ROOT DIGGERS AND HERB GATHERERS: THE RISE AND DECLINE OF THE BOTANICAL DRUG TRADE IN SOUTHERN APPALACHIA

by

THOMAS LUKE MANGET

(Under the Direction of John Inscoe)

ABSTRACT

Root digging and herb gathering has long been a part of the subsistence patterns of many rural Americans, but nowhere in the United States has it played a more important role than in the southern and central Appalachian Mountains. In the late-eighteenth and early-nineteenth centuries, American ginseng became one of the most important articles of commerce in some mountain sections, and as the production of patent medicines and botanical pharmaceutical products escalated in the mid- to late-nineteenth century, southern Appalachia emerged as the United States' most prolific supplier of many other species of medicinal plants, known by the catch-all term "crude botanical drugs." The region achieved this distinction due to both its legendary biodiversity and the persistence of certain common rights that guaranteed widespread access to the forested mountainsides, regardless of who owned the land. Following the Civil War, the region experienced an unparalleled root-and-herb boom that drew thousands of people into these supply chains and onto the *de facto* forest commons. Root digging and herb gathering became the most important way for landless and smallholding

families to earn income from the forest commons. This boom influenced class relations, gender roles, forest use, and outside perceptions of Appalachia, and it began a widespread renegotiation of common rights that eventually curtailed access to some plants such as ginseng.

Drawing on manuscripts, periodicals, business records, and other sources, this dissertation examines how and why Appalachia became the nation's premier supplier of botanical drugs in the late nineteenth century and the how the trade influenced the way human residents of the region interacted with each other and with the forests around them. Using the analytical framework of political ecology, it uncovers a unique narrative of commodification, one shaped as much by local ecology and culture as by global markets. Indeed, the particular dynamics of Appalachia's political ecology are more important to the rise of the botanical drug industry than scholars have heretofore acknowledged. Conversely, the botanical drug trade is more central to understanding Appalachian history than scholars have recognized.

INDEX WORDS: Appalachian History, Environmental History, Ginseng, Market Revolution, Pharmaceutical Industry, Medicinal Plants, Root Digging, Political Ecology.

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MA, Western Carolina University, 2012

BS, Georgia Institute of Technology, 2003

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2017

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May 2017

DEDICATION

To my grandmother, Orbenia Greer Stewart Burges, who grew up digging roots and gathering herbs in the mountains of eastern Kentucky and who first stimulated my interest in the botanical drug trade.

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the help of countless individuals along the way. First and foremost, I'd like to thank my wonderful wife, Natalie, without whose support for my education—not to mention her love and unceasing dedication to raising our three boys, Henry, Charlie, and Jack—I would never have made it through graduate school. I would also like to thank my parents, Tom and Debbie Manget, who provided much-needed funds, babysitting, and moral support along the way, and the rest of my extended family who helped us survive and enjoy graduate school by ensuring that we had support and enjoyable times. David Martinez, Matt Williams, and my other neighbors at Brandon Oaks Apartments also deserve credit for their regular conversations, encouragement, and friendship along the way.

I have benefitted from some excellent mentors along the way. John Inscoe, my major professor, advisor, and friend, deserves more credit than I can give here. A one-of-a-kind scholar and mentor, he read anything and everything I put on his desk, from dissertation chapters to articles and seminar papers, and despite his busy schedule, he gave me insightful feedback and encouragement, often over lunch or in the car as he drove me home from campus. At Western Carolina University, I was fortunate to have the guidance of Richard Starnes, who advised my thesis, helped me decide to pursue a PhD, and has remained a friend and confidant ever since.

I want to thank the rest of my dissertation committee as well. Shane Hamilton always provided me with penetrating analysis and provoking questions on my work, and Tim Cleaveland gave me very helpful comments, as well as career guidance. Of course, I could not have written this dissertation without the pioneering scholarship of Kathryn Newfont on the Appalachian commons. I cannot thank her enough for her support and encouragement throughout this process and the many conversations we have had on the commons idea. Many other professors at the University of Georgia, especially Stephen Mihm, Stephen Berry, Brian Drake, Dan Rood, Jamie Kreiner, Cindy Hahamovitch, Scott Nelson, Jim Cobb, and Peter Hoffer, have also provided valuable feedback at different times during my graduate career. Additionally, without the help of the excellent history faculty at Western Carolina, including Alex Macaulay, Libby McRae, Gael Graham, Andy Denson, and Jessie Swigger, I probably would not have pursued a PhD.

I have been a beneficiary of an excellent community of graduate students at the University of Georgia. My Appalachian history cohorts—Sam McGuire, Kevin Young, James Owen, Kate Dahlstrand, and Robby Poister—have given me countless hours of good conversations, friendship, and comradery that made graduate school enjoyable. Additionally, I want to thank Kaylynn Washnock, Katie Brackett-Fialka, Ashton Ellett, Kurt Windisch, Trae Welborn, James Wall, Tim Johnson, Andrew Fialka, and everyone else I forgot to mention for helping make LeConte Hall a supportive and congenial place to spend five years.

Last but certainly not least, I would like to thank the many colleagues that have shaped my understanding of Appalachian and environmental history through countless

conversations at conferences. These include Steven Nash, Tom Lee, Ron Eller, Dan Pierce, Donald Davis, Paul Sutter, Mark Fiege, Lisa Brady, Michael Weeks, Mark Hersey, Bert Way, Tom Okie, and many more.

And many thanks to Amanda and Greg Gregory for generously funding several research trips, as well as the Willson Center, the North Caroliniana Society, the Winterthur Museum, Library, and Garden, and the Hagley Museum and Library.

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“In locating her laboratories in different parts of the world, nature selected, as one of them, a vast wilderness in the mountainous region which one day was to be the southeastern United States. Here, in what is now southern Virginia and North Carolina, there gradually developed through the ages a wonderful flora, influenced by the tropics on one side and the bracing climate to the northward, of which perhaps some six hundred or more species have had medicinal application. Out of this Blue Ridge section of the Southern Appalachian System now comes 75 per cent of North America’s contribution to the drug supplies of the world.”

- Henry C. Fuller, *The Story of Drugs,* 1922.

In the spring of 1873, a man named Henry Webb scanned the ground for plants among the forested mountainsides that surrounded the picturesque hamlet of Valle Crucis on the Watauga River. Every spring, the forest floor of this spot in northwestern North Carolina sprouted a colorful carpet of wildflowers and herbaceous plants. In the moisture-rich coves that occupy streambanks and narrow ravines, trilliums, trout lilies, Solomon’s seal, blue cohosh, black cohosh, and dozens of other plants grew in the shade of Fraser magnolias, striped maples, beech, buckeye, and basswood trees. Webb may not have known every species of mountain flora, but he knew there were a few that brought good prices at Henry Taylor’s store down in the valley. The ultimate prize was ginseng, or “sang,” as he called it, which he could sell for thirty cents a pound, but it was becoming harder and harder to find. Mayapple fetched only two cents a pound, but it grew in large, dense patches from which he could harvest ten pounds easily. Taylor also paid for bloodroot, angelica, and jack-in-the-pulpit, which everyone referred to as Indian turnip. Several times a year, Taylor would haul wagonloads of such roots and herbs

down to the foothills of the Blue Ridge Mountains to towns like Lenoir, Wilkesboro, and Statesville, and sell them to other merchants. Almost all the ginseng that Taylor hauled down the mountain was eventually purchased by the Chinese. The rest of the roots and herbs made their way to patent medicine makers and pharmaceutical manufacturers from St. Louis to Boston to London.[1]

Webb could certainly have used the bartering power these plants offered. He needed coffee, sugar, tobacco, and more fish hooks, and as the effects of the Civil War lingered in the valley, his financial situation was bleak. Like the rest of the Watauga valley, Webb's life had been severely disrupted by the war-torn 1860s. A day laborer near the foothills town of Lenoir in 1850, he moved with his wife and three young children closer to the Blue Ridge and rented a farm. When the war broke out, he was forty-eight years old—perhaps too old to fight—and instead of enlisting, he moved further west deep into the Blue Ridge Mountains, closer to the forests full of herbs that he would harvest. The 1870 census found him living near the North Carolina/Tennessee border without his three children and a new wife half his age, working as a farm hand. In the early 1870s, he moved again to Valle Crucis, found work as a farm laborer, and had a son with his young wife, but his wages alone did not provide his family with any measure of comfort. So he relied on harvesting what many referred to as the catch-all "roots and herbs" to purchase a few luxuries. From 1873 to 1876, he traded $23.50 worth of ginseng, mayapple, Indian turnip, angelica, bloodroot, and other plants for corn, tobacco, fish hooks, leather, and other necessities.[2] It may not have been much, but it was all the store purchases he made during that time.

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[1] See entries for Henry Webb in Taylor and Moore Ledger, W.L. Eury Appalachian Collection, Special Collections, Belk Library, Appalachian State University, Boone, NC.

[2] U. S. Bureau of the Census, *Population Schedules of the 7th Census of the United States, 1850, North Carolina* (Washington: National Archives and Records Service, 1851); U. S. Bureau of the Census, *Population Schedules of the 8th Census of the United States, 1860, North Carolina* (Washington: National

Webb's story is not unique. It could have been told by any one of the thousands of people who harvested roots and herbs in the decades that followed the Civil War. He was part of a growing class of people who depended on these resources for their livelihoods. Mountain families had harvested ginseng for at least seventy years, and they depended heavily on other forest products, such as fish, game, and livestock forage, to supplement farm production throughout the antebellum era. But after the war, as the farm economy struggled to rebound from wartime devastation and the markets for wild medicinal plants expanded, many took to the forests for roots and herbs like mayapple, wild ginger, and, if they were lucky, ginseng. During the height of the botanical drug trade in the 1880s, contemporary estimates suggest that there may have been more than 40,000 people gathering roots and herbs for wholesale herb dealers in western North Carolina alone.[3] Some dug roots and gathered herbs in their spare time away from farm work, but for many mountain families like the Webbs, it was their only means of obtaining goods from the nearest store in an economy nearly devoid of cash.

Observers both inside and outside the region took notice of them. They were most often known as "sang diggers," or "sangers," and from the 1860s through the 1910s, newspaper reporters, magazine writers, missionaries and novelists created a distinct mythology surrounding this particular group of mountain people. In the hands of these writers, sang diggers became the most backward of all mountaineers, totally isolated from the main social, cultural, political, and economic currents sweeping the nation. They were "ignorant," one asserted, "because, shut in by the mountains, they have been unable to communicate with the

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Archives and Records Service, 1861); U. S. Bureau of the Census, *Population Schedules of the 9th Census of the United States, 1870, North Carolina* (Washington: National Archives and Records Service, 1871); Taylor and Moore Ledger, W.L. Eury Appalachian Collection, Belk Library, Appalachian State University, Boone, NC.

[3] See, for example, "A Singular Southern Industry," *The Atlanta Constitution,* 9 December 1886. This source claimed that an agent for the Wallace Brothers, a botanical drug firm in Statesville, NC, purchased roots and herbs from roughly 40,000 people, and there were a half dozen other firms engaged in the trade.

world around them, and the world has encountered the same barriers in trying to communicate with them."[4] Yet, the very nature of their identity suggests that they were not detached from the world at all. Indeed, they were plugged into commodity chains that stretched from the Far East to the urban centers of the United States and Europe. Sang-digger mythology was filled with the pejorative language of backwardness that characterized most other writing on Appalachian mountaineers of the time, but its emergence reflects a central yet underappreciated fact of Appalachian history: the region had a special relationship to the global trade in medicinal plants.

This dissertation digs into the roots of the peculiar relationship between the southern highlands and the botanical drug trade to understand its full implications for Appalachian history. It explores how evolving global markets converted medicinal plants into commodities and how networks of merchants extended these commodity chains deep into the mountains. It follows these linkages to the country stores where mountaineers bartered roots and herbs for goods and food. It pushes on into the rich cove forests with the men, women, and children who harvested them from their native beds, and it goes still further, into the soil and the bedrock in order to understand how the plants got there in the first place. How and why did the southern highlands become such an important supplier of crude botanicals? Just *how* important was the trade to local communities and economies? How did the trade influence land use and social relations? How did it shape Appalachia's transition to capitalism, and how did it inform outside perceptions of the region? In answering these questions, this dissertation uncovers an untold story that, it turns out, is more important to understanding Appalachian history than we have perhaps realized.

[4] "Julie, the Huntress," *Baltimore Sun,* 19 November 1888.

In her book, *The Livelihood of Kin*, anthropologist Rhonda Halperin has found that people in eastern Kentucky employ what she calls "multiple livelihood strategies" for making ends meet. These strategies include hunting, fishing, gathering, subsistence gardening, temporary wage work, labor exchanges within kin networks, and the buying and selling of second-hand goods in local periodic marketplaces (flea markets). She argues that these strategies should be understood as "forms of resistance to capitalism and to dependence upon the state."[5] Although Halperin's study focuses on modern-day Kentuckians, these practices are not new. Indeed, throughout the history of the region, many rural mountain people like Henry Webb have pieced together livelihoods from whatever sources were available, whether they were wages or products of the farm, the forests, or the streams. As markets for roots and herbs expanded in the nineteenth century, rural people dug roots and gathered herbs not so much as a way to resist capitalism but as a way to insulate themselves from the effects of it, although the degree of insulation varied from individual to individual. It is ironic, however, that the commodities they used to accomplish this were themselves products of global markets. Thus, a strategy they used to insulate themselves from the vagaries of the market economy actually worked to fuel the expansion of the botanical drug industry. And ultimately, they were forced to confront the fact that roots and herbs were subject to those same vagaries. That irony is the focus of this dissertation.

Telling the story of the rise and fall of the botanical drug trade requires creative uses of limited sources. The commerce in roots and herbs on a national and international scale was not consistently documented by any government agency or trade association, and statistics that could illuminate the volume of the trade over time do not exist. This dearth of sources has made it difficult to quantify the trade on a national scale. Thus, this dissertation is tasked with

[5] Rhoda H. Halperin, *The Livelihood of Kin: Making Ends Meet "the Kentucky Way"* (Austin: University of Texas Press, 1990), 1–20, 146.

establishing general trends in the botanical drug supply using a combination of anecdotal sources and a variety of local and regional data. There are sources available to piece together this history. This dissertation relies on an array of orthodox primary sources, such as diaries, correspondence, newspapers, and census records, as well as ecological and anthropological studies. However, much of this dissertation's findings are based on an examination of the business records of a variety of business men, from mountain merchants to piedmont wholesalers to northern manufacturers. For example, I have examined some fifty-five store ledgers and day books that document the business carried on at roughly thirty one different stores across southern Appalachia. These records are housed at fifteen repositories, including state archives, academic libraries, and local historical museums. Geographically and temporally, they range within Appalachia from northern West Virginia to southwestern North Carolina and from the late eighteenth century through the early twentieth century. However, the availability of these sources has imposed some limitations. Some time periods and geographic areas are more fully represented than others. For example, ledgers from east Tennessee and eastern Kentucky are decidedly lacking, and there are far more ledgers available from the late nineteenth century than the early nineteenth century. Nevertheless, this study represents the most comprehensive use of store records to date in Appalachian historiography.

Appalachian History and the Botanical Drug Trade

Scholars have long known that rural Appalachian people engaged in root digging and herb gathering. In 1930, geographer Ina Yoakley sketched out a brief history of these practices in her article, "Wild Plant Industry of the Southern Appalachians;" thirty years later, fellow geographer Edward T. Price traced the medical history of mountain plants his article, "Root Digging in the Appalachians: The Geography of Botanical Drugs," published in *The Geographical*

Review.[6] In 1995, historian Gary Freeze published an excellent study of the rise and fall of the Statesville (NC)-based wholesale drug firm Wallace Brothers within the context of Gilded Age business development, and Donald Davis has written a ten-page summary of the trade in Appalachia that appears in his *Homeplace Geography*.[7] This handful of scholarly articles made it clear that the botanical drug trade thrived in the region in the late nineteenth century.[8] More recently, two popular books on the ginseng trade, although not focused exclusively on Appalachia, have contributed to a recent growth in popular interest in the subject.[9] Thus, scholars understand that root digging and herb gathering have been important to the region, although our historical understanding of the trade remains piecemeal and incomplete.

Despite this attention, historians of Appalachia have had a difficult time fitting the botanical drug trade into broader narratives of the region's history. In his influential 1982 book, *Miners, Millhands, and Mountaineers,* Ronald Eller described root digging and herb gathering as part of the region's preindustrial patterns of subsistence. To make his point that the region's poverty was caused by the changes wrought by industrial capitalism, Eller painted preindustrial

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[6] Ina Yoakley, "Wild Plant Industry of the Southern Appalachians," *Economic Geography* 8, no. 3 (July 1932): 311–17; Edward T. Price Price, "Root Digging in the Appalachians: The Geography of Botanical Drugs," *Geographical Review* 50, no. 1 (January 1960): 1–20; Arnold Krochmal, "Medicinal Plants in Appalachia," *Economic Botany* 22, no. 4 (December 1968): 332–37; Alice Henkel, *Wild Medicinal Plants of the United States*, U.S.D.A. Bureau of Plant Industry Bulletin 89 (Washington, D.C.: Government Printing Office, 1906).

[7] Gary R. Freeze, "Roots, Barks, Berries, and Jews: The Herb Trade in Gilded-Age North Carolina," *Essays in Economic and Business History* 13 (1995): 107–27; Donald Davis, "Medicinal and Cultural Uses of Plants in the Southern Appalachians," Donald Edward Davis, *Homeplace Geography: Essays for Appalachia*, 1st ed (Macon, Ga: Mercer University Press, 2006), 165–76.

[8] Kathryn Newfont, *Blue Ridge Commons: Environmental Activism and Forest History in Western North Carolina*, (Athens: University of Georgia Press, 2012). Newfont discusses root digging as an important use of the forests but does not discuss the botanical drug trade outside of ginseng. The harvesting of what land managers call Non-Timber Forest Products in Appalachia today has received in-depth attention from anthropologists and folklorists such as Mary Hufford. See Mary Hufford, "Knowing Ginseng: The Social Life of an Appalachian Root," *Cahiers de Litterature Orale* 53–54 (2003): 265–92; Mary Hufford, "Reclaiming the Commons: Narratives of Progress, Preservation, and Ginseng," Benita J. Howell, ed., *Culture, Environment, and Conservation in the Appalachian South* (Urbana: University of Illinois Press, 2002), 100–120.

[9] Kristin Johannsen, *Ginseng Dreams: The Secret World of America's Most Valuable Plant* (Lexington: University Press of Kentucky, 2006); David A. Taylor, *Ginseng, the Divine Root*, 1st ed (Chapel Hill, N.C: Algonquin Books of Chapel Hill, 2006).

Appalachia with a broad brush, characterizing it largely as a "land of scattered, closely integrated, and self-sufficient island communities."[10] These communities maintained strong ties to the land rooted in family and kinship networks and they valued stability and continuity over commercial development. "Few areas of the United States in the late nineteenth century more closely exemplified Thomas Jefferson's vision of a democratic society," he wrote.[11] For Eller, then, root digging and herb gathering were traditional practices that extended deep into the preindustrial past and played an important role within a barter-based economy that characterized much of that era. "This form of commerce," he wrote, "reinforced the autonomy of the local market system and provided mountain communities with considerable freedom from the fluctuations of the national cash economy."[12]

Eller's characterization of Appalachia's preindustrial past has faced criticism over the past three decades, and many of his critics have taken different lessons away from the realities of root digging and herb gathering. Scholars such as Robert Mitchell and Wilma Dunaway, among others, have examined the region's frontier era and found that the initial Euro-American settlement was made possible by connections to national and global markets. Looking primarily at raw economic and demographic data, they see evidence for early commercialism, in part, in the money that ginseng brought to local communities. In his critique of the Turnerian theory that frontier development evolves from self-sufficient to subsistence to commercial, for example, Mitchell lists ginseng alongside wheat, corn, cattle, and deer skins as evidence that the Shenandoah Valley economy was commercialized from the start. "Commercial tendencies were present from the beginnings of permanent settlement and were the most dynamic element in

[10] Ronald D. Eller, *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930* (Knoxville: University of Tennessee Press, 1982), 6.
[11] Ibid., 3.
[12] Ibid., 22.

the emerging pioneer economy," he wrote. "The great majority of settlers were eager to exploit any profit-making opportunities available."[13]

No scholar has so vigorously attacked the idea that preindustrial Appalachia was a bastion of Jeffersonian democracy more than sociologist Wilma Dunaway. Dunaway has devoted much of her scholarship to destroying the romantic "myth of the happy yeoman." Understanding the history of the region through a lens of Immanuel Wallerstein's world systems theory, Dunaway contends that the incorporation of Appalachia into the periphery of world capitalism drove the very settlement of the region by Euro-Americans. Mountain farmers' desire to produce for external markets precipitated the removal of Native Americans, dictated the treatment of slaves and women, and shaped the agricultural development of the region throughout the eighteenth and nineteenth centuries. Rife with inequality, land speculation, and absentee ownership, she argues, Appalachia was no different than any other frontier area.[14] Perhaps not surprisingly, she argues that the ginseng trade, along with the deerskin trade, provides evidence that Appalachia was incorporated into the capitalist periphery even prior to widespread Euro-American settlement in the nineteenth century.

Over the past three decades, scholars have continued to add nuance to our understanding of Appalachia's preindustrial history. Much of this scholarship has focused on explaining the degree to which rural mountain communities were oriented towards market production, and they have found that neither Dunaway's characterization of mountaineers as nascent capitalists nor Eller's assertation that they were communally oriented subsistence

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[13] Robert D. Mitchell, *Commercialism and Frontier: Perspectives on the Early Shenandoah Valley* (Charlottesville: University Press of Virginia, 1977), 3–8.

