the fall we'd see them coming, maybe the parents and three or four kids coming down the trail. The old man would have a big coffee sack full of chestnuts on his back, and the little fellers would have smaller sacks, and even the mother would have a small sack of chestnuts caught up on her hip. They'd all trek to the store, and they'd swap that for coffee and



sugar and flour and things that they had to buy to live on through the winter. That's the way they made their living."

At the height of the season in Patrick County, families delivered so many thousands of bushels of chestnuts that the storerooms of the local stores were knee-deep in nuts. The stores were the first link in a chain that led back to cities like Baltimore, Philadelphia, and New York, where the nuts would be sold hot-roasted on the streets. The Patrick County storeowners bagged the nuts in cloth sacks and hauled them to the railway depot at the bottom of the mountain in Stuart. "This was not an easy trip," Lutts notes. Until the county got its first paved roads in the 1930s, it could take two days to make the thirty-five-mile round trip between Meadows of Dan and Stuart. Still, store owner James Hopkins would cart two thousand pounds of nuts at a time down the mountain. Over a single weekend in October 1915, about thirty wagonloads of chestnuts were brought to the Stuart depot from Meadows of Dan.

The trade was also a boon to Stuart's railway stationmaster, who oversaw the shipment of nuts to urban markets. During chestnut harvest, "you could hardly find a place to put the bags of chestnuts down, because everyone was a chestnut dealer, just about," recalled the son of the man who ran the station at the turn of the century. By 1903, the Dick and Willie had been upgraded to standard gauge and the train was moving thousands of pounds of chestnuts every day during the season. Because the nuts were perishable, they had to be shipped express, and the stationmaster made a commission on each shipment. Those shipments, his son recalled, were the best money the stationmaster ever made.

By the early 1900s, chestnuts had become an even more important source of income than cattle for Patrick County farmers. According to the U.S Agricultural Census of 1910, Patrick County produced more nuts than any other county in the state: nearly 160,000 pounds, almost all of it chestnuts. The 360,000 pounds of nuts harvested in Patrick

County and its four neighboring counties represented nearly half of Virginia's entire nut crop that year.



While Appalachia's fond memories for the American chestnut tend to center on the sweet mahogany nuts, in fact, the most valuable parts of the tree were its timber and bark, at least in the unsentimental calculus of dollars and cents. When the lumber boom hit the southern Appalachians in the late nineteenth century, chestnut was one of its major targets.

The notion that their backyards were filled with an untapped resource was not entirely new to the region's mountain dwellers. With the introduction of steam-powered mills in the early 1800s and their steady proliferation throughout the region, mountain farmers had already begun treating the woodlots on their property as potential sources of cash. By the middle of the century, the mountains were filled with small-scale, one- or two-man logging operations that would cut down the best trees along a waterway and float the logs to settlements and sawmills downstream. Logging was an important seasonal income for many mountain families. "Still the forest was only dented, not broken," notes writer Chris Bolgiano. "Seventy-five percent of Appalachia remained forested in 1900."

By then, industrial-scale logging had arrived. Timber barons, who'd already made millions emptying the Great Lakes pine forests, had begun opening new operations in the South and the southern Appalachians in the 1880s. The sheer scope of their acquisitions was mind-boggling in a region where mountain farmers typically held fewer than two hundred acres. One of the first businessmen on the scene was Alexander A. Arthur, creator of the Scottish Carolina Land Company. Arthur bought up sixty thousand acres—ten square miles—in eastern Tennessee alone. By 1895, the mountains echoed with the clang of locomotives and the buzz of sawyers and steam-powered sawmills. The

industrial loggers cleared the forests with “unparalleled speed and efficiency,” observes environmental historian Donald Davis. “Virtually no stand of timber was off-limits, including trees old enough to have witnessed the passing of Hernando de Soto in 1540.”

No other species saw the axe as frequently as chestnut. What made it so desirable? It wasn't its looks. Though the wood had a pleasant sandy color and even grain, it couldn't hold a candle to the lustrous surfaces produced from black walnut or cherry wood. Nor was it the strongest hardwood; oak won hands down when it came to tests of strength. Black locust was harder and more durable. Chestnut oak (an unrelated species) was more acidic, a trait valued for tanning leather.