[14] Dunaway, *The First American Frontier*; Wilma A. Dunaway, *Women, Work, and Family in the Antebellum Mountain South* (Cambridge ; New York: Cambridge University Press, 2008); Wilma A. Dunaway, *Slavery in the American Mountain South* (Cambridge: Cambridge University Press, 2003); Wilma Dunaway, "The Incorporation of Mountain Ecosystems into the Capitalist World-System," *Review* 19, no. 4 (Fall 1996): 355–81.

farmers can adequately explain preindustrial Appalachian society. Work by John Inscoe, Kenneth Noe, Dwight Billings, Kathleen Blee, Durwood Dunn, and many others have shown that preindustrial Appalachians were not isolated from the market economy or from broader cultural and political currents. Indeed, it was a heterogeneous place with considerable variations between communities. As Ralph Mann has described it, "while there were mountain communities that approximated Jeffersonian expectations, there were others that exhibited sharp social distinctions, contained large numbers of landless families, and were strongly oriented toward markets."[15] Capitalist values—expansion, exploitation, and accumulation—dominated some, while subsistence values—reproduction, stability, economic independence, and egalitarianism—dominated others, but these values shifted over time. Kenneth Noe contends that the arrival of the railroad in southwestern Virginia eroded precapitalist values and initiated the modernization of communities living near it, forcing a cultural divergence with the area that would become West Virginia.[16] In their study of western North Carolina in the Civil War era, John Inscoe and Gordon McKinney argue that the two sets of values could exist within the same communities and even within the same individual. The region's yeomen farmers, they suggest, desired material progress, and many even aspired to own slaves, but they also maintained a commitment to kin and community. The two sets of values were not mutually exclusive.[17] Inscoe points to ginseng as one piece of evidence to suggest that "there were few

[15] Ralph Mann, "Diversity in the Antebellum Appalachian South: Four Farm Communities in Tazewell County, Virginia," Mary Beth Pudup, *Appalachia in the Making: The Mountain South in the Nineteenth Century* (Chapel Hill: Univ. of North Carolina Press, 1995), 132.
[16] Kenneth W. Noe, *Southwest Virginia's Railroad: Modernization and the Sectional Crisis* (Urbana: University of Illinois Press, 1994).
[17] John C. Inscoe and Gordon B. McKinney, *The Heart of Confederate Appalachia: Western North Carolina in the Civil War*, Civil War America (Chapel Hill: University of North Carolina Press, 2000), 27–29.

families, if any, in the region without some opportunity for commercial transactions of some sort."[18]

In the body of scholarship considered above, roots and herbs, if they appear at all, appear only as evidence of market-oriented activity; but if we dig a little deeper, we can see that these were no ordinary commodities. Indeed, they defy categorization. They were neither agriculture, as many scholars have implied, nor industry. They were indicators of neither a wholly subsistence culture nor of a capitalist culture. They were not entirely part of the world capitalist system nor were they outside of it. Moreover, the people who harvested cannot be neatly categorized as laborers or farmers. It is clear that the traditional binaries used to explain Appalachian history cannot adequately account for roots and herbs. Indeed, they seem to blur the lines between them. Thus, rather than help explain an existing framework for how Appalachian history unfolded in the nineteenth century, the story of root digging and herb gathering suggests that a new framework is needed.

Kathryn Newfont has pointed to another way of conceptualizing the botanical drug trade. In her excellent book, *Blue Ridge Commons,* she brings into focus the existence and persistence of what she calls a "commons system" in western North Carolina. Throughout the nineteenth century, she argues, Appalachian settlements tended to cluster in river valleys and along creeks. The mountainsides, unsuited for agricultural development, were largely left forested. Tacit and ongoing negotiations between landowners and rural residents effectively gave residents access to these forests to hunt, fish, forage, dig roots and herbs, and range livestock. Some of this land was owned by community members, and some of it by absentee landholders, but it did not really matter. Due to these widely accepted common rights, mountain people could wander at will through the mountainside forests hunting for game or

[18] John C. Inscoe, *Mountain Masters, Slavery, and the Sectional Crisis in Western North Carolina*, 1st ed (Knoxville: University of Tennessee Press, 1989), 39.

lucrative plants without regard to who owned the land. Newfont contends that common rights became so woven into the cultural fabric of communities that the values associated with them persisted well into the twentieth century, forming a powerful strain of "commons environmentalism" that was "every bit as powerful as wilderness environmentalism."[19] This connection to the forests informed both the opposition to wilderness designation in the 1970s and the opposition to deforestation and oil and gas drilling in what became the region's *de jure* commons, the national forests, in the 1980s.[20] Newfont's findings suggest that forests and common rights deserve more scrutiny from scholars interested in the region's preindustrial history. With the issue of market interaction more or less laid to rest, perhaps it is time to ask the question: What does it mean that so many Appalachian people continued to depend on the forest—on other people's property—for their livelihoods and financial security into the twentieth century?

To be certain, as Newfont has noted, commons systems existed in many places around the United States in the nineteenth century and continue to exist. Historians examining localized contexts have found expressions of common rights in the early republican low country, in the Great Dismal Swamp region in the mid-nineteenth century, in the Georgia upcountry in the late nineteenth century, and among New Yorkers around Adirondack Park in the late nineteenth century.[21] Although they look at different types of resources, these scholars all identify a similar commitment to popular access to certain undeveloped resources. Stephen

[19] Newfont, *Blue Ridge Commons*, 3–11.
[20] Ibid.
[21] Harry Watson, "'The Common Rights of Mankind': Subsistence, Shad, and Commerce in the Early Republican South," in Paul Sutter and Christopher J. Manganiello, eds., *Environmental History and the American South: A Reader*, (Athens: University of Georgia Press, 2009), 131-167. Jack Temple Kirby, *Poquosin: A Study of Rural Landscape & Society* (Chapel Hill: University of North Carolina Press, 1995); Hahn, *The Roots of Southern Populism*; Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation;* Gary Kulik, "Dams, Fish, and Farmers: Defense of Public Rights in Eighteenth-Century Rhode Island," in Steven Hahn and Jonathan Prude, eds., *The Countryside in the Age of Capitalist Transformation: Essays in the Social History of Rural America* (Chapel Hill: University of North Carolina Press, 1985), 25-50; Newfont, *Blue Ridge Commons,* 22.

Aron refers to them as "rights-in-the-woods" and suggests they were a powerful cultural force in late eighteenth-century Kentucky.[22] Christine Keiner has also found them among Chesapeake watermen's claims to oyster beds in the early twentieth century.[23] A full history of common rights is difficult to uncover. It requires exploring that hard-to-reach space between the letter of the law and its implementation, and it requires tight focus on local contexts and careful reading of primary sources. Often, those committed to common rights did not articulate their ideas unless they were threatened with enclosure. Little by little, however, scholars are piecing together the history of common rights, revealing that they were much more widespread than once imagined. These scholars agree that such customs were characteristic of precapitalist rural societies committed to values of economic security and communal solidarity over the commercial values associated with the growing market economy.

Appalachia deserves a special place in the history of common rights, for it seems that this value system persisted there stronger and longer than elsewhere in the South with the possible exception of swamps. In his study of rural society around the Great Dismal Swamp, Jack Temple Kirby observed that mountains and swamps were the last to be "conquered" by "cosmopolitan society." Due to their terrain, which limited agricultural expansion, they became refuges for "hinterlanders" who valued the type of freedom that came from access to resources rather than the accumulation of individual wealth. At a time in which forests were being replaced by cotton plantations and fence laws were being passed in much of the piedmont South, the mountains and the swamps remained bastions for those who valued this type of freedom and independence.[24] In his examination of late antebellum Appalachian society,

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[22] Stephen Aron, *How the West Was Lost: The Transformation of Kentucky From Daniel Boone to Henry Clay* (Johns Hopkins University Press, 1999) 102-123.
[23] Christine Keiner, *The Oyster Question: Scientists, Watermen, and the Maryland Chesapeake Bay since 1880* (Athens, Ga: The University of Georgia Press, 2009).
[24] Kirby, *Poquosin: A Study of Rural Landscape & Society*, 164.

historian John Sherwood Lewis has found a distinct mountain subculture that lived in the more rugged stretches of mountains who valued security, independence, and leisure over acquisitiveness and economic advancement. Drawing on census records, court documents, local histories, and agricultural data, he concludes that the inhabitants of the mountain hinterlands, far from nodes of commerce and transportation routes, were not simply nascient capitalists waiting for better transportation routes to bring them closer to national markets. "Indeed," he writes, "these farmers moved into these areas precisely because the weaker links to the national economy allowed alternative economic structures to thrive and prosper."[25] Echoing Kirby's assessment, Lewis argues that hunting, fishing, foraging, and free-ranging livestock provided them with a livelihood outside of the traditional agricultural or industrial economy. Although he does not use the term "commons," the forest commons clearly played an instrumental role in helping them maintain this way of life.

As the botanical drug trade reveals, however, the persistence of common rights did not necessarily indicate the absence of market values. The trade thrived in areas distant from railroad connections, and those who participated in it were often the poorest residents who lived closest to the forests. Even these people—those whom Cratis D. Williams referred to as the "branchwater mountaineers"—were involved with the global market.[26] Indeed, many of them were dependent on it, especially after the Civil War. By the late nineteenth century, root digging was the easiest and most popular way of obtaining extra purchasing power from the commons, suggesting that the commons and the market economy were not mutually exclusive economic structures. While many people certainly harvested medicinal plants for their own use, especially in the early nineteenth century, the vast majority harvested them *because* it provided

[25] John Sherwood Lewis, "Becoming Appalachia: The Emergence of an American Subculture, 1840-1860" (PhD Diss., University of Kentucky, 2000), 47.
[26] Cratis D. Williams, "Who Are the Southern Mountaineers?," *Appalachian Journal* 1, no. 1 (Autumn 1972): 48–55.

them with extra purchasing power at the nearest store, and they vigorously defended their common right to them in order to maintain access to the market. Thus, in the case of botanical drugs, the commons custom and external markets reinforced each other.

Environmental History and Appalachia

This dissertation also seeks to address the issue of environmental change in Appalachia, a subject that has attracted increasing attention over the past decade and a half. One of the first to explicitly address environmental change in the mountains was Wilma Dunaway. In a 1996 article, she argued that all mountain ecosystems go through similar processes as they become incorporated into the world system. Because early Euro-American settlers in Appalachia were ostensibly governed by capitalist values of expansion, exploitation, and accumulation, they had devastating impacts on the environment. "In their race to produce surpluses for export," she contends, "capitalists redistributed, reorganized, and endangered the diverse local ecosystems that comprised the Southern Appalachians."[27] Dunaway puts forth a strong narrative of environmental decline, a tendency of the first generation of environmental historians who were eager to demonstrate the destructive tendencies of capitalism. Since the early 1990s, however, the field of environmental history has evolved to embrace a more dialectical relationship between nature and culture. Humans certainly have the power to drastically alter the environment, but the environment can also shape human culture. Mobilizing that culture, humans have the capacity to adjust to ecological limitations and mitigate change.[28]

[27] Dunaway, "The Incorporation of Mountain Ecosystems into the Capitalist World-System," 361.
[28] This shift in environmental historiography was spurred by the publication of William Cronon, ed., *Uncommon Ground: Toward Reinventing Nature*, 1st ed (New York: W.W. Norton & Co, 1995). Specifically, Cronon's opening essay, "The Trouble with Wilderness: Or Getting Back to the Wrong

Environmental historian Timothy Silver, one of the earliest to challenge the declensionist narrative, wrote in 1990 that "instead of decrying the evils of capitalism and pointing accusingly to its colonial origins, perhaps we should focus instead on that remarkable pattern of adjustment. For there—in that uniquely human ability to employ 'culture' as a means of environmental adaptation—is hope for our future."[29] Richard Judd has been at the forefront in arguing that conservation should be studied as a grassroots movement that has evolved out of rural peoples' long-term and intimate relationships to nature. He implores environmental historians to rethink the history of conservation by moving beyond a focus on the earliest pioneers and land speculators in the West and instead focus on long-settled areas and "those who stayed behind," to use Hal Barron's phrase, in the East.[30]

So how did Appalachian people adapt to environmental limitations? Perhaps first we must address the questions: How did they view nature? Did they see it as a collection of commodities to be exploited for personal gain? Or did they see it as, in environmental historian Donald Davis's words, "a living matrix of plants, animals, and shared memories"?[31] Answers to these questions largely depend on whether or not one sees preindustrial mountaineers as petty capitalists who valued commercial expansion or as subsistence farmers who valued sustainability. In the last twenty years, Appalachia has inspired a wave of environmental histories from scholars such as Ronald Lewis, Timothy Silver, Dan Pierce, Donald Davis, Margaret

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Nature," which argues that wilderness, as well as nature more broadly, is constructed by humans, and historians should view humans as part of nature rather than as destroyers of it.

[29] Timothy Silver, *A New Face on the Countryside: Indians, Colonists, and Slaves in South Atlantic Forests, 1500-1800*, Studies in Environment and History (Cambridge ; New York: Cambridge University Press, 1990), 198.

[30] Richard Judd, "Writing Environmental History from East to West," in Ben A. Minteer and Robert E. Manning, eds., *Reconstructing Conservation: Finding Common Ground* (Washington: Island Press, 2003), 19–31; Richard Judd, *Common Lands, Common People: The Origins of Conservation in Northern New England* (Cambridge: Harvard University Press, 1997); Hal S. Barron, *Those Who Stayed behind: Rural Society in Nineteenth-Century New England*, (Cambridge [Cambridgeshire] ; New York: Cambridge University Press, 1984).

[31] Donald Edward Davis, *Where There Are Mountains: An Environmental History of the Southern Appalachians* (Athens: University of Georgia Press, 2000), 179.

Lynn Brown, and Kathryn Newfont.[32] From this body of scholarship comes a more complex picture of environmental and cultural change in the preindustrial era. Ronald Lewis's exhaustive 1998 study of the effects of deforestation on the West Virginia landscape largely continues the trend set by Dunaway, although he provides a much more nuanced and meticulously researched interpretation. Favoring a world systems interpretation, Lewis argues that the cultural roots of large-scale destruction of forest ecosystems that accompanied the arrival of timber companies in the 1880s lay within the Appalachian people themselves. Their ability and willingness to exploit their ecosystems was constrained only by a lack of capital and technology. While early Euro-American settlers may have adapted their economies to the forest ecosystems, many consistently displayed a desire for commercial improvement and played a key role in attracting outside capital.[33]

In the most comprehensive environmental history of the region, *Where There Are Mountains,* Donald Davis offers a critique of the declensionist model of world systems analysis. Interpretations of the region's history in terms of world systems, he argues, "do not tell how or why cultures or, for that matter, environments change over time. Market incorporation of the periphery is seldom a universal process affecting all social groups or locales equally. Human agency very often leaves room for individuals or even entire communities to maneuver within or around the world economic system."[34] Although Davis's thorough research suggests that Euro-Americans did have a measurable impact on the antebellum environment, he is careful not to characterize all change as bad. He believes that the economic behavior of mountain people was

[32] Timothy Silver, *Mount Mitchell and the Black Mountains: An Environmental History of the Highest Peaks in Eastern America* (Chapel Hill: Univ. of North Carolina Press, 2003); Daniel S. Pierce, *The Great Smokies: From Natural Habitat to National Park*, 1st ed (Knoxville: University of Tennessee Press, 2000); Davis, *Where There Are Mountains*; Margaret Lynn Brown, *The Wild East: A Biography of the Great Smoky Mountains* (Gainesville: University Press of Florida, 2001); Newfont, *Blue Ridge Commons*.
[33] Ronald L. Lewis, *Transforming the Appalachian Countryside: Railroads, Deforestation, and Social Change in West Virginia, 1880-1920* (Chapel Hill: University of North Carolina Press, 1998).
[34] Davis, *Where There Are Mountains*, 208.

not always driven by external markets, and most mountain people were not motivated solely by the pursuit of profit. Indeed, they found ways to adapt. He argues that greater appreciation of cultural syncretism can enhance our understanding of that pattern of adjustment. The region's chief indigenous inhabitants, the Cherokee, while contributing to landscape change, developed a relationship to nature that sustained their culture and social relations over time. They made decisions that increased the ability of Cherokee communities to live within ecological limits. Exploring the extent to which Euro-American settlers were influenced by their values and practices, he suggests, could help us understand how nature and culture interacted through time.

As one way of examining how Appalachian peoples' relationship to nature changed over time, this dissertation provides something of a case study of a group of commons resources. It utilizes insights from the growing body of commons scholarship jumpstarted by biologist and human ecologist Garrett Hardin. In his 1968 essay in the journal *Science,* "The Tragedy of the Commons," Hardin offered a grim assessment of the fate of nature in a commons. "Picture a pasture open to all," he famously wrote. Each herdsman in this hypothetical pasture, acting in his own self-interest, would gradually increase the size of his herd, thereby consuming more of a particular resource (in this case grass) until it collapses. Hardin was making the Malthusian point that the pressures of population growth on the resource base refutes Adam Smith's invisible hand theory, which states that everyone acting in their own self-interest would benefit society as a whole. The problem of population growth, he argued, has no technical solution and, therefore, requires a reorientation of Americans' laissez-faire culture. However, the message that has resonated with academics ever since was his assumptions about the commons. Those resources are destined for collapse, he implied, because users lack necessary incentives to conserve them. "Ruin is the destination towards which all men rush, each pursuing his own

interest in a society that believes in the freedom of the commons," he wrote. "Freedom in a commons brings ruin to all."[35]

Hardin's work stimulated tremendous interest in property regimes and resource use, and academics and resource managers remain deeply divided over his thesis. While many conservation biologists embrace his theory as a fundamental justification for state management of commons resources such as fish and game, other scholars challenge it by asserting, among other things, that it did not account for the culture of commons users. Some say, for example, that he ignored the transformational forces of markets. "The market is the great unspoken presence in Hardin's version of the commons," writes Louis Warren in his history of the hunting commons. "The single greatest agent in transforming the local commons was trade."[36] It was the desire of herdsman for more money that drove the expansion of his herd. Critics also point to rural peoples around the world who have developed viable commons systems that effectively conserve resources.[37] Economist Elinor Ostrom won a Nobel Prize in Economics in 2009 for her work on human behavior and Common Pool Resources in which she points out the many alternative systems that exist for limiting commons harvests without relying on either privatization or state management. She argues that models explaining the inevitable collapse of commons resources do not take enough consideration of local context.[38] Thus, commons scholarship has followed a trajectory similar to that of other environmental histories. Once a

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[35] Garrett Hardin, "The Tragedy of the Commons," *Science*, New Series, 162, no. 3859 (December 13, 1968): 1243–48.
[36] Louis S. Warren, *The Hunter's Game: Poachers and Conservationists in Twentieth-Century America* (New Haven, CT: Yale University Press, 1997), 11.
[37] Bonnie J. McCay and James M. Acheson, eds., *The Question of the Commons: The Culture and Ecology of Communal Resources*, Arizona Studies in Human Ecology (Tucson: University of Arizona Press, 1987); Michael Goldman, "'Customs in Common': The Epistemic World of the Commons Scholars," *Theory and Society* 26, no. 1 (February 1997): 1–37; David Feeny et al., "The Tragedy of the Commons: Twenty-Two Years Later," *Human Ecology* 18, no. 1 (1990): 1–19; Bryan E. Burke, "Hardin Revisited: A Critical Look at Perception and the Logic of the Commons," *Human Ecology* 29, no. 4 (December 2001): 449–76.
[38] Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (New York, 1990).

field dominated by a gloomy outlook on human behavior and the fate of non-human nature, it has come around to paint a more complex—and hopeful—picture of adaptation.

This dissertation follows a political ecological approach to Appalachia's environmental history as a strategy for examining the processes of environmental and cultural change. The concept of political ecology has undergone significant revisions since it first appeared in the 1970s. Initially an outgrowth of the ecology movement of the 1960s, political ecology was a loose set of theoretical assumptions as well as a social movement that advocated for a forceful, if vaguely defined, state-led readjustment of humans to nature. For many scholars, namely anthropologists and geographers, it offered a powerful neo-Marxist critique of political economy from an ecological perspective. According to Adrian Atkinson's influential 1991 book, *Principles of Political Ecology,* the goal was to "promote radical political decentralization to regions which can be effectively run as ecological and politically self-managing entities."[39] Much like the first wave of environmental history in the late 1970s and early 1980s, the first studies in political ecology wrote a narrative of capitalist expansion in highly declensionist terms. Through the 1990s, it was heavily influenced by Wallerstein's world systems theory, which cast the spread of capitalism as a totalizing, universalizing, and inexorable march across the globe that subsumed all cultural, ecological, economic, and political forms into one unequal system comprised of core and peripheral areas. Scholars examined the commodification of resources from white pines to cotton to bananas and have found similar impacts across time and space. As regions of the world were pulled into the orbit of the capitalist system, plantations popped up along the periphery to supply these global markets with raw materials. This process tended to restructure and homogenize ecosystems, stratify social relations, determine labor regimes, and dictate local power dynamics.

[39] Adrian Atkinson, *Principles of Political Ecology* (London: Belhaven Press, 1991), 6.

However, a group of scholars has recently challenged these earlier assumptions and charted a new course for the study of political ecology similar to the one followed by environmental historians.[40] Among their critiques of the older version is that, due to its dependence on world systems theory, it overemphasized the hegemonic power of capitalism and posited environmental change as overtly deterministic.[41] It tended to ignore local dynamics that could mediate interactions between communities and the world system. These scholars maintain that paying attention to local places as "the grounded site of local-global articulation and interaction," could revive human agency and the ways in which "the transnational spaces of capitalism and colonialism…are created, reinforced, contested, or rebuffed."[42] The new political ecology does not dismiss the capability of capitalist economies to severely degrade the environment, but it pays more attention to local and regional context, as Ostrom implored commons scholars to do. The other important critique of the new scholarship is that it no longer privileges structural factors in environmental and cultural change. It now pays more attention to the ways in which language and other cultural symbols can serve to reinforce particular notions of the proper relationship between nature and culture.[43]

For the purposes of this dissertation, political ecology can now be defined as, to borrow from anthropologist Thomas W. Sheridan, a "historical dialectic that determines how and why

[40] A good introduction to this shift is the introduction to Aletta Biersack and James B. Greenberg, eds., *Reimagining Political Ecology*, (Durham: Duke University Press, 2006), 3–40.
[41] Although environmental historians have yet to fully embrace political ecology as an analytical framework, their work has followed a similar trajectory since the early 1990s when William Cronon's essay, "The Trouble with Nature, Or, Getting Back to the Wrong Nature" first appeared. Cronon criticized the first generation of environmental historians for positing an artificial division between nature and culture, a tendency which served to associate all environmental change, especially change associated with capitalism, as bad. Recently, both political ecology and environmental history have to embrace a more nuanced discussion of environmental and cultural change.
[42] Biersack and Greenberg, *Reimagining Political Ecology*, 17–18.
[43] The contributors to the edited volume, *Political Ecology: Science, Myth, and Power,* for example, analyze the ways in which certain narratives of environmental change are constructed using the language of science and the uses to which they are put. Philip Anthony Stott and Sian Sullivan, eds., *Political Ecology: Science, Myth and Power* (London : New York: Arnold ; Oxford University Press, 2000).

certain natural resources are converted into commodities at particular places and times, and how commodity production transforms, and is transformed by, local ecosystems and local societies."[44] Indeed, political ecology is a strategy for historical inquiry that takes into account market forces, cultural and ecological dynamics, and political struggles on the local, regional, national, and transnational levels that help determine which people have access to particular resources. The narrow focus of commodity studies offers an effective way to illuminate these layers of interactions between humans and ecosystems that shape the process of commodification.

This dissertation examines how the various relationships involving human and non-human nature worked to create and supply markets for medicinal plants. And it follows those relationships as they evolved over time. It is an unconventional story of commodification, one shaped by local ecology and culture as much as by global political economy. These markets were supplied entirely by people foraging in the forest, relying on the biodiversity of Appalachian forests. Ecosystems were not restructured. The extractive process was not capitalized, and labor was not divided. In this case, commodification depended on the existence of common rights, and, in turn, it worked to strengthen them. The trade did have noticeable impacts on plant populations, particularly the more lucrative plants such as ginseng, but describing their decline in the late nineteenth century as a "tragedy of the commons" oversimplifies the story. Ginseng did not disappear because of some inherent flaw of common-pool resources. Indeed, there are indications that by the Civil War, some locals had begun to adapt their practices in the face of dwindling populations in order to protect the species. Rather, ginseng disappeared throughout much of its former range because of the specific historical circumstances that existed in late-nineteenth-century Appalachia, and these

[44] T.W. Sheridan, "Arizona: The Political Ecology of a Desert State," *Journal of Political Ecology,* 2 (1995), 41-57.

circumstances were as much the product of social conditions after the Civil War as they were of economic or ecological conditions.

The botanical drug trade involved hundreds of different species of plants, each with their own markets and each subject to its own ecological and cultural dynamics. Thus, this dissertation tries to be sensitive to the uniqueness of each commodity. Ginseng, for example, was unique among the roots and herbs analyzed here because the market for it was in China and was, thus, subject to its own peculiarities. The markets for most other roots and herbs were created by particular cultural and material developments in the United States and Europe in the nineteenth century. But all of these roots and herbs can be analyzed here together as a distinct species of commodity because in the southern highlands, they were treated as such. At the level of production, they were subject to similar social, cultural, and ecological dynamics.

Organization of Dissertation

This dissertation follows a roughly chronological narrative that begins in the 1720s when American ginseng was first commodified. Chapter 1 explores the evolution of the ginseng market in China and how ecological and political factors led to the discovery of ginseng in Canada in 1728. It also focuses on how the first ginseng boom of the 1750s shaped the experiences of both Native Americans and Euro-American settlers along the borders of Iroquoia. Chapter 2 follows the ginseng boom into the Ohio Valley and the mountains of West Virginia and Kentucky where it facilitated the Euro-American settlement of the region in the late eighteenth and early nineteenth centuries. Over the course of the antebellum era, ginseng was incorporated into rural communities' seasonal subsistence patterns that depended on both the forest and the farm. By the 1850s, it had surpassed skins and furs as the most commonly traded forest product.

Chapter 3 shifts the focus away from ginseng and examines the creation of markets for a wide variety of other Appalachian plants. Sectarian challenges to medical orthodoxy and the rise of patent medicine and pharmaceutical manufacturing in the 1840s and 1850s stimulated demand for indigenous plants to be made into medicines. Calvin Cowles of Wilkesboro, North Carolina, was one of the first to link Appalachian plants to these burgeoning markets, and by the outbreak of the Civil War, he had established a trade network that stretched from country stores on the Blue Ridge to manufacturers in the Midwestern and northeastern United States, as well as in Europe. Chapter 4 utilizes the lens of business history to explore the emergence of southern Appalachia as the nation's premier botanical drug exporting region and the role the Civil War played in stimulating it. The decades following the war witnessed the rise of some of the largest wholesale botanical drug dealers in the nation, if not the world, and most of them were located around the southern mountains.

The next two chapters bring the focus into the forests of Appalachia to detail the local dynamics of the post-Civil-War root-and-herb boom. Chapter 5 makes the case that the economic depression that settled on the region after the war made root digging and herb gathering an attractive alternative to the agricultural economy, and many people like Henry Webb fell back on the forests to make ends meet. In the process, roots and herbs shaped class and gender dynamics across the landscape and led to the rapid depletion of ginseng populations. Chapter 6 explores the social tensions that the post-war root-and-herb boom engendered and the many efforts undertaken by local landowners and commons users to conserve that most illustrious of all roots, ginseng. Beginning in the 1870s, the commons system that supported the gathering of medicinal plants underwent a significant renegotiation as landowners worked to curb common rights, a process that continues today.

This dissertation concludes with a final chapter that explores how sang diggers shaped outside perceptions of Appalachia. During the 1870s, a sang digger mythology was created by mountain elites who wanted to distance themselves from their more rural neighbors. It became a byword for economic backwardness and resistance to the modernization. In the hands of national writers, journalists, and missionaries, this mythology served as a commentary on civilization and savagery and the proper relationship between nature and culture. In the process, it shaped popular understandings of the region's inhabitants.

CHAPTER 1

The Journey of Ewing's Roots: Ginseng and the Global Origins of the Botanical Drug Trade

It may have been growing among the old-growth chestnuts on the side of Little Mountain. Or perhaps it had matured under the butternut trees on the banks of Turkey Creek. Somewhere near the brand new hamlet of Union in the western Virginia backcountry in October of 1783, a Scots-Irish settler named William Ewing spotted a small plant among the deep green understory. He saw the cluster of bright red berries perched atop a peduncle that protruded from the center of the 20-inch-high herb. He counted the leaves. It had four. His heart beat a little faster. It probably had a large root. Ewing knew this root alone could provide him with either a knife, a pair of spectacles, a pound of gunpowder, a bushel of salt, or maybe a pint of rum.[1]

The Iroquois called it *garangtoging,* or "child's thigh."[2] The Cherokee named it *atali-guli,* "the mountain climber," and sometimes, *Yunwi Usdi,* "the little man."[3] The Tartars, living in the northern Chinese province of Tartar, called it *Orhota,* or "queen of the plants," and William Byrd of Virginia referred to it as the "plant of life."[4] Linnaean taxonomists would later

[1] Unidentified Private Account Book, 1783-1785 [microfilm], Monroe County Court Records, West Virginia History Center, West Virginia University, Morgantown, WV.
[2] Pehr Kalm and Adolph B. Benson, *Peter Kalm's Travels in North America: The English Version of 1770* (New York: Dover, 1987).
[3] James Mooney, *James Mooney's History, Myths, and Sacred Formulas of the Cherokees: Containing the Full Texts of Myths of the Cherokee (1900) and The Sacred Formulas of the Cherokees (1891) as Published by the Bureau of American Ethnology: With a New Biographical Introduction,* (Asheville, N.C: Historical Images, 1992), 425.
[4] William Byrd, "Letters of William Byrd II, and Sir Hans Sloane Relative to Plants and Minerals of Virginia," *The William and Mary Quarterly,* Second Series, Vol. 1, No. 3 (Jul., 1921), 199.

label it *panax quinquefolium,* but Ewing knew it as "sang," a shortening of the word ginseng, which was itself derived from the Mandarin "jen-shen."[5] It was a world famous plant.

Ewing had only one month before the plant disappeared for the season. A deciduous perennial, ginseng could grow for dozens if not hundreds of years, but its top—that is, everything but the root and rhizome—died back every year after the first frost. He likely knew that it grew in cool, moist deciduous forests, and although it could be found in the piedmont, it seems to have always preferred "the hills that lie far from the sea."[6] As early as the 1730s, colonists recognized the tendency of the plant to grow on the "north sides of mountains and very high hills, that are shaded with trees."[7] Ewing also likely knew that ginseng grew in patches, sometimes so dense that a digger could haul one thousand pounds of roots out of one patch. He may have realized that their seeds are typically dispersed by gravity, most ending up less than a few feet from their parent plant.[8] When he found one plant, there were probably hundreds more nearby. It was like treasure hunting.

Ewing uprooted the full ginseng plant from the earth, cut the leaves and stem off, and placed the gnarly root in a small sack, where this singular specimen joined hundreds of its kinsmen. He took these 186 pounds of roots to James Alexander's trading post in Union and exchanged them for, among other things, one pound of gunpowder, a hat, a pint of rum, and two saddles. At the end of the season, as the weather turned bitter cold, Alexander would have loaded Ewing's roots up with thousands of others and hauled them in a covered wagon to

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[5] Kalm and Benson, *Peter Kalm's Travels in North America*, 435; Stephen Fulder, *The Tao of Medicine: Ginseng, Oriental Remedies and the Pharmacology of Harmony*, 1st American ed (New York: Destiny Books, 1982), 88–89.

[6] James Adair, *History of the American Indians; Particularly Those Nations Adjoining to the Mississippi, East and West Florida, Georgia, South and North Carolina, and Virginia* (London: Edward and Charles Dilly, 1775), 362.

[7] William Byrd to William Mayo, 26 August 1731, in William Byrd, William Byrd II, and William Byrd III, *The Correspondence of the Three William Byrds of Westover, Virginia, 1684-1776*, ed. Marion Tining (Richmond: Virginia Historical Society, 1977).

[8] James B. McGraw et al., "Ecology and Conservation of Ginseng (Panax Quinquefolius) in a Changing World," *Annals of the New York Academy of Sciences* 1286 (2013): 80.

Staunton in the Shenandoah Valley. At Staunton, there is a good chance that they were purchased for close to four shillings per pound by Dr. Robert Johnston, who had purchased some 40,000 pounds of ginseng there in the summer and fall of 1783. If they had ended up in Johnson's hands, they would have been taken to Philadelphia, then up the coast to New York where some 57,000 pounds of other ginseng roots dug from the Virginia and Pennsylvania backcountry were loaded on the *Empress of China*. These roots would prove crucial in the first commercial encounter between the United States and China.[9]

The trade that took Ewing's roots from western Virginia to the Far East was made possible by a global market constructed outside the traditional purview of Atlantic-world oriented scholars. Like all markets, this one was built by cultural developments, social and political struggles, and ecological relationships that unfolded on a spatio-temporal scale that was both global and evolutionary. Ecological similarities facilitated the migration of many species of flora and fauna, including ginseng, from northeastern Asia to eastern North America sometime in the late tertiary period. Originating in northern China in the first millennium, the market for ginseng was extended deep into the backcountry of southern Appalachia over a period of centuries by emperors and missionaries, colonists and Native Americans, wealthy merchants and itinerant storekeepers. As the plant was transformed from an inconspicuous herbaceous perennial into a lucrative commodity for mass consumption, it gave Han peasants a means to find a livelihood in the forest and helped many Euro-American settlers purchase their first land, tools, and clothes. It facilitated the rise of the Qing Dynasty, brought John Jacob Astor his first fortune, and occupied a few years of Daniel Boone's life.

[9] Philip Chadwick Foster Smith, *The Empress of China* (Philadelphia: Philadelphia Maritime Museum, 1984), 41–42.

Figure 1. American Ginseng (*Panax quinquefolium*). Credit: Daniel Manget

By the end of the eighteenth century, ginseng had become a vital part of the flow of trade between North America and China, but it largely flowed against the prevailing currents of both colonial commerce and current historiography. Over the past two decades, scholars working within the history of science have greatly enhanced our understanding of botany and bioprospecting in the Atlantic World and how they shaped and were shaped by European empire building. Botanists traveling throughout the Atlantic world and parts of Asia studied plants such as cinchona, cocoa, cassava, cochineal, tea, and mulberry trees, appropriated knowledge of their uses from indigenous peoples, and worked with European gardens and

commercial interests to enhance the medical knowledge and wealth of the imperial core.[10] However, historians of science have been more interested in following the transference and transformation of knowledge and ideas in the colonial era than they have been in analyzing the process of commodification. This chapter incorporates both to tell the story of one of the most unique commodities to travel the globe and the first wild Appalachian herb to reach mass markets.

Ginseng was different than most commodities from the New World. First and foremost, commerce was driven by an imperial power that was far from Europe. Chinese consumers dictated the dynamics of the trade at every level of the supply chain. This simple fact, however, did not go uncontested. European botanists studied the plant intensely with an eye toward future profit and expanding medical knowledge of the imperial core, but there was a disconnect between the scientific study of the plant and its commercial production. Throughout the eighteenth century, physicians and botanists tried to stimulate demand for the plant in the West and develop a ginseng industry that would augment imperial wealth, but ecological, economic, and cultural factors conspired to thwart these plans. Instead of developing into a cash crop that could enrich planters, structure the landscape, organize labor regimes, and generate wealth for colonial powers, ginseng remained primarily a wild-harvested product, an extractive industry rather than an agricultural one. Production was not to be dominated by

[10] Londa L. Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, Mass: Harvard University Press, 2004); Kavita Philip, "Imperial Science Rescues a Tree: Global Botanic Networks, Local Knowledge, and the Transcontinental Transplantation of Cinchona," *Environment and History* 1, no. 2 (June 1995): 173–200; Lucile Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens*, Studies in Social Discontinuity (New York: Academic Press, 1979); John M. MacKenzie, ed., *Imperialism and the Natural World*, Studies in Imperialism (Manchester, UK ; New York : New York, NY, USA: Manchester University Press ; Distributed in the USA and Canada by St. Martin's Press, 1990); Christopher Parsons, "The Natural History of Colonial Science: Joseph-Francois Lafitau's Discovery of Ginseng and Its Afterlives," *The William and Mary Quarterly* 73, no. 1 (January 2016): 37–72; Londa L. Schiebinger and Claudia Swan, eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005).

large landowners but, rather, by the inhabitants of the imperial fringes in both Asia and North America.

Nature, Culture, and Ginseng

The market that provided Ewing with his store-bought goods was made possible by ecological forces 300 million years in the making. During the Paleozoic Age, continental collisions sent the earth's crust into geological chaos, creating folds and faults that shot upwards of some 26,000 feet. This "Appalachian Revolution" exposed different types of sandstones, shales, basalts, and minor carbonate rocks that, over the ensuing ages, were washed by the rains off the mountain tops and into the coves and valleys.[11] Erosional processes combined with soil-forming processes (i.e., the accumulation of organic matter) to create a mosaic of soil properties, from clay to sandy loam, with varying combinations of magnesium, potassium, calcium, and phosphorus. Furthermore, the mountains provided a variety of topographic features that ranged from large river valleys less than one thousand feet above sea level to rugged cliffs and gentle ridges that soared above six thousand feet. These features created microhabitats with widely different moisture levels, sunlight exposure, climate and soils, all within a relatively short distance. Over the course of the Tertiary Period (beginning 65 million years ago), vegetation patterns emerged in these microhabitats that combined newly arriving floral migrants from Asia and other northern climes with older species such as pines, ferns, and mosses. Some plants, such as blue cohosh *(Caulophyllum thalictroides*) and black cohosh (*Actaea racemose*), thrived on north-facing slopes. Others, such as Solomon's seal (*Polygonatum*

[11] This term is used by Maurice Brooks, *Appalachians*, (Boston: Houghton Mifflin Co., 1965).

biflorum) and May apple, found their niche among deciduous trees in the rich, dark coves, while still others grew on windy ridges, swampy bogs, lowland valleys, and craggy cliffs.[12]

While the wide variety of microhabitats created the conditions for species diversity and richness, the Appalachian floral mosaic was created by dramatic climatic shifts that influenced plant migrations. During the Pliocene Epoch (twelve to two million years ago), the region was home to flora that grew in warmer, wetter climates, but the Pleistocene Epoch (two million to 500,000 years ago) brought a colder, drier climate. During the advance and retreat of glaciers during the Pleistocene, average temperatures fluctuated as much as 18°C every one hundred thousand years or so, effectively reshuffling ecological communities and creating new assemblages of plants as their ranges ebbed and flowed.[13] As glaciers expanded throughout the northern hemisphere, moving as far south as Pennsylvania, plant communities were annihilated along the way, but the southern Appalachians escaped this glaciation, and it became what biogeographers call a refugia. Many northern boreal species found refuge among some of the tropical plants that had taken up residence there. These newcomers may have included ginseng, Canadian wild ginger, bloodroot, and goldenseal. When the ice sheet retreated less than 11,000 years ago, these species not only remained in the South; from their headquarters in the mountains, they even recolonized the North.[14]

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[12] Dan Pitillo, Robert D. Hatcher, and Stanley W. Buol, "Introduction to the Environment and Vegetation of the Southern Blue Ridge Province," *Castanea,* 63, no. 3 (September 1998): 202–16; Clay Jackson et al., "Species Diversity and Composition in Old Growth and Second Growth Rich Coves of the Southern Appalachian Mountains," *Castanea,* 74, no. 1 (March 2009): 27–38. Timothy P. Spira, *Wildflowers & Plant Communities of the Southern Appalachian Mountains & Piedmont: A Naturalist's Guide to the Carolinas, Virginia, Tennessee, & Georgia*, A Southern Gateways Guide (Chapel Hill: University of North Carolina Press, 2011); There are several good naturalist accounts of the region, including George Constantz, *Hollows, Peepers, and Highlanders: An Appalachian Mountain Ecology* (Missoula, Mont: Mountain Press Pub. Co, 1994); Jennifer Frick-Ruppert, *Mountain Nature: A Seasonal Natural History of the Southern Appalachians* (Chapel Hill: University of North Carolina Press, 2010), 5.

[13] Pitillo, Hatcher, and Buol, "Introduction to the Environment and Vegetation of the Southern Blue Ridge Province," 209.

[14] Frick-Ruppert, *Mountain Nature*, 4–6.

The ancestor of American ginseng, the first in the *Panax* genus, likely originated in the mountains of northeastern China sometime well before the Pleistocene glaciation.[15] At that time, mixed mesophytic (medium moisture) forests blanketed most of the northern hemisphere, and the environments of China and North America looked very similar. They had similar climates and terrain.[16] Over ensuing ages, the plant, along with other Asian flora and fauna, migrated into North America. Scholars disagree on exactly how and when they got there, but most biogeographers believe that through the very gradual process of seed dispersal, they crossed the Bering land bridge that connected the two continents beginning around 10 million years ago.[17] As glaciers crept into much of the northern hemisphere during the Pleistocene, ginseng's range fragmented and the plant underwent a process called vicariance. Cut off from its ancestral populations, it developed new characteristics in North America and became genetically distinct, forming a new species, *Panax quinquefolium.* By the time the glaciers retreated around 11,000 years ago, most of the world's *Panax* populations were limited to eastern North America and eastern Asia.[18] The species's Asian homeland was primarily between the thirty-ninth and forty-seventh parallel in the thick forests that covered rugged mountains in northern China—the so-called Tartary region—and the Korean Peninsula. American ginseng grew across a wide geographical range in eastern North America that formed something of an inverted triangle. It grew as far north as southern Canada, stretching from Minnesota and

[15] Jun Wen and Elizabeth A. Zimmer, "Phylogeny and Biogeography ofPanaxL. (the Ginseng Genus, Araliaceae): Inferences from ITS Sequences of Nuclear Ribosomal DNA," *Molecular Phylogenetics and Evolution* 6, no. 2 (October 1996): 167–77.

[16] Naturalist George Constantz, however, disagrees with the assertion that Asian flora arrived in the New World via Asia and claims that the migration patterns occurred via Europe. He argues that many of the disjunct species date back further than the era of Beringia. See Constantz, *Hollows, Peepers, and Highlanders*, 43–45.

[17] Qiu-Yun Xiang et al., "Timing the Eastern Asian–Eastern North American Floristic Disjunction: Molecular Clock Corroborates Paleontological Estimates," *Molecular Phylogenetics and Evolution* 15, no. 3 (June 2000): 462–72;

[18] Xiang, Soltis, and Soltis, "The Eastern Asian and Eastern and Western North American Floristic Disjunction: Congruent Phylogenetic Patterns in Seven Diverse Genera."

Ontario in the west to Nova Scotia in the east, and as far south as north Georgia with small populations in the Ozarks of Missouri and Arkansas. Ginseng was not the only plant to find refuge among the eastern mountains from global environmental forces. Indeed, the regions share some 120 genera of flowering plants, most of which likely made similar journeys. The existence of genetically similar species in two geographically different regions of the world is a phenomenon biogeographers call disjunction, and the east Asia-eastern North American connection is one of the most striking examples of disjunction in the world.[19]

Over the ensuing millennia, ginseng became woven into the cultural fabric of Asian and North American peoples, often in remarkably similar ways. Some writers have contended that the Chinese used incorporated the plant into their medical systems as early as 2600 B.C. when the first Chinese medical text, the *Pen Ts'ao Ching,* was supposedly written by a man named Shen Nung, but according to medical historian Paul Unschuld, it is unlikely that the Chinese developed extensive practices of drug therapy until the arrival of Taoism in roughly the fourth century BC.[20] Taoism challenged both the belief in "demonic medicine" of the pre-Confucian era and the medical theories of Confucianism by emphasizing the role of the natural world in human health. Whereas Confucian thought had held that illness was the result of humans failing to conform to social customs, Taoism asserted that ill health was the consequence of humans failing to live according to the laws of nature. They believed that studying nature could reveal the secrets of human health, and the development of a pragmatic drug therapy based on the study of medicinal herbs was the outgrowth of this cultural development.[21] To Taoists, Shen Nung, "The Divine Husbandman," became something of a cultural hero. According to legend, he

[19] Ibid.

[20] While there are references to this earlier work in the third and fourth centuries A.D., the earliest surviving work called *Shen-nung pen-ts'ao ching* (Shen Nung's Book of Herbs) was written in the sixth century A.D. See Paul U. Unschuld, *Medicine in China: A History of Ideas* (Berkeley: University of California Press, 1985), 101–116.

[21] Ibid

taught people not only aspects of agroecology but also which herbs were the most medically useful. He tested their efficacy by ingesting them all himself.[22] As Taoist thought exerted greater influence over Chinese culture in the first millennium, ginseng took on greater importance, and by the time the earliest surviving record of the *Shen-nung pen-ts'ao ching* was written, it was one of the most revered herbs in a system of pragmatic drug therapy.