But in a pinch, chestnut could fill in for any of those other woods. It had a utilitarian versatility no other tree could match. It was, in that sense, the perfect tree, or as close to it as you could ever hope to find. The wood was lighter than most other hardwoods, making it cheaper to ship. It contained a high amount of tannins, acidic chemicals that allowed chestnut to defy rot and warping better than almost any other wood. And it was wildly abundant. Such a winning combination of traits, *American Forestry* magazine reported in 1915, “has given chestnut a greater variety of uses than almost any other American hardwood.”

The mammoth chestnuts felled in Appalachia wound up touching nearly every aspect of early twentieth-century American life. Straight chestnut poles held up the lengthening miles of telegraph and telephone wire unspooling across the nation. Sturdy chestnut ties supported the ever-expanding railroad lines. Chestnut beams shored up mine shafts. Builders used chestnut to frame and shingle houses and occasionally for interior trim. Furniture makers employed chestnut nearly as much as oak, using it as a core stock for tables, bureaus, or desks that were then finished with veneers made of pricier woods. Chestnut was also a favorite of casket makers who could again disguise its virtues: the grieving widow might want an impressive mahogany coffin for her dearly beloved, but that was only affordable if the core were made of humble

chestnut. Chestnut found its way into nearly anything made of wood, from pianos to packing crates. It served literally cradle to grave.

The tannins in chestnut wood and bark were used to turn rough hides into leather. Europeans had employed chestnut to tan leather for centuries, and in the late 1800s, Americans began adopting the methods. By 1915, tannin extraction had become a thriving industry in the South and over two-thirds of the tannic acid produced in the United States came from chestnut wood and bark.

Like so many wood-related industries, tannin extraction was a wasteful process in which enormous quantities of pulverized wood were discarded once the valuable acids were leached out. But in 1912, a chemical engineer at the Champion Paper and Fibre Company in North Carolina figured out a way to extract tannins from thinly shaved wood chips, which could be then used for paper production. The innovation revolutionized the industry. Companies were able to sell the same wood twice and make twice the profit. Soon chestnut pulp was being used for all sorts of low-grade paper products, from newsprint to government postcards.

As the raw material for such an array of products, chestnut accounted for one-fourth of all the hardwood lumber cut out of the southern Appalachians. By 1909, about six hundred million board feet of chestnut were being cut each year, not including the thousands of trees felled annually for utility poles, fencing posts, or cordwood. Count those in, and one observer of the time estimated that “chestnut has the largest cut of any single species of hardwood in America.” At the peak of its production, between 1907 and 1910, chestnut wood contributed more than ten million dollars annually to the economy of Appalachia. Nevertheless, the people of the region did not gain much from the intensive logging. True, the timber boom brought mill jobs to the region, but most of the profits flowed out of Appalachia to investors in the North and overseas.

Of course, chestnut wasn't the only tree disappearing into the maw of the Appalachian timber boom. The appetite for all of the region's trees was enormous, peaking in 1909 when four billion board feet of

hardwood lumber—enough foot-wide boards to circle the equator thirty times—were cut from the mountain forests from Maryland to Georgia. By then, it was beginning to dawn on Americans that the country's vast seas of timber could not be tapped forever. Just as the American frontier had been pushed to the ends of the continent, conservationists were now warning, the country's foremost natural resource was in danger of being exhausted.

At the turn of the twentieth century, citizen and forestry groups pushing for a national park to preserve the Great Smokies and the Black Mountains persuaded Congress to appoint a team of surveyors to examine the southern Appalachian forests. The surveyors were alarmed by how quickly the magnificent virgin stands of chestnut, oak, poplar, maple, gum, cypress, and pine were vanishing. In a report submitted to President Theodore Roosevelt in 1902, the U.S. Geological Survey described the serious damage the industrial loggers had inflicted on the forests through their "inexcusable slovenliness." The loggers had lumbered through the mountains as clumsily and carelessly as evil fairy-tale giants, leaving in their wake swaths of crushed trees, acres of torn-up earth, and destructive fires. Even worse was the loggers' rapaciousness. If the lumbering operations continued at their present break-neck pace, the surveyors concluded, "within less than a decade every mountain cove will have been invaded and robbed of its finest timber, and the last remnants of these grand Appalachian forests will have been destroyed."

Little did the survey team know that sawmill's whine was not the only danger facing the Appalachian forests. The forests would soon confront an equally grave threat that even then was wending its way toward the mountains. This peril would be even harder to control than the human hunger for profits.