Western observers would later claim that the Chinese used ginseng as an aphrodisiac and to cure impotence, as well as to treat the effects of tiredness, fatigue, and old age. Various writers claimed they used it as an aid to digestion, a cure for the weaknesses of lungs and loss of appetite, and as a general tonic. However, the Chinese understood the herb's efficacy somewhat differently. Its value was in the role it played in a system of medicine grounded in a cosmology of balance.[23] Influenced by both Confucian and Taoist thought, the Chinese believed that the universe was infused with a vital life force called *Qi*, which operated according to the polarizing, yet complimentary, forces of *yin* and *yang.* The human body, like the rest of Nature, was a temporary assemblage of *Qi* that was kept in balance by the interplay of *yin* (femininity, earth, passivity, darkness, and negative) and *yang* (masculinity, lightness, heaven, and positive). This balance could be affected by the presence or absence of certain sensory experiences, elements, or emotions, or the relative activity of certain organs (or viscera), specifically the kidney, spleen, pancreas, liver, heart, and lungs.[24] By the end of the first millennium A.D., the Chinese had integrated Taoist herbal therapies into Confucian theories on health, developing a pharmacology that ascribed specific uses to ginseng and other plants according to the yin-yang system of correspondence. According to the *Shen-nung pen-ts'ao ching,* ginseng was used for "repairing the five viscera, harmonizing energies, strengthening the soul, allaying fear, removing

[22] Fulder, *The Tao of Medicine*, 69–70.
[23] Ibid., 107–13.
[24] John Berthrong, "Motifs for a New Confucian Ecological Vision," Ch 10 in Roger S. Gottlieb, ed., *The Oxford Handbook of Religion and Ecology* (Oxford University Press, 2010), 236–265.

toxic substances, brightening the eyes, opening the heart, and improving thought. Continuous use will invigorate the body and prolong life."[25] In short, ginseng could help strengthen the *yang* in order to restore balance. It was, as physician Stephen Fulder explains, the most important herb in a "pharmacology of harmony." By the time of the Ming Dynasty (1368-1644), ginseng had become one of the most prescribed herbs in Chinese medicine.[26]

Medicine was a vital part of Chinese people's conceptualization of themselves within nature. As they incorporated aspects of Taoist thought into their largely Confucian culture, the Chinese came to understand ginseng and other medicinal herbs within a cosmology that viewed the human body as inseparable from the natural world. James Miller, John Berthrong, and Emily Wu, among others, have noted that this conceptualization of health had significant implications for human ecology.[27] Taoism, perhaps the most ecologically minded of the three Chinese intellectual traditions, promoted ethical interactions of humans with their environment and warned that ill health was a consequence of failure to live up to these standards. In his study of the Taoist text known as the *One Hundred and Eighty Precepts,* written by early Tao masters, Kristofer Schipper points out that twenty of them deal exclusively with human-nature interactions. Number nineteen specifically advises followers that "you should not wantonly pick herbs or flowers."[28] Furthermore, Taoists believed that humans should live in small

[25] Fulder, *The Tao of Medicine*, 108–17.
[26] In her analysis of the case studies written by sixteenth century physician Wang Ji, Joanna Grant states that ginseng was Wang's most prescribed herb, used to treat a variety of illnesses. She also suggests that his prescriptions of ginseng were somewhat controversial, which could mean that ginseng was gaining importance. See Joanna Grant, "Medical Practice in the Ming Dynasty--A Practitioner's View: Evidence from Wang Ji's 'Shishan Hi'an'," *Chinese Science* 15 (1998): 37–80.
[27] John Berthrong, "Confucian Views of Nature," in Helaine Selin and Arne Kalland, eds., *Nature across Cultures: Views of Nature and the Environment in Non-Western Cultures*, Science across Cultures, v. 4 (Dordrecht ; Boston: Kluwer Academic Publishers, 2003), 373–392; James Miller, "Daoism and Nature," in ibid., 393–409; Emily Wu, "Ecology and Traditional Chinese Medicine in California," *CrossCurrents,* 60, 2 (June 2010), 224-237.
[28] Kristofer Schipper, "Daoist Ecology: The Inner Transformation: A Study of the Precepts of the Early Daoist Ecclesia," in James Miller, N.J. Girardot, and Liu Xiagogan, eds., *Daoism and Ecology* (Cambridge: Harvard University Press, 2001), 82-83.

communities and pursue a simple, agrarian life. They should avoid commercial relations, eschew technology, and work the land with their own hands.[29]

Despite the ecological influences of Taoism, east Asian peoples exerted powerful influences over their landscape. Indeed, Taoist ideals could prevent neither the development of an extensive commercial economy nor the wanton overharvesting of ginseng in East Asia. Although ginseng had been an article of trade among Asian kingdoms since at least the Han Dynasty (202 B.C.-220 A.D.), available evidence suggests that by the early eighteenth century, overharvesting had become a significant problem due, in part, to the commercial role it played in imperial politics during the seventeenth century. The founders of the Qing Dynasty (1644-1911), which overthrew the Ming Dynasty (1368-1644) in mid-century, were ethnic Manchus, once called Jurchens, who were from the ginseng growing regions of Tartary (or what is now Manchuria). During the late Ming Dynasty, they were a loose-knit group of scattered tribes who lived by hunting, fishing, and foraging in the mountainous regions beyond the northern borders of the empire. Some Jurchens began to adopt a more sedentary agricultural lifestyle in the sixteenth century and grew increasingly dependent on trade with Korea and China. In exchange for iron tools and silks, these Jurchens traded primarily ginseng and furs. Thus, ginseng helped draw them into a northeast Asian trade network that would have drastic impacts on Asian history.[30]

By the mid-seventeenth century, the northeast Asian trade network led to new configurations of wealth along the empire's northern border. A Jurchen chief named Nurgaci came to control most of the commercial licenses issued by the imperial Chinese government.

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[29] Unschuld, *Medicine in China*, 104.

[30] Morris Rossabi, *Blackwell History of the World : History of China* (Somerset, NJ, USA: John Wiley & Sons, 2013), 265, http://site.ebrary.com/lib/alltitles/docDetail.action?docID=10738690; Gang Zhao, *Perspectives on the Global Past: Qing Opening to the Ocean: Chinese Maritime Policies, 1684-1757* (Honolulu: University of Hawaii Press, 2013), 64–65.

Hoping to unify the Jurchen tribes to gain regional power, Nurgaci monopolized the ginseng trade in order to provide a financial base for his emerging state. This strategy seemed to have worked, for as the Jurchens grew in power, the Ming government, sensing the threat they posed to their northern border, moved to place the lucrative ginseng trade under imperial regulation. In 1607, they banned the trade completely. This countermove was effective because the Jurchens had not yet learned how to adequately preserve the root for Chinese consumption, which led to the spoiling of some 100,000 pounds during the embargo. However, according to the official history of Nurgaci's rule, Nurgaci himself devised a way of preserving the root, which apparently helped him circumvent Chinese regulations and double the volume of trade in subsequent years. Control of the ginseng trade helped empower the Jurchens, now calling themselves the Manchus, to eventually challenge the Ming Dynasty. By 1644, after a protracted bloody war, Manchu armies marched into Beijing and established the Qing Dynasty, which would reign over China for two and a half centuries. Under this dynasty, the ginseng trade would flourish and expand, as the government moved to privatize overseas trade and strengthen the tribute system from Korea.[31]

In addition to protecting their ginseng business from the Han, Qing officials also clashed with the Choson Dynasty in Korea over some choice ginseng habitat on the mountain called Changbaishan near the headwaters of the Yalu River. As Seonmin Kim has found, the porous borderland between Korea and China began to cause problems when a fight over ginseng led Kangxi to consider strengthening the empire's northeastern frontier region. Both imperial governments asserted claims over Changbaishan, and in 1685, a diplomatic crisis erupted when a surveying party with orders from Kangxi encountered a group of ginseng diggers from

[31] Zhao, *Perspectives on the Global Past: Qing Opening to the Ocean: Chinese Maritime Policies, 1684-1757*, 65–70; Denis Crispin Twitchett and John King Fairbank, eds., *The Cambridge History of China* (Cambridge [Eng.] ; New York: Cambridge University Press, 1978), 39–41.

northern Korea. After an exchange of arrows and rifle fire, the Koreans killed one Qing official and wounded several more. This incident initiated a sixty-year effort, marred by several more acts of violence over ginseng, to firm up the border between the two empires with the aid of Jesuit cartographers.[32] These Jesuits would prove to be a key force in the spread of the ginseng trade to North America.

A product of Counter Reformation efforts within the Catholic Church, the Society of Jesus had sent missionaries to China near the end of the sixteenth century with the goal of proselytizing the Chinese and ultimately expanding the borders of Christendom to the Far East. As Liam Brockey has argued, Jesuits also played the role of scientific ambassadors, spreading scientific knowledge, often in the form of mathematics, astronomy, and cartography, as a way to ingratiate themselves to the Qing elite and further their evangelizing mission.[33] Since the early days of their mission, Jesuits evinced a desire to map the Chinese empire, but it was not until the 1690s that the Jesuits succeeded in obtaining imperial sponsorship for the mapping project that would produce the first atlas of the Chinese empire. Historian Theodore Foss suggests that Kangxi agreed to support the project in part because he hoped to consolidate control over the empire's northeastern border following the Chinese victory over Russian forces under Peter the Great in 1689. In the 1690s, French Jesuits began arriving in China, many of whom had cartographic training, and among them was a mathematician named Pierre Jartoux. In 1709, Jartoux was chosen to accompany the Jesuit geographer Jean-Baptiste Regis on surveying expeditions to the empire's northeastern border. In July, the party found themselves in a small village less than a dozen miles from the disputed Korean border. It was here that Jartoux first laid eyes on ginseng after a local Manchu climbed a nearby mountain, perhaps

[32] Seonmin Kim, "Ginseng and Border Trespassing Between Qing China and Chosŏn Korea," *Late Imperial China* 28, no. 1 (2007): 33–61, doi:10.1353/late.2007.0009.
[33] Liam Matthew Brockey, *Journey to the East: The Jesuit Mission to China, 1579-1724* (Cambridge, Mass: Belknap Press of Harvard University Press, 2007), 75.

Changbaishan itself, and brought back four plants in a basket. "No Body can imagine that the Chinese and Tartars would set so high a Value upon this Root," he wrote in a letter to the Procurator General of Missions in Paris. "The most eminent Physicians in China have writ whole Volumes upon the Virtues and Qualities of this Plant and make it an ingredient in almost all Remedies. I am persuaded that it would prove an excellent Medicine in the Hands of any European who understands Pharmacy."[34]

Jartoux's presence in Tartary in 1709, then, was part of Kangxi's attempt to strengthen the Qing's hold on the lucrative ginseng populations, but this effort met with mixed results. The atlas was completed in the 1720s, but the border remained unenforced, enabling the subjects of both empires to continue to treat it as a great commons, much to the chagrin of Qing officials. As one Qing official declared in 1740, "The mountains near the river are prohibited areas that produce ginseng. People from Choson continue to creep into [the 'Superior Country's'] territory and intrude into these forbidden mountains to steal ginseng."[35] Facing intense opposition from the Choson court and unwilling to further antagonize his neighbors, Kangxi abandoned his effort to patrol the border with more soldiers, deciding instead to preserve a tributary relationship with Korea in which Korea sold its ginseng and other valuable goods to the Qing government. Changbaishan continued to be a terrain of struggle between Manchu and Korean ginseng diggers.[36]

A defining feature of the ginseng trade in China during this time was the fact that virtually all the plants involved were harvested from the wild. The earliest writings on ginseng

[34] F. Jartoux, "The Description of a Tartarian Plant, Call'd Gin-Seng; with an Account of Its Virtues. In a Letter from Father Jartoux, to the Procurator General of the Missions of India and China. Taken from the Tenth Volume of Letters of the Missionary Jesuits, Printed at Paris in Octavo, 1713," *Philosophical Transactions of the Royal Society of London* 28 (1713), http://archive.org/details/philtrans05305296.
[35] Seonmin Kim, "Ginseng and Border Trespassing Between Qing China and Chosŏn Korea," *Late Imperial China* 28, no. 1 (2007), 53.
[36] Kim, "Ginseng and Border Trespassing Between Qing China and Chosŏn Korea."

specifically associated the plant with "the gorges of the mountains."[37] Although the history of ginseng domestication is a relatively contentious issue, recent analysis of wild and domesticated ginseng genetic structures reveals that ginseng was first cultivated in Asia around the time of the Liang Dynasty (502-555 A.D.). One of the early centers of ginseng cultivation, according to this study, was around the town of Fusong, China, near the mountainous border with Korea.[38] Cultivation seems to have caught on slowly in Asia due to both ecological and cultural reasons. First, East Asian peoples found it difficult to cultivate. Jartoux remarked that all ginseng was harvested from the wild, "they having sowed the Seed in vain, without its producing any plant."[39] Perhaps because of this, people living in what is now Manchuria believed that the seed had to pass through a bird's digestive system in order to germinate. When a person attempted to plant a seed, according to this folklore, a bird would dig up the seed and, after digesting it, deposit it somewhere else, where it would grow in its droppings.[40]

Secondly, Chinese consumers much preferred the wild article. The reasons for this are complicated, but there seem to be physiological and metaphysical reasons. Wild ginseng was (and is) morphologically and genetically distinct from the cultivated plant. It typically had a shorter primary root and longer, more spindly secondary roots, whereas cultivated ginseng had a thicker, longer primary root. The wild root was more flexible, had a stronger aroma, a stronger taste. It had a longer rhizome and contained more "rings" around the root. For these reasons, it was more likely to resemble the human form, a trait that Chinese consumers revered above all else. Furthermore, because wild ginseng was usually much older than cultivated

[37] Quoted from Shen Nung's *Pen Ts'ao-ching* in S.Y. Hu, "A Contribution to Our Knowledge of Ginseng," *American Journal of Chinese Medicine* 5, no. 1 (1977): 7.
[38] Ming-Rui Li et al., "Genetic and Epigenetic Diversities Shed Light on Domestication of Cultivated Ginseng (Panax Ginseng)," *Molecular Plant* 8, no. 11 (November 2, 2015): 1612–22, doi:10.1016/j.molp.2015.07.011.
[39] Jartoux, "The Description of a Tartarian Plant, Call'd Gin-Seng" 245.
[40] Ibid.

ginseng, some Chinese believed that it had more time to absorb the curative powers of the forest.[41] Recent genetic analyses suggest that the cultivated plant has far lower levels of the DNA base cytosine methylation, which accounts for several aspects of plant development.[42] Additionally, there was something in the wildness of the plant that appealed to Chinese sensibilities. According to Chinese physician Shiu-Ying Hu, ginseng, to the early Chinese practitioners, represented the "crystallization of the essence of the earth, or the unseen spirit of nature."[43] The fact that it was not produced by man enhanced its reputation as a gift from God.

Overharvesting and habitat change conspired to decimate the plant in the seventeenth and eighteenth centuries. The fact that harvesting the root kills the entire plant, and the fact that it takes at least five years, preferably ten or fifteen, for the plant to reach harvestable size from seed, made it particularly susceptible to overharvesting.[44] And the role it played in imperial politics enhanced the threat of overharvesting. With Manchus in control of the empire, Qing emperor Kangxi moved to protect their homeland from encroachments by ethnic Han Chinese, including the protection of their ginseng from Han poachers. When Jartoux visited the Manchu region in 1709, he noted that the local "Tartars" had erected a fence of wooden stakes around their mountainous ginseng strongholds and patrolled it with armed guards. However, this was no effort at conservation but rather, an ethnically motivated attempt to monopolize the exploitation of the plant. To control the harvest, Kangxi ordered 10,000 Tartars, under Mandarin overseers, to comb the mountains and forests and pluck every ginseng plant they

[41] W. Scott Persons, *American Ginseng: Green Gold*, Rev. ed (Asheville, N.C: Bright Mountain Books, 1994), 24; The maximum age of ginseng is subject to some debate. Many botanists assert that it can grow more than 50 years. Some have claimed it could grow up to several hundred years old. See Walter H. Lewis and Vincent E. Zenger, "Population Dynamics of the American Ginseng Panax Quinquefolium (Araliaceae)," *American Journal of Botany* 69, no. 9 (October 1982): 1483; Fulder, *The Tao of Medicine*, 92.
[42] Li et al., "Genetic and Epigenetic Diversities Shed Light on Domestication of Cultivated Ginseng (Panax Ginseng)."
[43] Hu, "A Contribution to Our Knowledge of Ginseng," 8.
[44] McGraw et al., "Ecology and Conservation of Ginseng (Panax Quinquefolius) in a Changing World."

found. Each digger was required to give the emperor two ounces of the best root.[45] Each digger in this "army of herbalists," wrote Jartoux, carried only a small shovel and a sack of millet and braved the weather, as well as wild animal attacks, for six months out of every year. "These poor people suffer a great deal in this Expedition," he wrote.[46] Despite these precautions taken by the Qing emperor, thousands of Han Chinese risked their freedom and their lives every year to cross into the ginseng region and harvest the plant for sale. Such practices undoubtedly led to the rapid depletion of ginseng in the wild and made cultivated ginseng more tolerable to Chinese consumers.

Furthermore, because it required the rich humus and heavy shade found in cool deciduous forests, deforestation for agricultural purposes had deleterious effects on ginseng populations. As Jartoux had observed, ginseng grew best in heavily forested mountainous areas and "is not to be met with in Plains, Vallies, Marshes, the bottoms of Rivulets, or in Places too much exposed and open."[47] By the late seventeenth and early eighteenth centuries, agricultural expansion had begun to take its toll north of Beijing. An enormous population growth in China proper forced millions of migrants north, and agricultural estates spread into the once heavily forested Tartary, destroying ginseng's habitat along the way.[48] Thus, the plant, a perpetual victim of human-induced environmental change, would always be associated with a realm beyond human habitation. Jartoux commented that due to its scarcity and the effort it took to find it, only nobility could afford to purchase it. By the early eighteenth century, Chinese consumers were desperate for more sources of ginseng.

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[45] Jartoux, "The Description of a Tartarian Plant, Call'd Gin-Seng; with an Account of Its Virtues. In a Letter from Father Jartoux, to the Procurator General of the Missions of India and China. Taken from the Tenth Volume of Letters of the Missionary Jesuits, Printed at Paris in Octavo, 1713," 1713.
[46] Ibid., 241–42.
[47] Ibid., 240.
[48] James Reardon-Anderson, "Land Use and Society in Manchuria and Inner Mongolia during the Quing Dynasty," *Environmental History* 5, no. 4 (October 2000): 505–7.

Ginseng in Native America

Ginseng never attained the same value among North American cultures as it did in East Asia, but Native American tribes did incorporate ginseng into their systems of medicine, often in similar ways to the Chinese. The wave of ethnographies conducted in the late nineteenth and early twentieth century suggest that ginseng was highly prized by many tribes. Frans Olbrecht, who studied Cherokee ethnobotany in the 1920s, observed that it was "one of the most important plants in the Cherokee medical botany… There is no other plant that is treated with so much respect by the laity as well as by the medicine men."[49] Like the Chinese, they used it as a "love medicine," as well as to treat pain the chest, chills, fever, headache, cramps, and "female troubles."[50] The Delawares (Lenni Lenape) referred to it as either "Grandmother" or "Grandfather," depending on whether the root was shaped like a man or a woman. They believed it was the most potent of all medicinal herbs and used it both as a general tonic and as a cure-all when other herbs had failed.[51] The Fox tribe (Meskwaki) similarly used it as a love medicine, a "universal remedy" for all ailments, and as a "seasoner" to increase the potency of other medicines.[52] The Mohegan and Menominee tribes also viewed the plant as a panacea.[53]

[49] Quoted in David N. Cozzo, "Ethnobotanical Classification System and Medical Ethnobotany of the Eastern Band of the Cherokee Indians" (PhD Dissertation, University of Georgia, 2004), 211; Henry Timberlake commented in the 1760s that the Cherokees used it to treat venereal diseases, "which, however, they never had occasion for…before the arrival of Europeans among them." Henry Timberlake, *Lieut. Henry Timberlake's Memoirs, 1756-1765*, ed. Samuel Cole Williams (Marietta, Ga: Continental Book Co, 1948), 70–71.

[50] Cozzo, "Ethnobotanical Classification System and Medical Ethnobotany of the Eastern Band of the Cherokee Indians"; Mooney and Mooney, *James Mooney's History, Myths, and Sacred Formulas of the Cherokees*, 326.

[51] Gladys Tantaquidgeon, *A Study of Delaware Indian Medicine Practice and Folk Beliefs* (Harrisburg: Pennsylvania Historical Commission, 1942), 27.

[52] Huron H. Smith, *Ethnobotany of the Meskwaki Indians* (Milwaukee, Wis.: Public Museum of the City of Milwaukee, 1928), 204.

[53] Huron H. Smith, *Ethnobotany of the Menominee* (Milwaukee, Wis.: Public Museum of the City of Milwaukee, 1923), 24; Gladys Tantaquidgeon, *Folk Medicine of the Delaware and Related Algonkian Indians* (Harrisburg, Penn.: Pennsylvania Historical and Museum Commission, 1972), 174.

Indeed, late nineteenth and twentieth-century ethnobotanical studies suggest that Native Americans placed great value on the plant and used it in similar ways to the Chinese.

However, these ethnobotanical accounts should be taken with some degree of caution. As there are few written sources on Native American medicine that predate the advent of the trans-Pacific ginseng trade, it is hard to determine how far back these relationships with ginseng go. It is likely that many native tribes focused more medical attention on the root because traders paid such a high price for it. James Mooney, the ethnologist who lived among the Cherokee in the 1880s, hinted that those high prices had "doubtless increased their idea of its importance."[54] Some tribes seemed to have learned about the plant through cross-cultural exchanges since the nineteenth century. The Mikasuki Seminole of Florida, for example, incorporated the root into their pharmacopoeia as late as the 1920s after receiving roots from Oklahoma (which were themselves brought from elsewhere, likely Appalachia, as the plant does not grow there).[55] Others, such as the Ojibwe, seem to have known about the plant only from European traders. The ethnobotanist Huron Smith suggested in 1932 that the Ojibwa's name for the plant, *jissens,* was an attempt to pronounce ginseng, the traders' term for it.[56]

Yet, despite these exceptions, it is clear that many Native Americans had a relationship with the root that extended into the prehistoric past. The Cherokee, specifically, seem to have always used the root. David Cozzo, an ethnobotanist for the Eastern Band of Cherokee Indians in western North Carolina, has pointed out that the cultural saliency of the root among the Cherokee indicates an ancient origin. It was one of the most commonly occurring plants in their medicine and religious ceremonies, and we know from the trader James Adair's account that in

[54] Mooney and Mooney, *James Mooney's History, Myths, and Sacred Formulas of the Cherokees*, 326.
[55] William Sturtevant, *The Mikasuki Seminole: Medical Beliefs and Practices* (Ann Arbor: University Microfilms International, 1955), 158.
[56] Huron H. Smith, *Ethnobotany of the Ojibwe Indians* (Milwaukee, Wis.: Public Museum of the City of Milwaukee, 1932), 356.

the 1760s, the "Indians use it on religious occasions."[57] Moreover, Cozzo argues that the etymology of the Cherokee term for it, a*'tali'guli,* meaning, "it climbs the mountain," suggests that it originated long before the arrival of Europeans.[58] Thus, it is likely that the Cherokee and other tribes realized the medical virtues of the plant independently through centuries of interaction and developed a relationship with it.

Native Americans, like the Chinese, used ginseng as part of an expansive system of medicine that embraced not only therapeutic practices but also systems of knowledge and power that reaffirmed their position in nature.[59] The term "medicine," to them, as Virgil Vogel reminds us, referred to "an array of ideas and concepts" used to explain the mysterious, inexplicable, and unaccountable.[60] Cherokee healer J. T. Garrett refers to "medicine" as "a way of life, an object or ceremony having power or control over influences that may affect a person, and a path toward restoring health."[61] Although varying considerably across cultures, Native Americans generally conceptualized the earth as a living being and their relationship to it as one of mutual respect and reciprocity. As historian Annie Booth contends, they believed that the world "exists as an intricate balance of parts, and it was important that humans recognized this balance and strove to maintain and stay within it."[62] The Cherokee concept of *tohi* exhibited

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[57] Adair, *History of the American Indians; Particularly Those Nations Adjoining to the Mississippi, East and West Florida, Georgia, South and North Carolina, and Virginia*, 362.

[58] Cozzo, "Ethnobotanical Classification System and Medical Ethnobotany of the Eastern Band of the Cherokee Indians," 136, 209–210; David Cozzo, Lecture, October 4, 2010, Western Carolina University, Cullowhee, NC.

[59] Scholars, specifically anthropologists, have warned against generalizing native cultures to promote an image of an "ecological Indian," but as Annie Both has argued, Native American tribes did share some common conceptions of their relationship to nature that can serve as useful analytical framework for comparing their ecological worldviews with those of Euro-Americans. See Annie L. Booth, "We are the Land: Native American Views of Nature," in Selin and Kalland, *Nature across Cultures*, 329–30.

[60] Virgil Vogel, *American Indian Medicine*, The Civilization of the American Indian Series (Norman, OK: University of Oklahoma Press, 1970), 24.

[61] J. T. Garrett and Michael Tlanusta Garrett, *Medicine of the Cherokee: The Way of Right Relationship* (Santa Fe, N.M: Bear & Co. Pub, 1996), 11–12.

[62] Annie L. Booth, "We are the Land: Native American Views of Nature," in Selin and Kalland, *Nature across Cultures*, 332.

fascinating similarities with Taoist thought. In their analysis of the concept, Heidi Altman and Cherokee linguist Thomas Belt argue that *tohi* referred to the "normal state of the Cherokee universe," and the Cherokee strove to maintain it by obeying a "system of natural laws instilled through oral tradition."[63] Unethical actions among humans or between humans and the rest of nature could disrupt this flow of energy, which would bring on illness and disease. Indeed, according to Cherokee mythology, disease originated because humans upset an ecological balance. According to this belief, there was a time when humans, animals, and plants all co-existed in perfect harmony, but as human populations increased, they began to kill off more animals. The vengeful animals resolved to introduce diseases that would destroy the humans, but the plants, who remained friends of the humans, agreed to provide them with all the antidotes to disease.[64]

Ginseng played an important role in sustaining *tohi* among the Cherokee. In addition to treating specific ailments, the Cherokee used it in a number of "religious" ceremonies aimed at ensuring continued harmony between humans and the universe. In the 1840s, missionary Daniel Butrick mentioned its uses as one of seven articles of purification in the elaborate Green Corn Dance and the Great New Moon Feast.[65] Cherokees held that all life was sacred, and ginseng was no exception. James Mooney observed that ginseng, referred to as the "Great Man" in the sacred formulas, was the most important of the "plant gods" and was treated with utmost respect. One formula dictated that when hunting ginseng, a medicine man should pass

[63] Heidi M. Altman and Thomas Belt, "Tohi: The Cherokee Concept of Well-Being," in Lisa J. Lefler, Susan Foz, and Heidi Altman, *Contemporary American Indians : Under the Rattlesnake : Cherokee Health and Resiliency* (Tuscaloosa, AL, USA: University of Alabama Press, 2009), 13–14, http://site.ebrary.com/lib/alltitles/docDetail.action?docID=10387673.

[64] The myth of the origins of disease is described in James Mooney, *James Mooney's History, Myths, and Sacred Formulas of the Cherokees: Containing the Full Texts of Myths of the Cherokee (1900) and The Sacred Formulas of the Cherokees (1891) as Published by the Bureau of American Ethnology: With a New Biographical Introduction, James Mooney and the Eastern Cherokees* (Asheville, N.C: Historical Images, 1992), 319–322.

[65] John Howard Payne et al., *The Payne-Butrick Papers*, Indians of the Southeast (Lincoln, Neb: University of Nebraska Press, 2010), 46, 161.

by the first three plants and approach the fourth by circling it counterclockwise one or four times while reciting a prayer. After assuring the mountain that "he comes only to take a small piece of flesh (ginseng) from its side," he digs up the root and places a small bead into the hole in the ground as payment.[66] Although this formula may not have been intended to protect the plant from overharvesting, it nevertheless suggests a respect for the spirit of ginseng that would have had a similar effect.

Despite the ecological implications of both Chinese and Native American concepts of medicine, they must not be overly romanticized, as these peoples demonstrated their capacity for producing substantial ecological change in the seventeenth and eighteenth centuries. As numerous scholars have shown, notably Shepherd Krech and Wilma Dunaway, the Cherokee and other tribes contributed to many destructive trends, including the deerskin trade beginning in the seventeenth century, demonstrating that native peoples, like the Chinese and peoples everywhere, struggled and sometimes failed to live up to their own ideals. Indeed, as the trans-Pacific market in ginseng extended into North America, the cultural values that worked to prevent the overharvesting of ginseng would come into dramatic conflict with the commercial values of a growing market culture.[67]

Ginseng and the Failure of Colonial Science

Ginseng, a migrant from China that was incorporated into both Chinese and Native American medicine, eventually drew these disparate cultures and ecologies into dialogue with one another as European colonists began appropriating North American indigenous knowledge to supply the demands of Asian customers. The turning point came in the summer of 1709 with

[66] Mooney and Mooney, *James Mooney's History, Myths, and Sacred Formulas of the Cherokees*, 339.
[67] Shepard Krech, *The Ecological Indian: Myth and History*, 1st ed (New York: W.W. Norton & Company, 1999); Dunaway, *The First American Frontier: Transition to Capitalism in Southern Appalachia, 1700-1860*, 23–50.

the arrival of Pierre Jartoux in eastern Tartary. The Jesuit was well aware of this legendary Chinese panacea. Indeed, European physicians had learned about its medical virtues as early as the thirteenth century when Marco Polo brought back specimens to Italy. In 1680, after witnessing its healing ability on some tuberculosis patients, William Simpson, a physician from Yorkshire, proclaimed it to be "one of the best Medicines in the World."[68] Yet, by the time of Jartoux's expedition, Westerners knew very little about its identity or its ecology. Eager to sketch it out to send a detailed description back to France, Jartoux attempted to learn as much as he could of the plant. After observing its habitat and growing conditions, Jartoux speculated that "if it is to be found in any other country in the world, it may be particularly in Canada, where the forests and mountains, according to the relation of those that have lived there, very much resemble these here."[69] His report, which was translated and published in the *Philosophical Proceedings of the Royal Society of London* in 1713, was met with great curiosity in scientific circles around the Atlantic and touched off a widespread search for the plant in North America.[70]

In Canada, another Jesuit priest named Joseph-Francois Lafitau, who lived among the Iroquois in Sault-Saint Louis, induced local Iroquois to help him find the plant based on Jartoux's description. After three months of searching, he found it growing by a nearby house in 1716 and took it to one of his Mohawk informants who recognized it as one of their "ordinary remedies."[71] When he published his findings several years later, his report was widely

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[68] William Simpson, John Peachi, and John Pechey, *Some Observations made upon the root called nean or ninseng imported from the East-Indies: shewing its wonderful virtue in curing consumption, prissicks, shortness of breath, distillation of rhume, and restoring nature after it hath been impaired by languishing distempers and long fits of sickness* (London: Printed for the author, 1680), U of Georgia Catalog, EBSCOhost [accessed Feb. 14, 2016].
[69] Jartoux, "The Description of a Tartarian Plant, Call'd Gin-Seng."
[70] John Appleby, "Ginseng and the Royal Society," *Notes and Records of the Royal Society of London* 37, no. 2 (March 1983): 121–45.
[71] Parsons, "The Natural History of Colonial Science: Joseph-Francois Lafitau's Discovery of Ginseng and Its Afterlives," 51.

circulated and drew intense interest from botanists across the Atlantic, as well as the merchants of Montreal and Quebec. Historian Christopher Parsons argues that Lafitau was the first to discover ginseng in North America because he was able to use his relationship to the Iroquois to tap into indigenous ecological knowledge, particularly that of Mohawk women. Another botanist and colonial administrator in Canada named Michel Sarrazin had also engaged in a search for the plant but was unsuccessful. After hearing of Lafitau's discovery, he attributed his failure to the fact that he was not privy to indigenous knowledge. "There appears here a plant that is believed to be the geinseing of Tartarie or of China, that the sauvages have found and that they have given to the Jesuits: they have made their accounts, and we rest in the dark," he wrote to the Academie Royale de Sciences. "I have been a botanist here for twenty years and yet this plant has unfortunately escaped me."[72] Lafitau himself was clear about the help he received from the Iroquois. "I report only what I have learned from my Sauvages," he wrote.[73]

Lafitau's search for the root was part of an ambitious effort at comparative ethnography to prove the Old World origins of Native Americans. He was more interested in finding the "roots of a unified human and natural history" than he was in finding a commercial outlet for Canadian merchants.[74] To support his theory, he found that the Iroquois and other aboriginal peoples used ginseng in similar ways to the Chinese: as a purgative and to treat such conditions as dysentery and rheumatic fever. When he discovered that both the Iroquois and the Chinese had similar etymology for the plant—they both named the plant according to its resemblance to a human figure—he felt he had found a crucial evidentiary link. "By this I confirmed an opinion

[72] Ibid., 41.
[73] Joseph-Francois Lafitau, *Memoire presente a son altesse royal Monseigneur le duc d'Orleans, regent du royaume de France: Concernant la precieuse plante du gin-seng de Tartarie, decouverte en Canada par le. P. Joseph Francois Lafitau, de la Compagnie de Jesus, missionnaire des Iroquois du Sault Saint Louis,* quoted in Christopher Parsons, "The Natural History of Colonial Science: Joseph-Francois Lafitau's Discovery of Ginseng and Its Afterlives," *The William and Mary Quarterly* 73, no. 1 (January 2016): 38.
[74] Ibid., 54.

that I already had," he wrote, "that America was the same continent as Asia, to which it was connected by Tartarie to the north of China."[75] Less than ten years later, Lafitau would publish his famous *Moeurs des sauvages americains,* in which he laid out more fully his theory of a common human history. Lafitau was one of the first to draw attention to the east Asia-eastern North American disjunction. In doing so, he was well ahead of his time, as it was not until the nineteenth century that the scientific community fully recognized this disjunction.[76] However, Lafitau was incorrect in assuming that the presence of ginseng in both regions suggested a common continental origin. As we have seen, ginseng is believed to have migrated from Asia to North America with other plants long after the breakup of Pangea.

Not to be outdone by the French, the English soon evinced a strong interest in learning more about the famous plant. Following the appearance of Jartoux's description in its own publication in 1713, members of the Royal Society of London began a campaign to develop a western commerce in the plant. William Byrd, a Virginia planter and one of the few colonial members of the Royal Society, was instrumental in its discovery in Virginia in 1729 and its promotion to the Royal Society. He carried some with him on his journey to survey the dividing line between Virginia and North Carolina in 1729. "I us'd to chew a Root of Ginseng as I walked along," he wrote. "This kept up my Spirits, and made me trip away as nimbly in my half Jack-Boots as younger men cou'd in their Shoes."[77] He evidently procured this root from somewhere other than Virginia, for he would later credit Robert Beverley for its discovery in that colony.

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[75] Ibid.

[76] Two students of Carl Linnaeus, the Swedish naturalist who first devised modern taxonomic systems, made similar observations, but it was not until 1878 when Harvard botanist Asa Gray wrote on the subject, that the eastern Asian-eastern North American disjunction attracted sustained scholarly attention. See D.E. Boufford and S.A. Spongberg, "Eastern Asian-Eastern North American Phytogeographical Relationships: A History from the Time of Linnaues to the Twentieth Century," *Annals of the Missouri Botanical Garden* 70 (1983): 423–39.

[77] William Byrd II, "The History of the Dividing Line Betwixt Virginia and North Carolina Run in the Year of Our Lord 1728," in *The Prose Works of William Byrd of Westover*, ed. Louis B. Wright (Cambridge, Mass.: Belknap Press of Harvard University Press, 1966), 161.

During a 1729 expedition to the Shenandoah Valley of Virginia, Beverley, the son of the author of *History and Present State of Virginia* (1705), carried along a copy of Jartoux's Royal Society article and found a plant growing on a north-facing slope in the Blue Ridge Mountains that resembled Jartoux's plant. He carried a specimen back to Westover, where he showed it to Byrd.[78] Convinced that this plant was the exact same as Jartoux's, Byrd traveled to the Blue Ridge the following year to find some of the plants for himself. Over the next few years, convinced of the medical virtues of the plant, he sent specimens to his friends in the Royal Society, including John Perceval, Earl of Egmont, and Charles Boyle, Earl of Orrey. He also sent a root to Prime Minister Robert Walpole, who apparently did not use it.[79] He told Hans Sloane, the Royal Society president and King's physician, that "the earth has never produced any vegetable so friendly to man as ginseng."[80]

Byrd's news of discovery in Virginia intrigued the Royal Society, including the Quaker botanist Peter Collinson, who in 1737 asked Byrd to procure him a specimen. Byrd's response was not promising. "The ginseng grows only on [our mountains], and consequently not easily to be got by us, who live at [one hundred and fifty miles] distance," he wrote.[81] Collinson then implored his other American botanist friend, John Bartram, to consult with Byrd and attempt his own search for the plant. "I mightily want it," he told him.[82] The following year, Bartram found it growing in western Pennsylvania, the news of which was heralded by Benjamin Franklin. "The famous Chinese, or Tartarian, plant called GinSeng, is now discovered in this Province, near the

[78] William Byrd to John Perceval, 20 August 1730, in William Byrd, William Byrd II, and William Byrd III, *The Correspondence of the Three William Byrds of Westover, Virginia, 1684-1776*, ed. Marion Tining (Richmond: Virginia Historical Society, 1977).
[79] William Byrd to Charles Boyle, 18 June 1730, Ibid, 431.
[80] William Byrd to Hans Sloane, 20 August 1738 Byrd, Byrd II, and Byrd III, *The Correspondence of the Three William Byrds of Westover, Virginia, 1684-1776*, 528.
[81] William Byrd to Peter Collinson, 5 July 1737, ibid., 523.
[82] Peter Collinson to John Bartram, 16 September 1741, John Bartram and Humphry Marshall, *Memorials of John Bartram and Humphry Marshall*, ed. William Darlington (Philadelphia: Lindsay & Blakiston, 1849), 146.

Susquehannah," Franklin announced in the *Pennsylvania Gazette*.[83] Bartram soon shipped Collinson a live specimen of ginseng, which he successfully transplanted to his garden and proclaimed it the first cultivated in England.[84]

Over the next six decades, Royal Society botanists in both Europe and North America continued to try to cultivate American ginseng in their gardens. A few seem to have been successful at transplanting it. In addition to Collinson, another Quaker botanist, John Fothergill, claimed to have raised at least one plant at his garden in Upton from a specimen sent by Bartram in 1769.[85] If they could unlock the botanical secrets that would enable the plant to be cultivated, these botanists continually asserted, they could develop a thriving industry for both home consumption and Chinese trade. "I am well assured it will prove a very profitable commodity to China," Collinson told Bartram.[86] The publication of Jean-Baptiste Du Halde's *The General History of China* in 1735 stoked vigorous discussion of the medical value of the plant among European physicians. Du Halde reported that ginseng sold for its weight in silver in Canton, and he listed no fewer than seventy seven ginseng recipes employed by the Chinese to treat various illnesses, reinforcing the perception that a vast market awaited the enterprising gardener who could cultivate it.[87] It seemed as though a ginseng industry would soon develop as European demand for the root would rise, as had happened for other medicinal plants obtained from the colonies, specifically cinchona.[88] If ginseng could be made a plantation crop, the trade could be controlled by wealthy planters like Byrd, who could apply slave labor to its cultivation.

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[83] *Pennsylvania Gazette,* 27 July 1738.
[84] Appleby, "Ginseng and the Royal Society," 133.
[85] John Fothergill to John Bartram, 5 January 1769, Bartram and Marshall, *Memorials of John Bartram and Humphry Marshall*, 339.
[86] Peter Collinson to John Bartram, 24 February 1738, ibid., 127.
[87] Physicians as renowned as Sloane, who held some thirteen specimens of the plant in his collection, frequently referred to Du Halde's account of the plant Appleby, "Ginseng and the Royal Society," 126.
[88] Philip, "Imperial Science Rescues a Tree: Global Botanic Networks, Local Knowledge, and the Transcontinental Transplantation of Cinchona."

However, ginseng culture failed to thrive in either the colonies or Europe. A telling anecdote occurred in 1786, when Joseph Banks, a successor to Sloane as president of the Royal Society, asked Humphry Marshall, the Pennsylvania plant collector and cousin to John Bartram, to send him a few hundred pounds of the root. He wanted to perform some experiments in cultivation and curing, "which, if they succeed, may become of importance both to your country and mine."[89] Marshall enlisted his nephew, the botanist Moses Marshall, who was obliged to travel "two hundred miles to the westward, through a dismal mountainous part of our country" to procure the root. Moses Marshall hired another man at a dollar a day to help him dig, and the two men spent twenty days camping and tromping around the mountains before they acquired the requested weight.[90] That this event occurred at all indicates that, despite half a century of experiments in cultivation by the most talented botanists and gardeners in Europe and despite continued interest by the most influential scientists of the age, the secrets of successful ginseng cultivation had not been unlocked. Banks, perhaps the most well-connected man in botany, was still pressed to order specimens to be gathered in the wilds of Pennsylvania at great expense. Byrd gave up trying to cultivate it and seemed resigned to the fact. "I have sowed seeds of it, but it never came up," he told Charles Boyle. "Providence I sopose has ordered it thus, lest so great a blessing should be too common."[91] Thus, the ecology of ginseng operated to defy the wishes of the most powerful men in the Atlantic world. This circle of trans-Atlantic botanists maintained a small trade in ginseng seeds and nursery stock, but commerce in the plant was driven by the imperial power in East Asia, and the vast majority of the work of

[89] Joseph Banks to Humphry Marshall, 5 April 1786, Bartram and Marshall, *Memorials of John Bartram and Humphry Marshall*, 559–60.
[90] Humphry Marshall to Joseph Banks, 14 November 1786, ibid., 560–61.
[91] William Byrd to Charles Boyle, 18 June 1730, Byrd, Byrd II, and Byrd III, *The Correspondence of the Three William Byrds of Westover, Virginia, 1684-1776*.

ginseng harvesting for the China market would be performed by Native Americans and Euro-American settlers in the backcountry of North America.

North America's First Ginseng Boom

Canadian ginseng was the first in North America to reach China in large numbers. Although Lafitau himself was interested in ginseng more for the support it provided for his theory of a common human history than for its potential commercial value, his discovery soon touched off a commercial frenzy in Canada. The late 1740s and 1750s seem to have been its peak. When Peter Kalm, the Swedish student of Linnaeus, visited Canada in 1748, he observed that the ginseng trade was "very brisk…[A]ll the merchants at Quebec and Montreal received orders from their correspondents in France to send over a quantity of ginseng."[92] He noted that most of the roots were dug by Native Americans, who "travelled about the country in order to collect as much as they could and sell it to the merchants at Montreal."[93] In 1752, merchants in New France sent 34,580 pounds to the French port at La Rochelle on its way to China.[94]

By the mid-eighteenth century, the forests around Montreal were suffering from overharvesting and habitat destruction. "By all accounts [ginseng plants] grew in abundance round Montreal," Kalm wrote in 1748, "but at present there is not a single plant of it to be found, so effectually have they been rooted out."[95] He remarked that "many people feared lest by continuing for several successive years to collect these plants without leaving one or two in each place to propagate their species, there would soon be very few of them left, which I think

[92] Kalm and Benson, *Peter Kalm's Travels in North America*, 436.
[93] Ibid., 436.
[94] Parsons, "The Natural History of Colonial Science: Joseph-Francois Lafitau's Discovery of Ginseng and Its Afterlives," 39.
[95] Kalm and Benson, *Peter Kalm's Travels in North America*, 437; Lafitau also warned that "the plant will soon be destroyed near the French habitations." Parsons, "The Natural History of Colonial Science: Joseph-Francois Lafitau's Discovery of Ginseng and Its Afterlives," 68.

very likely to happen."[96] John Lambert, traveling through Canada sixty years later, confirmed the acuity of Kalm's prediction by writing a requiem for the plant. "The high price which was given for it by the Chinese tempted the Canadians to gather the roots before the proper time," he wrote. "The consequence was, that the Canadian ginseng soon became exhausted, and at this day few plants are to be found."[97] Consequently, ginseng harvesting began to spread south.

The Iroquois played a role in expanding knowledge of and involvement in the ginseng trade throughout the edges of their territory, which stretched roughly from the area south of Montreal to northwestern Pennsylvania. Kalm reported that the Montreal trade "obliged the Indians this summer to go far within the English boundaries to search for the root."[98] A French engineer and surveyor confirmed in 1752 that "all the sauvages had left to trade in New England, or were collecting geinseing; all the cabins were closed."[99] That same year, Moravian missionary J. Martin Mack observed around one hundred Oneidas and Cayugas digging the roots in New York's Mohawk Valley.[100] Native Americans were heavily engaged in the trade.

As one of the most commonly traded frontier commodities, ginseng played an important role in the global crisis unfolding in the woods of western New York and western Pennsylvania. As David L. Preston has argued, commercial interactions between members of the Six Nations and the German and English settlers virtually within their midst formed the basis for a "mutually beneficial relationship" that created the framework for peace between the British and Iroquois during the Seven Years' War. And ginseng was one of the most important

[96] Kalm and Benson, *Peter Kalm's Travels in North America*, 437.
[97] John Lambert, *Travels through Canada, and the United States of North America, in the years 1806, 1807, & 1808,* Vol. 2 (London: C. Cradock and W. Joy, 1814), 433.
[98] Ibid, 437.
[99] Parsons, "The Natural History of Colonial Science: Joseph-Francois Lafitau's Discovery of Ginseng and Its Afterlives," 67.
[100] David L. Preston, *The Texture of Contact : European and Indian Settler Communities on the Frontiers of Iroquoia, 1667-1783*, The Iroquoians and Their World (Lincoln: University of Nebraska Press, 2009), 210.

commercial items.[101] American go-betweens like William Johnson and Conrad Weiser, who played an important role in securing the allegiance of the Six Nations of the Iroquois, were involved in the trade. In western New York, Johnson, the British agent to the Iroquois, purchased large amounts of the root from that tribe in the early 1750s.[102] Sammy Weiser, the son of the famous frontier diplomat Conrad Weiser, reported searching "all day long" with a German immigrant and an Iroquois named Brant Kanagaradunckwa in the early 1750s. "I cannot adequately describe what a Furore there is round here over the famous Roots," he remarked.[103] Thus, the economic relationship, as well as the common experience of hunting ginseng together, helped form the basis of cross-cultural accommodation that ultimately benefitted the British settlers after the Seven Years' War.[104]

But this cooperation in the harvest was never widespread, as ginseng could also be a source of friction between colonists and Native Americans. The root enabled some Native Americans to remain relatively independent of the labor markets into which colonists consistently pulled them. Kalm, for example, noted that the Indians around Montreal were "so much taken up with this business [digging ginseng] that the French farmers were not able during that time to hire a single Indian, as they commonly do to help them in the harvest."[105] Indeed, a careful reading of sources indicates that Indians preferred the work and often used it to resist acculturation efforts by missionaries, even as it drew them into the trans-Pacific commodity chain. In a private letter in 1752, the Reverend Jonathan Edwards noted the blossoming of the trade around Albany, New York, and lamented that it has "occasioned our Indians of all sorts,

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[101] Ibid., 178–223.
[102] William Johnson to Gov. DeLancey, 2 June 1755, *The Documentary History of the State of New York* (Albany: Weed, Parsons, & Co., 1849), 656-657.
[103] Quoted in Preston, *The Texture of Contact*, 210.
[104] See also James H. Merrell, *Into the American Woods: Negotiations on the Pennsylvania Frontier* (W. W. Norton & Company, 2000); Richard White, *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815*, 1St Edition edition (Cambridge University Press, 1991).
[105] Kalm and Benson, *Peter Kalm's Travels in North America*, 437.

young and old, to spend abundance of time in the woods, and sometimes to a great distance, in the neglect of public worship and their husbandry, and also in going to Albany to sell their roots, which proves worse to them than going into the woods, where they are always much in the way of temptation and darkness."[106] While the merchants who purchased the roots may have felt differently, those colonists who sought to control Indian labor were frustrated by the trade. Thus, for at least a few years at the peak of the boom, ginseng had a noticeable, if uneven, impact on Indian-white relationships.

While the ginseng trade flourished on the borders of Iroquoia in the 1740s and 1750s, it seems to have had a negligible impact on the southern colonies prior to the American Revolution.[107] Despite Byrd's role in colonial science, he was unwilling to engage Native Americans to gather the wild root for him, as Lafitau had done in Canada, and he was unwilling to engage in trade with white settlers. Rather than publicize Beverly's discovery of ginseng in 1729 or promote the economic benefits that the plant could bring to Virginia, he attempted to maintain strict secrecy around the plant. Tellingly, he instructed a surveyor working for him to keep an eye out for ginseng and made him promise to "tell the secret to no mortal."[108] Further south, Indian trader James Adair, writing in the 1770s, suggested that merchants in the southern backcountry were unwilling to engage in the trade with Native Americans.[109] He observed that

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[106] Jonathan Edwards to William McCulloch, November 24, 1752. Quoted in "Ginseng," *Fur-Fish-Game Magazine, Vol. 5-6* (Summerville, New Jersey: 1907), 56.

[107] Without the availability of any systematic study of the ginseng trade, several scholars have implied that the Cherokee engaged in the trade throughout the eighteenth century, but they seem to have based their claim on one source by John Drayton. However, this source was written in 1802 and, therefore, is referring to the post-Revolution boom. See Wilma A. Dunaway, *The First American Frontier: Transition to Capitalism in Southern Appalachia, 1700-1860* (Chapel Hill: University of North Carolina Press, 1996), 46; Timothy Silver, *A New Face on the Countryside: Indians, Colonists, and Slaves in South Atlantic Forests, 1500-1800*, Studies in Environment and History (Cambridge ; New York: Cambridge University Press, 1990), 101.

[108] William Byrd to William Mayo, 26 August 1731, Byrd, Byrd II, and Byrd III, *The Correspondence of the Three William Byrds of Westover, Virginia, 1684-1776*.

[109] Adair, *History of the American Indians; Particularly Those Nations Adjoining to the Mississippi, East and West Florida, Georgia, South and North Carolina, and Virginia*.

the plant was "very plenty on the fertile parts of the Cheerake mountains," but he lamented that "it is a great loss to a valuable branch of trade, that our people neither gather it in a proper season, nor can cure it."[110] Apparently, merchants would not take it. However, he did report that some inhabitants of the upper Yadkin valley in North Carolina, near the western edge of Euro-American settlement, had begun digging the root from the mountains and hauling it two hundred miles to Charleston themselves, but they seem to have been atypical.[111] Thus, there is hardly any evidence to suggest that western Virginia or the Carolinas produced any sizeable quantity of ginseng prior to the 1780s. By 1766, an economic report showed that only one bag of ginseng had been brought out of the upper reaches of the James River the previous year.[112] The earliest trading post records to have survived from the Greenbrier River valley (now West Virginia) reveal that only 90 pounds of ginseng were traded from 1771 to 1773.[113]

The lack of trade in the southern colonies can be partly attributed to a collapse of Chinese demand in the mid-eighteenth century just as the trade in Canada and the northern colonies was picking up. Nearly every observer commented on this, but they do not agree on exactly what caused it. Kalm claimed that it was due to oversupply, whereas others attributed it to successive shipments of poorly prepared or adulterated roots.[114] It was likely the latter, as demands for the wild root always outstripped supply. Furthermore, Adair's comments suggest that neither the Cherokee nor the merchants had learned how to cure it properly, and the Chinese were meticulous in their expectations of the roots, as Nurgaci and the Jurchens figured out in the late sixteenth century. Jartoux said that the roots had to either be dried for a couple

[110] Ibid., 362.
[111] Adair, *History of the American Indians; Particularly Those Nations Adjoining to the Mississippi, East and West Florida, Georgia, South and North Carolina, and Virginia*.
[112] "Exported from the Upper District of James River between the 25th of October 1765 and the 25th of October 1766," *The New York Gazette,* 23 March 1767.
[113] Harry Handley, "The Mathews Trading Post," *Journal of the Greenbrier Historical Society,* Vol. 1, No. 1 (August 1963), 8-14.
[114] Kalm and Benson, *Peter Kalm's Travels in North America,* 436; Francois Michaux, *Michaux's Travels to the West of the Alleghany Mountains* (Carlisle, MA: Applewood Books, 2012), 232.

weeks or subjected to a process of curing whereby the root is steamed, then dried. However, he was vague on this process, which likely contributed to ignorance on the topic.[115] Whatever the reason, the bottom dropped out of the ginseng market mid-century, which slowed the trade in the North and hindered its development in the South.

A Symbol of American Independence

During the American Revolution, the ginseng trade seems to have virtually halted, as Americans could not spare ships, but almost before the ink had dried on the Treaty of Paris in 1783, the ginseng trade began to blossom into a social, economic, and ecological force in the southern backcountry. The years following the Treaty of Paris brought renewed interest in ginseng as a potential article of commerce as people began to pour across the Proclamation Line of 1763 looking for valuable forest products and eastern merchants began looking for ways to break into the China market. American trade with China prior to the Revolution had been limited and restricted by both the Chinese themselves and British mercantilist policies. When the Qing emperor Kangxi finally began opening up China to increased foreign trade at the end of the seventeenth century, British mercantilist policies prevented American colonists from directly engaging in the China trade. All exports of ginseng and any other goods going to China had to pass through Britain and loaded onto ships belonging to the East India Company, thus precluding any accumulation of profits by American merchants.[116]

Eager to procure the tea that Americans had gone without for nearly a decade, merchants and financiers up and down the eastern seaboard likely harbored dreams of engaging in the China trade once the shackles of British mercantilism were overthrown, but it was the

[115] The process is briefly described in F. Jartoux, *The Description of a Tartarian Plant, Call'd Gin-Seng; with an Account of Its Virtues*, 246.
[116] Smith, *The Empress of China*, 9–12.

scheme of the inveterate Connecticut adventurer John Ledyard that first planted the seed that would germinate into the *Empress of China*. Ledyard, a veteran of Captain James Cook's ill-fated Pacific expedition, had observed the rich furs produced by native tribes in the Pacific Northwest and the high demands placed on these furs in Canton, China. In June 1783, he approached the Philadelphia merchant Robert Morris, one of the most powerful men in America due to his role as the "financier of the American Revolution," with a proposition to open up the United States-China trade with a massive shipment of furs. Morris, intrigued by the idea, promptly agreed to outfit a voyage that included a trip around Cape Horn and up the western coastline of North and South America to reach the furs of the Pacific Northwest. He enlisted the support of a group of New York merchants led by Daniel Parker and another group of Boston merchants. They reached an agreement in which each group would provide one-third of the capital to finance the ship. However, within a few months, the Boston group withdrew its commitment, and the remaining investors, unwilling to put up more money on such a risky venture, made a fateful decision for the American backcountry. They decided to forego a more costly expedition to the Pacific Northwest in search of furs and, instead, rely on the more easily obtainable ginseng.[117]

As several scholars have pointed out, ginseng as a commodity had significant benefits to financiers eager to establish trade relationships with the Far East. First and foremost, the Chinese seemed to want a lot of it. Despite the few decades of low demand since the 1750s, Parker and Morris had obtained reliable intelligence from European sources that the Chinese still wanted it badly. Second, it grew wild in the backcountry and many inhabitants were knowledgeable veterans of the trade in Iroquoia, so it was readily available for an immediate trade expedition. Third, it was a commodity to which European traders had very little access, as the plant did not grow in Europe. The United States' monopoly on the root provided them with

[117] Ibid., 28–34.

an advantage and, thus, a way to break into the Chinese market that had been dominated by the British.[118] Rather than turn to northeastern merchants who had been involved in the mid-century boom, the financiers turned to the South, perhaps realizing the relatively untapped resources there. In August 1783, Daniel Parker informed the Philadelphia company of Messrs. Turnbull, Marmie, & Co. that "We are in want of 10,000 lb. Ginseng" and requested them "to procure that Quantity if to be had at your Market."[119] Realizing they had precious little time to fulfill the order before ginseng died back for the winter, the company hired a 33-year-old Pennsylvania physician named Robert Johnston and fronted him one thousand dollars to travel the backcountry to procure the root. He quickly began a race against time.

Within a week, Johnston arrived at Fort Pitt but found very little root. "After a most tiresome Journey across the Frontier of Pennsylvania," he wrote to Turnbull and Marmie, "I have not been able to procure more than 400 weight of Ginseng." Yet, he sounded a word of optimism. "Tomorrow I set out for Stantown [Staunton] and Augusta, where I am informed large Quantities of Ginseng has been sent from the Frontier parts of this State [Virginia]."[120] His intelligence was accurate. Ginseng was flowing into the Shenandoah Valley from the mountains of western Virginia and Pennsylvania, but the people who were digging it were reluctant to take bank notes or even gold for the root. Instead, they wanted goods, so Johnston, unable to haul wagonloads of goods across country, resolved to purchase the roots from various storekeepers and country merchants who themselves bartered with the diggers. On his first jaunt, Johnston procured some 14,000 pounds of "the best Ginseng which I have seen" and made arrangements

[118] John Rogers Haddad, *America's First Adventure in China: Trade, Treaties, Opium, and Salvation* (Philadelphia: Temple University Press, 2013), 11–13; Kendall Johnson, "A Question of Character: The Romance of Early Sino-American Commerce in The Journals of Major Samuel Shaw, the First American Consul at Canton (1847)," Kendall Johnson, ed., *Narratives of Free Trade: The Commercial Cultures of Early US-China Relations*, Global Connections (Hong Kong: Hong Kong University Press, 2012), 40–43.
[119] Smith, *The Empress of China*, 31.
[120] Ibid., 38.

with other storekeepers to ship more roots to Baltimore.[121] By the end of December 1783, he had succeeded in accumulating an astounding 57,000 pounds of ginseng root from the mountains of Virginia and Pennsylvania. Indeed, he had purchased so much of the root for prices above market value that storekeepers complained that he had shifted the price of the root throughout the backcountry.[122]

On a cold winter day in February of 1784, laden mostly with ginseng and Spanish silver, the *Empress of China,* weighed anchor in the icy waters of the Hudson River and set sail for the Far East. The ambitions and hopes of the young nation sailed with it. As historian John Haddad has pointed out, ginseng held great symbolic value to many Americans, who viewed the root through a brand new nationalistic lens. If it could help establish a lucrative trade relationship with China independent of European intermediaries, the American dream of economic and political independence might become a reality.[123] The voyage was long and rough. The *Empress of China* followed the western coast of Africa down to the Cape of Good Hope and turned east, crossing the Indian Ocean in June and continuing north through the East Indies. On August 28, 1784, the ship arrived in Canton, where it remained for four months while the ship's merchants negotiated the sale of its cargo. The final destination of the ginseng roots from the mountains of western Virginia cannot be determined from available evidence. Perhaps they were consumed by noblemen in Canton. More than likely they exchanged hands a few more times as they made their way into the Chinese interior, where they would have been gradually sliced up and boiled into tea, or else prepared in a number of other common ways. Meanwhile in December, weighed down with 700 chests of black tea, 100 chests of green tea, and thousands

[121] Ibid., 40.
[122] Ibid., 42.
[123] Haddad, *America's First Adventure in China*, 11–14.

of pieces of porcelain ware, the *Empress of China* set sail on its return voyage. In April 1785 it arrived safely in New York, some fourteen months after it left.

The return of the *Empress* from her maiden voyage to Canton in the spring of 1785 brought renewed hopes for the future of ginseng and for American economic independence. In order to secure "permanent advantage to this rising empire," one observer quipped, "it is only necessary to encourage the cultivation and proper curing of ginseng, to prevent its exportation to any other country than China, and that in our own vessels."[124] "The inhabitants of America must have tea," wrote Samuel Shaw, the chief merchant on board the *Empress* and first American consul to China. "[I]t must be pleasing to an American to know that…the otherwise useless produce of its mountains and forests will, in a considerable degree, supply him with this elegant luxury."[125] Ginseng, predicted one observer from South Carolina, "may become to us, that is, the backcountry, very valuable articles of commerce."[126]

Merchants along the Atlantic coast hastened to engage in the trade. John Jacob Astor, who arrived in New York City the year the *Empress* set sail for China, immediately set his sights on ginseng. He began purchasing all he could find of the root, and by 1800, he was outfitting his own ships to China, laden with ginseng and the furs for which he would become rich and famous.[127] Ginseng helped people like Astor build fortunes, but for people like Joseph Smith, Sr., the father of the Mormon founder, it proved a curse. An aspiring merchant in southern Vermont, Smith was caught up in the ginseng fever that followed the *Empress of China's* voyage and collected ginseng from the woods and from farmers closer to the mountains. Refusing an offer from a nearby merchant named Stevens to sell his roots to him, Smith decided to

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[124] *Columbia Herald,* 19 January 1786, 2.
[125] Samuel Shaw, "Remarks on the Commerce of America with China," *City Gazette,* 30 June 1790.
[126] [Repubesco], *City Gazette,* 20 December 1797.
[127] Axel Madsen, *John Jacob Astor: America's First Multimillionaire* (New York: Wiley, 2001), 51-52; Johannsen, *Ginseng Dreams*, 20.

circumvent middlemen merchants by taking his ginseng to New York himself and arranging for its sale in Canton on consignment. However, when his ship returned he learned to his great dismay that the venture had failed. He had lost everything. Smith later discovered that the venture, in fact, had succeeded and his ginseng had brought a pretty sum, but that Stevens had sent his son on the same voyage and had stolen the proceeds. In the wake of this scandal, Stevens fled to Canada and Smith was left virtually penniless. Forced to sell his farm, he spent the next fourteen years living in seven different places before finally settling down in Palmyra, western New York, where he would raise Joseph Smith, Jr.[128] Indeed, commercial- minded Americans had caught ginseng fever, and it quickly began to shape fortunes across the landscape.

The commodification of ginseng was a process that unfolded over several centuries beginning in Asia and eventually extending into North America due to a botanical twist of fate that occurred in the Tertiary Period. As we have seen, the difficulty in cultivating the plant, the preference of Chinese consumers for the wild article, and the high price they were willing to pay determined that wild harvesting remained the key feature of ginseng production throughout the seventeenth and eighteenth centuries. This fact had far-reaching social and cultural implications. Its high market value and the desire of indigenous peoples to access that market worked to overwhelm any cultural adaptations that these societies may have developed to limit the overharvesting of the plant. Consequently, the plant began a slow decline, and the centers of production shifted from northern China to French Canada and, eventually, the British colonies. Along the way, the trade helped build the Qing Dynasty, shape relations between Native Americans and colonists, and open trade between China and the United States. By the 1780s, the centers of ginseng production had moved further southwest. "In these mountains

[128] Richard Lyman Bushman, *Joseph Smith, Rough Stone Rolling: A Cultural Biography of Mormonism's Founder* (New York: Vintage Books, 2007), 18–20.

the plant is still common," confirmed one observer of western Virginia in the 1783, "but in the lower parts it has pretty well disappeared."[129] Thus, the southern Appalachian region, still a sparsely settled backcountry by the post-Revolutionary period, was poised for its first large-scale ginseng boom.

[129] Johann Schoepf, *Travels in the Confederation, 1783-1784*, trans. Alfred Morrison, vol. 1 (Philadelphia: William J. Campbell, 1911), 236.

CHAPTER 2

Southern Appalachia's First Ginseng Boom and the Evolution of Commons Culture

In 1783, during his tour of the newly independent American colonies, German traveler and physician Johann Schoepf ran into a man leading two horses loaded with 500 pounds of ginseng roots in the mountains of western Pennsylvania. The man declared that during the war for American Independence, virtually no roots were harvested, and he was ready to cash in on the new bounty.[1] The following year, on a surveying trip to the Cheat River area in western Virginia, General George Washington similarly encountered "numbers of Persons & Pack horses going in with Ginsang; & salt & other articles at the Markets below."[2] Schoepf and Washington had witnessed the beginnings of the first significant ginseng boom in the Ohio River Valley.

Over the next two decades, as waves of Euro-Americans and their African American slaves arrived in the region on the heels of Native American retreat, they found forests near the Ohio River full of valuable ginseng communities that had not previously faced harvesting pressure. Speculators like Daniel Boone eagerly dug and/or bought up as much as they could with hopes of high returns. Hunters and fledgling farmers used the root to purchase goods, food, and even land. Merchants readily took the root as payment and, in turn, sold it to exporting firms in Baltimore, Philadelphia, and New York. It became one of the leading mediums of exchange in a frontier region that lacked hard cash and reliable transportation

[1] Johann Schoepf, *Travels in the Confederation, 1783-1784*, trans. Alfred Morrison, vol. 1 (Philadelphia: William J. Campbell, 1911), 236.
[2] *The Diaries of George Washington*, Vol. 4, in Donald Jackson and Dorothy Twohig, eds., *The Papers of George Washington* (Charlottesville: University Press of Virginia, 1978), 20.

systems, facilitated the resettling of the frontier to a degree that has heretofore been overlooked by historians. As population increased and economies diversified, rural highlanders incorporated ginseng into their seasonal routines as one component of a landscape of subsistence that included both the forest and the farm. Knowledge of how to find, harvest, and prepare ginseng for market was passed down through the generations. Over time, the custom that anyone in the community could harvest ginseng from unimproved forests, regardless of who owned the property on which it grew, evolved into a common right that acknowledged the plant as the property of the harvester rather than the landowner.

The First Southern Appalachian Ginseng Boom

By the 1780s, the resettlement of the trans-Appalachian Ohio River Basin had reached something of a crescendo. In the mid-eighteenth century, the region beyond the Shenandoah Valley was largely the domain of the Shawnee, Delaware, Mingo, and Cherokee tribes, but their hold on the land was becoming increasingly tenuous. Beginning in the 1740s, land companies such as the Transylvania, Greenbrier, Loyal, and Ohio Companies acquired large land grants from the colonial Virginia government to encourage settlement of the region. While the Royal Proclamation of 1763 prohibited white settlement west of the Appalachian crest in an attempt to forestall conflicts with Indians and prevent a mass emigration of land-seekers from England, land speculators continued to purchase frontier lands, partly by negotiating private treaties with Native Americans.[3] From 1763 to 1776, as Wilma Dunaway has found, these companies acquired titles to roughly five million acres of Indian lands in the trans-Appalachian region. The victory of Virginia Governor Lord Dunmore's forces over the Shawnees in 1774 at the Battle of Point Pleasant rendered the "Kentucke" region south of the Ohio River safe for white

[3] Barbara Rasmussen, *Absentee Landowning and Exploitation in West Virginia, 1760-1920* (Lexington, Ky: University Press of Kentucky, 1994), 29–31; Aron, *How the West Was Lost*, 60–63.

settlement.[4] Following American independence, land speculators began to rapidly dispose of their lands, selling them to other non-resident speculators, as well as would-be settlers who streamed across the mountains. The passage of the Land Ordinance in 1785 and the Northwest Ordinance in 1787 and American victories over Native Americans in the 1790s, initiated a new era of surveying and land settlement in the Ohio Valley.

As historian Stephen Aron has demonstrated, the 1780s and 1790s witnessed the beginning of a significant cultural and economic transformation of the Ohio Valley. Prior to this time, the first whites to inhabit the landscape, a group that several scholars have called simply "hunters," were pioneers like Boone who had come to the region in the 1750s and 1760s to hunt, fish, and generally live off the "spontaneous productions of nature."[5] They were likely squatters with no formal title to lands who raised a little corn and livestock but were heavily dependent upon the forests for their subsistence needs.[6] What Aron calls "rights-in-the-woods" predominated among this group of hunters. While people like Boone certainly pursued private ownership of land, they held fluid notions of property and believed that unimproved forests, regardless of ownership, should be generally treated as semi-public property—a de facto commons. They struck a balance between private property and public necessity.

However, by the opening decades of the nineteenth century, the world of the hunter was rapidly giving way to the world of the farmer, the merchant, and the lawyer, and the legal culture began to change with it. Commercial expansion proceeded with the establishment of towns like Marietta on the Ohio River, and the Mississippi River network became a commercial highway for emerging cash crops such as hemp, corn, cotton, and whiskey. New landowners began to assert greater control over the resources on their land, and by the first decade of the

[4] Dunaway, *The First American Frontier: Transition to Capitalism in Southern Appalachia, 1700-1860*, 52.
[5] Quoted in Aron, *How the West Was Lost*, 15.
[6] This early phase of resettlement is best depicted by Aron, *How the West Was Lost*.

nineteenth century, according to Aron, the rights-in-the-woods gave way to a new legal culture with a more stringent view of property. This transformation was gradual, beginning in the most heavily populated and commercialized areas. In the midst of this transition, the ginseng boom reached its greatest influence on the region. Indeed, ginseng helped usher in this commercial transition. It was, after all, a commons commodity, one accessible by hunters and farmers alike that grew outside the bounds of private property regimes. And in an area struggling to develop its cash economy, it readily served as currency that kept many of the early merchants afloat. The irony is that the production of this commodity depended on the very rights-in-the-woods it was helping to undermine.

The story of Col. John May, an agent for the Ohio Company and itinerant merchant from Boston, illustrates the importance of ginseng to the early commerce of the Ohio Valley. A member of the Massachusetts militia during the Revolution who participated in the Boston Tea Party, May was appointed agent of the Boston-based Ohio Company around 1786 and put in charge of purchasing land under the Land Ordinance of 1785 for company shareholders. Among his many land acquisitions in 1786-1787 were areas along the Ohio River at the mouth of Muskingham Creek and Limestone Creek that would, within three years, become sites of the emerging commercial hubs of Marietta (Ohio) and Maysville (Kentucky), respectively.[7] After returning to Boston in 1788, he decided on a plan to cash in on the developing frontier economy by floating five tons of goods down the Ohio River. He hoped to sell his stock of goods to arriving American settlers for cash, but he was quickly disappointed. “Here week after week, with little or nothing to do, no money stirring,” May wrote in his diary for July 3, 1789. “I have as

[7] John May, *The Western Journals of John May, Ohio Company Agent and Business Adventurer* ([Cincinnati] Historical and Philosophicl Society of Ohio, 1961), 3–5, http://archive.org/details/westernjournalso00mayj.

yet refused taking any [ginseng]. Ginseng is worse than nothing."[8] May seemed wary of the fluctuating ginseng markets, as well as difficulty in handling the roots. Indeed, still scarred by the Chinese rebuff earlier in the eighteenth century, many merchants were still hesitant to get involved in the trade. "It is a ticklish article to speculate in," wrote Virginian Thomas Howard to his brother in Philadelphia in 1789, "because some part of what was sent to India [sic] was brought back, being so bad that it would not sell."[9] However, the lure of ginseng as a medium of exchange was irresistible. As Francois Michaux remarked in 1802, ginseng was the only "species of colonial produce in Kentucky…that will bear the expense of carriage by land from that state to Philadelphia."[10] Having failed to unload much of his stock by the time he reached Wheeling, May made up his mind that "if we would do anything, we must take deer skins, furs, and ginseng in exchange for goods."[11] In effect, May had hoped that the agricultural economy of the region had evolved to the point at which cash purchases would sustain his business, but instead, he had to rely on bartering the products of the forest, products harvested according to the rights-in-the-woods by which hunters lived.

After floating down the Monongahela to the Ohio River in the late summer of 1789, May found a bustling economy with ten traders hawking their wares, whereas the year before there had been only one. Ginseng seems to have fueled much of the boom. Referring to the merchants' dependence on the plant, he called it "their darling Gensang" and seemed to believe that a sudden depreciation of ginseng prices threatened to derail the fledgling economy.[12] Marietta is "filled with merchants who cannot dispose of their goods, as the dealing medium of

[8] John May, "Journal of Col. John May, of Boston, Relative to a Journey to the Ohio Country, 1789," *The Pennsylvania Magazine of History and Biography* 45, no. 2 (1921): 133.
[9] Thomas Howard to C.P. Howard, 21 August 1789, Grinnell Letters, Virginia Historical Society, Richmond, Virginia. Howard refers to India, but this was almost certainly a misconception. All ginseng was sold to China.
[10] Michaux, *Michaux's Travels to the West of the Alleghany Mountains*, 204.
[11] May, "Journal of Col. John May, of Boston, Relative to a Journey to the Ohio Country, 1789."
[12] May, *The Western Journals of John May, Ohio Company Agent and Business Adventurer*, 139.

exchange ginseng has utterly depreciated," May wrote in his diary. "[I]t seems to be a prevailing opinion that two thirds of the traders referred to will be ruined by this summer's business."[13] The reason for this depreciation is unclear. In his study of early U.S.-Chinese trade relations, John Haddad claims that the *Empress of China* flooded the market, and by 1786, unbeknownst to many in the backcountry, prices for ginseng in Canton had dropped from thirty-two dollars a pound to thirty-two cents per pound.[14] However, the performance of the ginseng market throughout the rest of the eighteenth and nineteenth centuries indicates that the market was virtually impervious to glut. Thus, the depreciation in 1789 may have had more to do with the poor quality of the roots on board the *Empress* and the faith Chinese consumers had in the roots coming from America. Whatever the reason, May was confident that if he could dispose of his goods for ginseng at one shilling, six pence, "I am not afraid as it may bear keeping one or two years at that price."[15] After spending a few weeks in Wheeling and Marietta, he headed inland across the mountains of Virginia. Along the way, he took in 1400 pounds of deer skins and various furs and 2800 pounds of ginseng, including 1700 pounds he purchased from "a Dutchman." He claimed he could have had a thousand more pounds of the root but a frost and heavy rain killed the plant tops in early October, thus shortening the season by a month. After drying the roots in the sun, he packed them up in large bags and sent them on a wagon 250 miles over the mountains to Baltimore.[16]

May's experience demonstrates that dependence on this trans-Pacific trade network brought risks as well as rewards to frontier merchants. Indeed, ginseng was the most important medium of exchange in some areas, but it was a precarious and unpredictable one, as it was

[13] May, "Journal of Col. John May, of Boston, Relative to a Journey to the Ohio Country, 1789," 153.
[14] Haddad, *America's First Adventure in China*, 26–27.
[15] May, *The Western Journals of John May, Ohio Company Agent and Business Adventurer*, 115.
[16] John May, "Journal of Col. John May, of Boston, Relative to a Journey to the Ohio Country, 1789," *The Pennsylvania Magazine of History and Biography* 45, no. 2 (1921): 161-165.

subject to the vagaries of a fragile and relatively new global trade network. Many merchants moved away from the commodity as soon as they could find more stable sources of income. At Wheeling in 1789, May crossed paths with Dudley Woodbridge, who was on his way to Marietta to establish a mercantile business there. At first, Woodbridge dabbled in ginseng, but by the second decade of the nineteenth century, ginseng virtually disappeared from his record books. As the region's economy developed into a more mature agricultural economy, it seems, Woodbridge and other merchants had no problem selling their goods for cash.[17]

Beginning in the late 1790s, ginseng became a more stable commodity with the arrival in the backcountry of a process many referred to as "ginseng manufacturing." In the 1780s, the vast majority of the ginseng handled by merchants was prepared for market by drying it in the sun, but in the 1790s, a few merchants began acquiring knowledge of how to prepare the roots in the way the Chinese preferred, a process of steaming and drying called clarification. This process was vaguely described by Jartoux, but it was not until the 1790s that merchants began to perfect it. While in Kentucky, Michaux noted in 1802 that "several persons begin even to employ the means made use of by the Chinese to make the root transparent."[18] In order to perform it on a large scale, they erected "factories" and hired laborers to help carry out the work.

Exactly what happened in these factories has remained something of a mystery to ginseng scholars, primarily because people rarely discussed it beyond a brief mention. But in an 1802 letter instructing Smithfield, Virginia, planter John Preston in how to build a ginseng factory, one of his business associates laid out the entire process. Typically, such facilities were comprised of two rooms under the same roof with a door between them. One was used for

[17] See, for example, Folders 67-90, Woodbridge Mercantile Company Records, West Virginia History Center, West Virginia University, Morgantown, West Virginia.
[18] Michaux, *Michaux's Travels to the West of the Alleghany Mountains*, 233.

steaming, the other for drying, and they contained no windows and carefully planned ventilation systems. The clarifying process began outside, where laborers, usually from three to five boys or men, washed the roots, scraped them gently with the back of a knife, and polished them first with a shoe brush and then with a tooth brush. The roots were then brought into the steaming room, where they were placed near the top of an iron kettle at least eighteen inches in diameter on a coarse linen cloth suspended above the boiling water. After about an hour of steaming, once the roots turned a translucent "whitish" color, they were wrapped up in the linen and plunged into cold water for a few minutes until cool. Then, they were transferred to the drying room, where a furnace was gently warming the air "somewhat more than heat of sun on warm summer day," and laid out on a clapboard to dry. The process, which took the better part of a day, rendered the roots "a beautiful amber color."[19] Although little is known about why the Chinese preferred their ginseng prepared in this way, modern scientific studies have demonstrated that the root undergoes a chemical transformation that affects its medicinal qualities. It rearranged the ratios of various ginsenosides, the active compound in the root. However, due to the complex phytochemistry of the plant and the relative lack of clinical studies, scientists do not know how that affects its medical efficacy.[20]

Regardless, merchants quickly realized that with a little investment, they could greatly increase their profits by making their commodity more attractive to their Chinese customers. Michaux claimed that clarified roots sold for six or seven dollars per pound on the coast, more than ten times what simple dried ginseng fetched.[21] Robert Wellford, a prominent Fredericksburg physician who had once counted George Washington as a patient, constructed

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[19] John Rhea to John Preston, September 1802, Box e8-422, Preston Family Papers, 1769-1864, Virginia Historical Society, Richmond, Virginia.
[20] Lian-Wen Qi, Chong-Zhi Wang, and Chun-Su Yuan, "Ginsenosides from American Ginseng: Chemical and Pharmacological Diversity," *Phytochemistry* 72, no. 8 (June 2011): 693, doi:10.1016/j.phytochem.2011.02.012.
[21] Michaux, *Michaux's Travels to the West of the Alleghany Mountains*, 233.

what was likely the first ginseng factory in Scott County, Virginia. Leaving his medical business behind in October of 1801, he headed west on the Wilderness Road to Powell Mountain, Virginia. He may have obtained the knowledge of clarification from John Preston, who was Wellford's patient and had accompanied him on part of his journey to Powell's Mountain. By the time Wellford arrived, the laborers he had hired under the direction of his partner, a Dr. Carter, had constructed three cabins and were busy processing roots. He had hired another young man to haul "more Goods to assist in the purchase of Ginseng," which suggests that he obtained his roots by bartering with local inhabitants.[22]

Knowledge of the clarification process was a closely guarded secret on the frontier. John Rhea made it clear that Preston "will not make it known to any…without my consent" and instructed him to take care to keep the contents of the factory "well guarded from public inspection," including the gaze of his laborers.[23] This secrecy was a business strategy. According to Michaux, Kentuckians paid those with the desired knowledge four hundred dollars for instructions on how to clarify roots.[24] As this knowledge spread and factories opened from New York to North Carolina, exports increased rapidly. Total ginseng exports averaged under 30,000 pounds annually through most of the 1790s, but from 1798 to 1807, that number jumped to 281,000 pounds annually.[25]

[22] Robert Wellford Diary, June 3-Oct. 14, 1801, Virginia Historical Society, Richmond, Virginia.
[23] John Rhea to John Preston, September 1802, VHS.
[24] Ibid.
[25] This statistic was compiled by the author using export statistics from letters from the Secretary of Treasury Alexander Hamilton to the House of Representatives, American State Papers, Commerce and Navigation, 1st-10th Congresses.

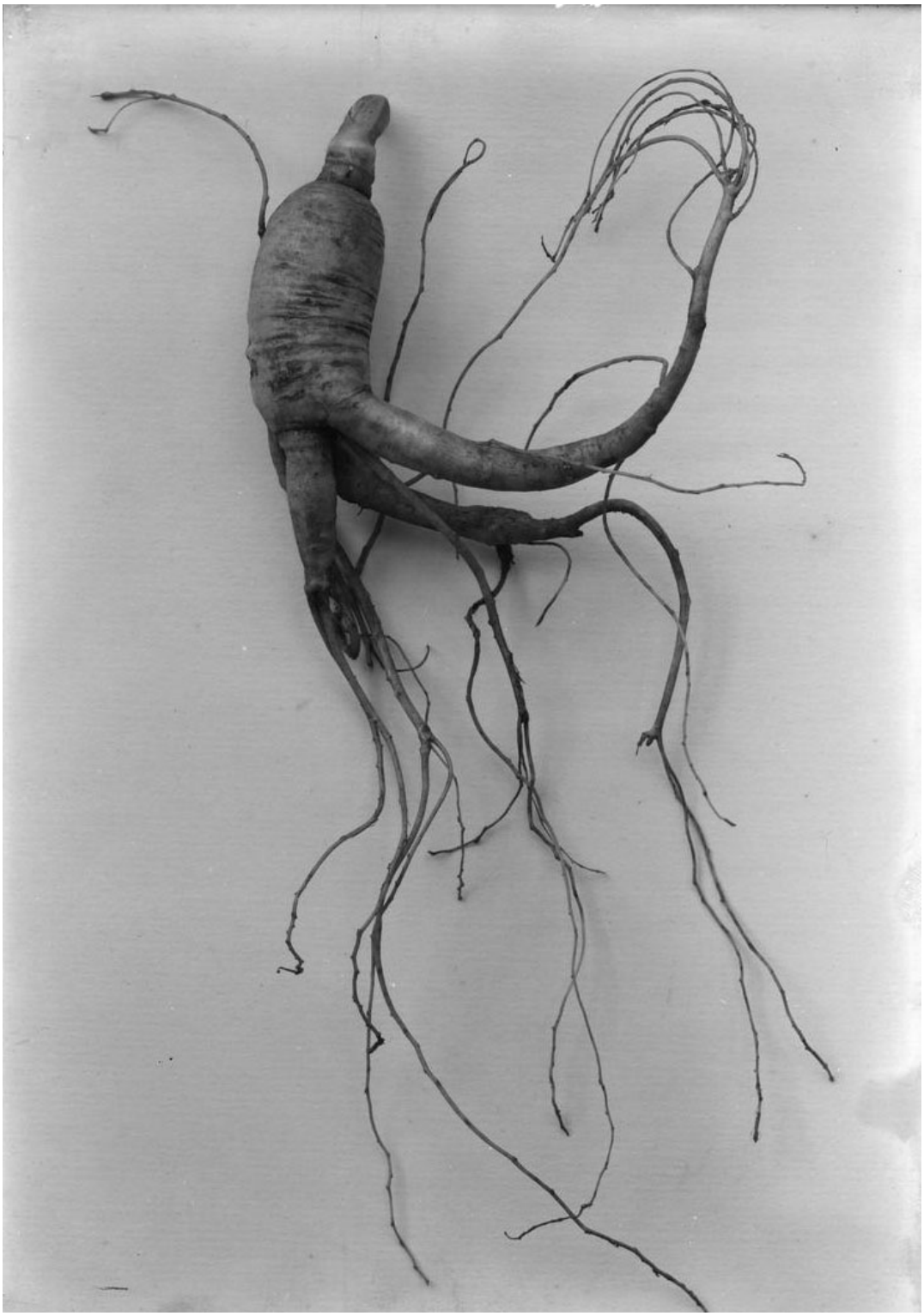

Figure 2. Wild American ginseng root as it appears in the fall of its second season. Credit: Harrison Garman, *Ginseng: Its Nature and Culture,* Agricultural Experiment Station of the State College of Kentucky, Bulletin No. 78 (Lexington: 1898), 163.

Ginseng Harvesting on the Frontier

So who were the people who harvested ginseng? Many of them were hunters like Daniel Boone who knew the forests well, had little or no agricultural business to attend, and could afford to spend days on end in the woods in September and October. "The hunters collect it incidentally in their wanderings," remarked Johann Schoepf.[26] Around 1800, one anonymous diarist who may have been the John Preston, hired some 16 hunters to join his party of surveyors in the Coal River basin in (West) Virginia. Their job was to provide food for the surveyors and to dig ginseng. Upon crossing the "high and rough ridge and mountain" between the New River and the Coal River, they discovered "plenty of root" and constructed a camp next to a small branch to serve as a base for a few days of gathering.[27] While the diary fragment does not indicate how many roots were dug, with so much manpower, it was likely a considerable sum.[28] He found that utilizing the labor of hunters, those men who knew the forests so well, could yield valuable ginseng harvests. Some hunters with the knowledge and skill to find and harvest the plant became specialists whose services were in much demand. May relied for most of his roots on a "Dutchman from Kentucky" and spent weeks courting his business. "I have bin playing out my best Cards to the Dutch man—have kept his skin full, and prevented his having any correspondence with the many packers who Came here to Carrey Loads, least he should Send off his Sang [to another party]," he wrote.[29] May's preoccupation with this Dutchman suggests that knowledge of how to find and harvest ginseng empowered knowledgeable diggers to dictate the terms of their labor.

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[26] Schoepf, *Travels in the Confederation, 1783-1784*, 1:236.
[27] Anonymous Diary, Undated folder, John Preston Papers, Virginia Historical Society, Richmond, Virginia.
[28] John Preston, who owned a store in Abingdon, Virginia, as part of his commercial enterprise, became a leading ginseng trader in subsequent decades. For one season in 1826, for instance, he sold 147 barrels of ginseng totaling more than 13,000 pounds to a Philadelphia merchant. "Invoice for 147 barrells of ginseng," Robert A. Taylor Business Papers, Special Collections, Virginia Tech, Blacksburg, Virginia.
[29] May, *The Western Journals of John May, Ohio Company Agent and Business Adventurer*, 149.

Easily the most famous ginseng digger in history was Daniel Boone. In 1787, two years after he had moved his family to Maysville at the mouth of Limestone Creek, Kentucky, and three years after he had become nationally famous by John Filson's biography, 53-year-old Boone got caught up in ginseng fever. According to his son, Nathan, he and his father frequently dug ginseng "out among the hills" near the Ohio River. But he was more than a simple digger; he was a speculator. He hired "several hands" to dig for him and purchased more ginseng from other diggers, who, like him, roamed the nearby hills and mountains searching for the increasingly elusive plant. For two seasons, he collected ginseng in this way and stored it in a warehouse before hauling it by keelboat up the Ohio. At the very least he stood to make a few thousand dollars, but disaster struck when the boat capsized and soaked the roots, and after drying them out and poling up to Redstone, Pennsylvania, he loaded them onto pack horses and hauled them to Philadelphia. Due to water damage, however, he received only half of their market value.[30]

Surveyors themselves often found that digging ginseng along their routes could turn their expeditions into more profitable ventures. In July 1786, a 21-year-old Massachusetts man named John Mathews was appointed by the Confederation Congress to survey the lands in what is now southeastern Ohio, recently ceded by Wyandotte and Delaware Indians. Mathews' father-in-law was Rufus Putnam, a shareholder in the Ohio Company who was instrumental in

[30] There has been some scholarly debate about how much ginseng Boone hauled. Nathan Boone told Lyman Draper that they had collected some "twelve or fifteen tons," but recent scholars have challenged this. Believing that there was no way he could have collected and transported 30,000 pounds of roots upriver, Robert Morgan argues that Boone used the term "tuns," or barrels, instead of "tons," as Draper recorded. While this is a definite possibility, there is also a possibility that Boone, with skilled help for two seasons could have collected that amount. Writing during a time in which the largely untouched populations of ginseng still covered the ground, two observers in the 1780s estimated that a good digger could harvest 60 pounds in a day. Given 120 days to harvest over a two year period and assuming that eight diggers averaged around 25 pounds a day, they could have reached twelve tons. Nathan Boone et al., *My Father, Daniel Boone: The Draper Interviews with Nathan Boone* (Lexington: University Press of Kentucky, 1999), 81–83.

founding the town of Marietta in 1788.[31] In September, Mathews and four others in his surveying party took advantage of a lull in their duties, camped on the headwaters of Short Creek, and found ginseng growing "in great abundance." They spent five days wandering the nearby forests digging roots. Demonstrating a detailed knowledge of digging practices, Mathews claimed that the best diggers could dig more than 40 pounds a day, a considerable sum that could have earned him upwards of 20£ worth of goods at the nearest mercantile.[32] Even as they engaged in the symbolic enclosure of the commons by delineating property boundaries and, thus, hastening the transformation of the Ohio Valley, surveyors nevertheless asserted a common right to ginseng.

Unlike the earlier ginseng boom in Canada and New York, Native Americans did not engage in the early trade on the Virginia frontier. Following the Revolution, the middle ground that had created opportunities for cross-cultural collaboration in the trade in 1750s New York had eroded.[33] As American settlers flowed into the Ohio Valley in the 1780s and 1790s, forcing ever greater land cessions from native tribes, the relationship between white Americans and Indians was at its nadir. Rather than drawing them together, ginseng digging by white settlers often exacerbated the problem, as Native Americans exacted reprisals on groups of white settlers they found on their territory. Shortly after his digging expedition in 1786, Mathews heard that another party of men "out after ginseng" was attacked by Indians. Three were killed and another taken prisoner, which led him to remark that "I feel very happy that I have reached my old quarters and will give them liberty to take my scalp if they catch me after ginseng again

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[31] Andrew Clayton, "Marietta and the Ohio Company," Robert D. Mitchell, Shenandoah Valley Historical Institute, and American Frontier Culture Foundation, eds., *Appalachian Frontiers: Settlement, Society & Development in the Preindustrial Era* (Lexington, Ky: University Press of Kentucky, 1991), 187.
[32] Joseph Buell and John Mathews, "The Journals of Joseph Buell and John Mathews," in *Pioneer History: Being an Account of the First Examinations of the Ohio Valley, and the Early Settlement of the Northwest Territory, Chiefly from Original Manuscripts*, ed. Samuel P. Hildreth (Cincinatti: H. W. Derby & Co., 1848), 187.
[33] White, *The Middle Ground*; Merrell, *Into the American Woods*.

this year."[34] Similarly, May filled his diary with anxious speculation about Indian attacks. He estimated that they had killed some fifty men and women during the summer of 1789, reinforcing his suspicion that "there will be an Indian war."[35] Thus, on the Virginia frontier in the 1780s and 1790s, ginseng harvesting was conducted exclusively by white Americans under the cloud of frontier violence. Such findings support the claim recently put forward by Alan Greer, Virginia Anderson, and others, that the clash between native peoples and Euro-Americans was not an abstract contest between a system based on communal, usufruct property rights and a system based on absolute, individual property rights. White frontiersmen and Native Americans initially experienced it as a fight over the commons. They fought over who could hunt, fish, run livestock, and dig ginseng and where they could engage in these activities.[36]

As surveyors designed towns and drew property borders, and as new human communities situated themselves on the Ohio Valley landscape, new settlers used ginseng as a means of exchange to obtain the products of a rapidly advancing national economy with which they began their lives in the backcountry. One of the first Euro-American settlers in what is now Monroe County, West Virginia, 22-year-old James Alexander built a farm in 1774 near a prominent intersection of two Indian paths in the Greenbrier River valley on the eastern slope of the Alleghenies and a short jaunt from the Wilderness Road. He also operated a small trading post following the Revolution.[37] From 1783 to 1785, Alexander conducted 87 percent of his sales in ginseng, trading for roughly 6,000 pounds worth £643. Because ginseng was still plentiful in nearby hills, virtually all early settlers found it an easy means of extracting some

[34] Buell and Mathews, "The Journals of Joseph Buell and John Mathews," 188.
[35] May, "Journal of Col. John May, of Boston, Relative to a Journey to the Ohio Country, 1789," 119.
[36] Allan Greer, "Commons and Enclosure in the Colonization of North America," *American Historical Review*, April 2012; Virginia DeJohn Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America*, Oxford University Press pbk (Oxford ; New York: Oxford University Press, 2006).
[37] Oren Frederic Morton, *A History of Monroe County, West Virginia* (Dayton, VA: Ruebush-Elkins, 1916), 191-194.

quick wealth while they busied themselves with the tasks of improvement. In the fall, they would bring their ginseng in sacks and open a line of credit that they would use through the winter, spring, and summer to purchase an array of goods. They used the root to pay for plow points, scythes, knives, gunpowder, and other goods that would help them begin life in the forests of western Virginia. Around 47 percent of Alexander's customers used ginseng to pay for their entire purchases for those two years, while most of the remainder used some combination of ginseng, saltpeter, and cash.[38]

Alexander's customers, most of whom were Scots-Irish, included many prominent landholders. Dozens received original land patents from 1783 to 1794 and became owners of some of the choicest property along the river bottoms. William Blanton, for example, purchased 400 acres along Turkey Creek from the Greenbrier Company in 1783 and, the same year, traded 225 pounds of ginseng for a variety of merchandise. Blanton had been appointed constable in 1773 and later purchased a lot from Alexander in the new town of Union. William Ewing, mentioned in chapter one, also received a Greenbrier patent for 170 acres. A majority of Alexander's customers, including Blanton and Ewing, cast votes for electors in the presidential election of 1800, which means they met the property and residency requirements of Virginia.[39] Thus, Alexander's store records indicate that involvement with the ginseng economy was widespread in some Ohio Valley communities and included some of the most prominent landowners and public officials. Alexander became a large landholder as a result of his ginseng venture, donating 26 acres in 1806 to construct the town of Union, which would become the county seat of Monroe.[40]

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[38] Unidentified Private Account Book, 1783-1785 [microfilm], Monroe County Court Records, West Virginia History Center, West Virginia University, Morgantown, WV.
[39] List of voters and patentees are found in Oren Morton, *A History of Monroe County, West Virginia* (Dayton, Va: Ruebush-Elkins Co, 1916), 80–101, 472–73.
[40] Ibid., 191–93.

Indeed, ginseng helped shape fortunes across the Ohio Valley landscape, enabling some merchants who were willing to engage in the trade to accumulate wealth. Andrew Beirne, an Irishman who immigrated to western Virginia in 1795, similarly benefited from the ginseng economy. A 24-year-old Beirne arrived in the county as an itinerant merchant with little property and a stock of goods and immediately set to work trading goods for ginseng.[41] According to what locals told Anne Royall, who toured the Virginia backcountry in 1826, Beirne, a tireless businessman, often went door to door taking people's ginseng roots in exchange for goods. Beirne decided to stay in the county and within a few years, he had moved to Union and constructed a store, where he faced stiff competition from another able merchant named Hugh Caperton. Determined to prevail over his commercial rival, Beirne expanded his operations and opened up several other stores in the county, where he accepted ginseng and other produce for goods. Within a few years, according to local historian Edward White, Beirne had acquired 72 parcels of land, presumably in exchange for nonpayment of store debts, and became the largest landowner and slaveholder in the county.[42] Thus, ginseng greatly assisted Beirne's rise from itinerant merchant to slaveholder, and Beirne helped spread the trade into the more inaccessible parts of the county.

As ginseng shaped individual fortunes and helped grease the wheels of the economy in an area that lacked cash, it also helped sustain the civil and legal functions of local communities. According to court records from Greenbrier County in 1785, a man named John O'Neal, the loser in a lawsuit, was ordered to pay the plaintiff 22 pounds of ginseng. That same year, one John Smith weighed 69 pounds of ginseng due John Brown in Augusta County, presumably a

[41] Edward T. White, "Andrew and Oliver Beirne of Monroe County," *West Virginia History,* Vol. 20, No. 1 (October 1958), 16-23.
[42] Ibid.

reference to a verification of payment in a judgment.[43] Thus, in the early years of Euro-American settlement, ginseng quickly became woven into the fabric of community life in western Virginia.

The impact of the frontier boom on ginseng populations in the Ohio Valley was noticeable. When the boom commenced in the mid-1780s, diggers found virtually untouched patches of ginseng comprised of hundreds, even thousands, of individual plants. The slow-growing nature of the plant and challenges to seed germination dictate that patches also grow very slowly. Although long-term studies of wild ginseng populations are surprisingly lacking, short-term studies have suggested that for a patch to increase from a handful of individual plants to over one thousand takes hundreds of years.[44] And in the late eighteenth century, there were many virgin patches of such a size. Both John Mathews and Johann Schoepf, two men familiar with the practice in the mid-1780s, asserted that one experienced digger could harvest up to sixty pounds in one day, a remarkable sum that no one would ever again match.[45] Mathews claimed that even the medium sized roots he dug were twenty or thirty years old, which he measured by counting the growth rings on the rhizome. Just a short two decades later, Francois Michaux, who visited the Ohio Valley in 1802, claimed that "a man cannot pull up above eight or nine pounds of fresh roots per day."[46] Michaux himself was able to collect half an ounce, "which was a great deal, considering the difficulty there is in procuring them."[47] One observer, referring to Pennsylvania in the 1780s, declared that "ginseng is either dug up for sale, or rooted up by the hogs so much, that it begins to grow scarce in the inhabited parts, especially where the people are any ways thick settled; and seems likely to be entirely demolished

[43] Kenneth D. Swope, "Ginseng," *Journal of the Greenbrier Historical Society,* (1982), 107.
[44] Lewis and Zenger, "Population Dynamics of the American Ginseng Panax Quinquefolium (Araliaceae)."
[45] Buell and Mathews, "The Journals of Joseph Buell and John Mathews," 187; Schoepf, *Travels in the Confederation, 1783-1784*, 1:236–37.
[46] Michaux, *Michaux's Travels to the West of the Alleghany Mountains*, 231.
[47] Ibid.

amongst the inhabitants in a few years."[48] Even if all observers were exaggerating slightly, these kinds of reports suggest that overharvesting began to take its toll in much of the plant's range within two decades of the boom.

Aside from such anecdotal evidence, assessing the impacts of the Ohio Valley ginseng boom from existing traditional sources is a difficult task, but ecology can help. When determining the impact of harvests on ginseng populations across wide geographic areas, ecologists take into account three factors as they relate to a hypothetical ginseng patch: (1) the likelihood that harvesters find a particular patch, (2) how much of the patch they harvest, and (3) other mitigating factors such as the number of seeds they successfully replant.[49] The first factor, whether or not a particular patch was found by diggers, was typically a function of geography. It depended on the range covered by diggers and the location of the patches. It is safe to say that around the turn of the nineteenth century, there were vast stretches of territory that had not yet seen harvesting pressure. The second and third factors, however, were largely functions of culture, and it was not conducive to a conservation ethic. When diggers approached a particular patch of ginseng, they brought with them certain cultural baggage that determined how much of that patch they harvested and whether or not they took measures to replenish it. If they harvested an entire patch and took no further measures to replant seeds, it may have taken decades, if ever, for the patch to regain what ecologists call a minimum viable population size, which may be as few as two hundred plants.[50]

Of course, each individual entered the forest with his or her own complex web of cultural values and attitudes, and sources that could help reconstruct them all simply do not exist. But early harvesters had little incentive to conserve the plant. First, they were extremely

[48] Humphrey Marshall to Joseph Banks, 14 November 1786, in Bartram and Marshall, *Memorials of John Bartram and Humphry Marshall*.
[49] McGraw et al., "Ecology and Conservation of Ginseng (Panax Quinquefolius) in a Changing World."
[50] McGraw et al., "Ecology and Conservation of Ginseng (Panax Quinquefolius) in a Changing World," 69.

mobile, often lacking long-term land tenure. Many of them took up residence as squatters and faced near constant threats to their tenure. John Mathews ran into ten white families along Muskingam Creek who were squatting on federal lands and in the midst of a protracted struggle with federal troops who sought to remove them.[51] The 1802 diary of land speculator George Hunter is also full of references to finding people living on lands for which he claimed a patent.[52] According to Wilma Dunaway, as late as 1810, absentee owners held title to some 93 percent of the land in what is now West Virginia.[53] Without the legal means of ensuring long-term, multigenerational tenure, one strong incentive for long-term stewardship was lacking. Secondly, hunters generally eschewed social rules, both statutory and informal. Indeed, many of them, like Daniel Boone, were attracted to a life in the woods because of the freedom it offered and did not readily submit to limits on that freedom. As Johann Schoepf observed in 1783, "They shun everything which appears to demand of them law and order, dread anything that breathes constraint…Their object is merely wild, altogether natural freedom, and hunting is what pleases them."[54] Hunters' track record with other game species suggests that they placed little value on conservation. They hunted buffalo and elk to extirpation in the Ohio Valley, and they significantly reduced the numbers of bear, deer, beaver, and any other animal whose hides could be marketed. The occasional call for game conservation always went unheeded, leading Stephen Aron to conclude that "About the only ceiling that pioneer hunters observed was that set by the supply of powder and bullets."[55] When these hunters approached a patch of ginseng, therefore, all indications suggest that they typically dug the entire patch.

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[51] Buell and Mathews, "The Journals of Joseph Buell and John Mathews," 183.
[52] George Hunter, "The Western Journals of Dr. George Hunter, 1796-1805," ed. John Francis McDermott, *Transactions of the American Philosophical Society*, New Series, 53, no. 4 (1963): 38–39.
[53] Dunaway, *The First American Frontier: Transition to Capitalism in Southern Appalachia, 1700-1860*, 57.
[54] Schoepf, *Travels in the Confederation, 1783-1784*, 1:239.
[55] Aron, *How the West Was Lost*, 55–57.

Moreover, evidence suggests that harvesters took no measures to replant ginseng seeds. In order to replant seeds, one must harvest only in the late fall, typically after mid-September when the plants begin to produce seeds. Francois Michaux remarked in 1802 that unlike the Chinese, who begin digging in the autumn, Americans "begin gathering ginseng in the spring, and end at the decline of autumn."[56] John May's diary further suggests that people did not wait until the autumn to harvest. When he arrived in Marietta in June, he noted that several other merchants were already taking ginseng. He was bombarded by potential customers who brought ginseng ready to trade, but he refused to take any on account of recent news that prices had dropped.[57] Without waiting until the plant went to seed, harvesters contributed to the rapid depletion of the plant near the Ohio River. Following the initial "smash and grab," ginseng populations retreated deeper into the more inaccessible places, mostly located in the mountains.

The Changing Geography of Ginseng

By the 1840s, the dynamics of the ginseng trade had changed. First of all, the centers of production—that is, the forests from which people harvested ginseng—had shifted away from the areas along the Ohio River and well-travelled paths like the Wilderness Road and moved deeper into the mountainous interior and south into southern Appalachia. As part of the 1840 census, federal enumerators recorded the only county-level statistics of ginseng production from the nineteenth century. They surveyed local merchants in every county, inquiring into the value of the ginseng roots they handled. An analysis of this data paints a revealing picture of the changing forest economy in central and southern Appalachia. While upstate New York still produced large quantities of ginseng (as much as $140,000 that year), North Carolina ($46,000),

[56] Michaux, *Michaux's Travels to the West of the Alleghany Mountains*, 233.
[57] May, *The Western Journals of John May, Ohio Company Agent and Business Adventurer*, 115.

(West) Virginia ($35,000) and Kentucky ($35,000) were the clear leaders south of New York. Significantly, ginseng had replaced skins and furs in these states as the most valuable forest products. In Kentucky, the hunters' paradise of Daniel Boone's generation, rural residents now traded nearly twice as much ginseng as skins and furs.[58]

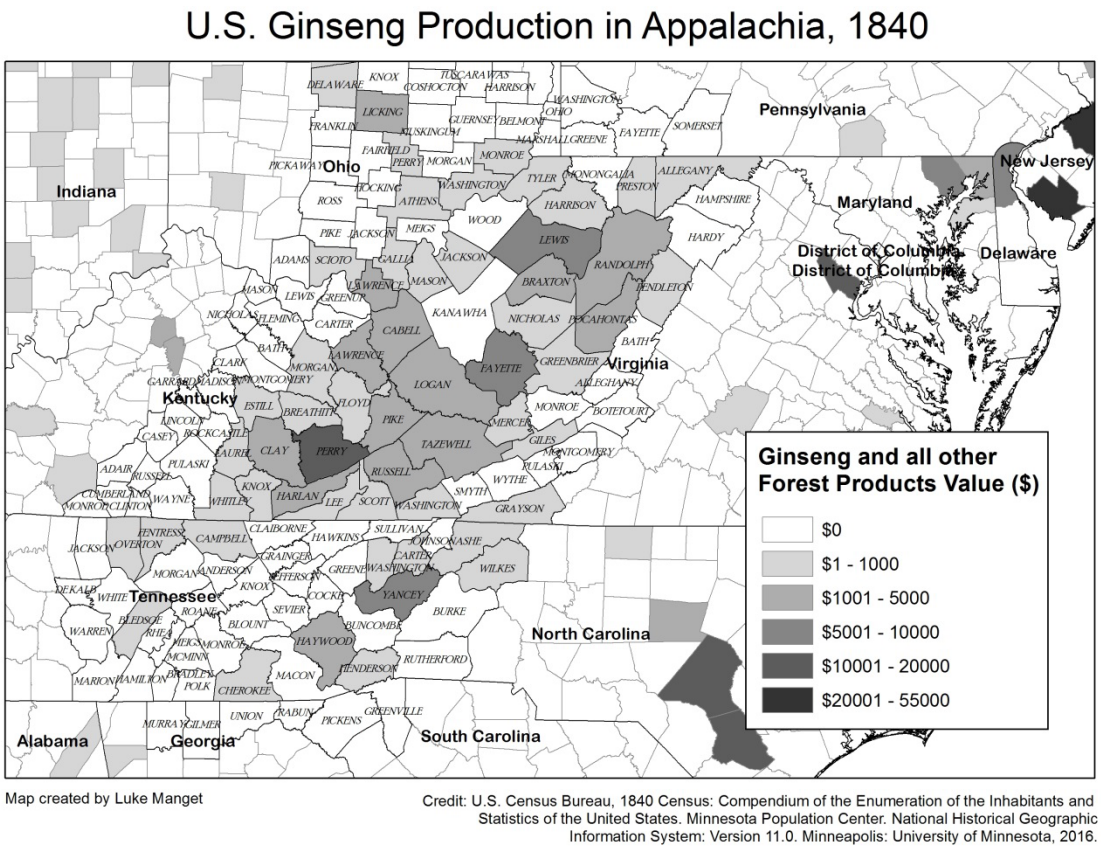

Figure 3. Map showing ginseng production in Appalachia, 1840.

The 1840 census data also reveals that the vast majority of ginseng came from the least accessible and least populated sections of central Appalachia. Ginseng production had moved away from the Ohio River and further into the mountainous headwaters of the Tug Fork of the

[58] It must be noted that the census category includes the value for "Ginseng, and all other productions of the forest." It is impossible to know how much of the sum totals were for ginseng alone. However, there were separate categories for timber, tar, pitch, turpentine, pot ashes, skins, and furs. Therefore, it is likely that the bulk of the totals in this category was comprised of ginseng. U.S. Census Office, *Compendium of the Enumeration of the Inhabitants of the United States of the Sixth Census, 1840* (Washington: Thomas Allen, 1841).

Big Sandy River. In Kentucky, the leading ginseng counties were Perry, Lawrence, Breathitt, Pike, Harlan, Clay, and Knox Counties, all clustered in the mountainous eastern portion of the state. In West Virginia, large amounts of ginseng came from Logan, Cabell, and Jackson counties, located on the eastern bank of the Tug Fork. However, West Virginia's top producers were further east in Fayette, Pocahontas, Randolph, and Greenbrier, which comprised the highest elevated ridges in the state.[59] Whereas ginseng was found throughout much of the Ohio Valley in the eighteenth century, the geography of ginseng harvesting was moving further into the mountains, following the movement of settlers into those regions.

The frontier ginseng boom came to western North Carolina a little later than the Ohio Valley. As discussed in chapter one, ginseng was not an economic factor on the southern frontier prior to the American Revolution. By the 1780s and 1790s, the Cherokee had begun to dabble in it, but the extent of this trade is unclear. A 1790 report from Indian traders in the piedmont region of north Georgia informed Congress that "ginseng abounds in that country, but is not yet gathered in any considerable quantities."[60] Yet, in his 1802 book, *View of South Carolina,* John Drayton remarked that "Ginseng has been so much sought by the Cherokee Indians for trade, that at this time, it is by no means so plenty, as it used formerly to be in this state."[61] Evidently, the trade among Native Americans was only getting started in the 1790s, but it escalated quickly. Merchants began looking south, believing that the southern reaches of the Appalachians still contained virgin ginseng patches waiting for the spade. Perhaps reflecting this optimism, Michaux noted in 1802 that the plant "grows chiefly in the mountain regions of the Alleghenies, and is by far more abundant as the chain of these mountains incline south

[59] Ibid.
[60] Southern Tribes, Communicated to Congress, January 12, 1790, American State Papers, Indian Affairs Vol. 1, 1st Cong., 2nd Sess., No. 9.
[61] John Drayton, *A View of South Carolina, as Respects Her Natural and Civil Concerns* (Charleston, Printed by W. P. Young, no. 41, Broad-street, 1802), 83, http://archive.org/details/viewofsouthcarol00dray.

west."[62] American settlers pouring into western North Carolina found it plentiful, and itinerant merchants found it to be a very useful medium of exchange with the early settlers there.

James Patton helped expand the trade into western North Carolina. Born in Ireland in 1756, Patton fled high rents and oppressive landlords and arrived in Philadelphia in 1783, where he immediately set out for the backcountry. He undoubtedly developed experience with ginseng as he worked various jobs in western Pennsylvania, and within a few years, he headed south along the Great Valley and entered the world of frontier commerce in western North Carolina. According to an autobiographical letter he left for his children, Patton spent the early 1790s traveling around the mountains purchasing ginseng, furs, beeswax, and snakeroot. He remained in each location for a week or two and sent word ahead announcing his imminent arrival to give the inhabitants time to gather these products. He was so successful at this business that he eventually hired a partner, Andrew Erwin, purchased land in several states, and opened an inn and store in Wilkesboro, North Carolina, on the Yadkin River.[63] Itinerant merchants like Patton relied on ginseng to sustain their businesses in the early years of commercial development.

In western North Carolina, the trade really advanced the first decade of the nineteenth century with the arrival of Isaac Heylin from the Ohio Valley. An able physician and active member of the Philadelphia medical community, Heylin traveled to China in the 1790s where he likely learned about clarification, for upon returning to the United States, he set off for the Ohio

[62] By "Alleghenies," Michaux was referring to the portions of the Appalachian Mountain chain that extended from Pennsylvania down to Georgia. This was a common term used for this geographical region prior to the late nineteenth century, when it was referred to as Appalaachia. Michaux, *Michaux's Travels to the West of the Alleghany Mountains*, 231.

[63] Tyler Blethen, Curtis Wood, "A Trader on the Carolina Frontier," in Robert D. Mitchell, ed., *Appalachian Frontiers: Settlement, Society & Development in the Preindustrial Era* (Lexington, Ky: University Press of Kentucky, 1991), 150–165.

River Valley to use his new knowledge on the ginseng frontier.[64] Near the upper reaches of Limestone Creek, upstream from where Daniel Boone was doing business, Heylin spent around $1000 to build a ginseng factory, making him one of the first to clarify ginseng in Kentucky. He must have done well, for in 1802, he hauled 4000 pounds of clarified root on two wagonloads to Limestone Creek, where it was put on a keelboat for Pittsburgh. If Michaux's estimates are accurate, Heylin stood to make $24,000 on the shipment. He soon grew dissatisfied with the trade in the Ohio River Valley—perhaps due to the root's increasing scarcity—because when the explorer and land speculator George Hunter passed through Kentucky later that year, Heylin offered to sell him his business for $2000. Hunter told him he'd think about it.[65] Although Hunter's journal makes no mention of whether he accepted the offer, Heylin must have found a buyer somewhere, as he was soon investing time and money in ginseng clarification in western North Carolina.

Over the next three decades, remaining a resident of Philadelphia, Heylin induced several prominent merchants in western North Carolina to build factories and sell their ginseng to him. He must have established connections with James Patton and his partner Andrew Erwin in Wilkesboro, for when Erwin, who was married to Patton's sister, had his third child in 1807, he named him Isaac Heylin Erwin.[66] In 1808 the noted botanist John Lyon mentioned passing through "Patton & Erwines ginseng works" near Scott's Creek in Haywood County, which suggests Heylin may have taught them the art of clarification.[67] Lyon's reference is the earliest indication of a ginseng factory in western North Carolina, and sources are sparse for the next

[64] "Ginseng," *The Wilmington Daily Herald,* 6 March 1860. This article asserts that Heylin traveled to China but places the date at 1807, which does not make sense given his involvement with the trade at an earlier date.
[65] Hunter, "The Western Journals of Dr. George Hunter, 1796-1805," 42.
[66] Moore Family Tree, Ancestry Family Trees, ancestry.com [accessed December 2, 2015].
[67] John Lyon, Joseph Ewan, and Nesta Ewan, "John Lyon, Nurseryman and Planter Hunter, and His Journal, 1799-1814," *Transactions of the American Philosophical Society* 53, no. 2 (1963): 39.

two decades. Sometime in the late 1820s, Heylin convinced two young Buncombe County citizens, Nimrod S. Jarrett and Bacchus J. Smith, to move further west to Jonathan's Creek and operate a ginseng factory.[68] In the 1830s, Smith joined John McElroy at another of Heylin's factories along the Caney River in Yancey County, where for one year in 1837 they produced some 25,000 pounds of clarified roots from 86,000 pounds of green roots.[69] These were the pioneers of ginseng manufacturing in western North Carolina, and Heylin was the driving force behind them. Heylin may have been involved in convincing Felix Walker, who opened a store in 1818 on Soco Creek in Haywood County, to purchase ginseng from the Cherokee. Walker hired a 13-year-old William Holland Thomas as clerk to barter goods for ginseng and other forest products, and when Thomas opened his own stores in the 1830s and 1840s in Murphy, Scott's Creek, and Qualla Town, he sent Heylin large shipments of roots.[70]

Ginseng and the Commons Culture

In the 1840s, the ginseng trade thrived in areas distant from major transportation routes where the agricultural economy was least developed. Perhaps not surprisingly, western Virginia's counties that produced significant quantities of ginseng in 1840 (more than $1000), on average, produced some 13 percent less cattle, 14 percent less corn, and 70 percent less wheat than counties that did not export ginseng. This has much to do with the fact that major ginseng producing counties contained, on average, 40 percent less people than counties that did not

[68] A. T. Davidson, "Reminiscences of Western North Carolina," *The Lyceum* (January 1891), 5-6. For another good source on Smith, see his obituary in "The Late Bacchus Smith," *The Asheville Citizen,* 6 August 1886.
[69] Conaro Drayton Smith, "Autobiography of Dr. Conaro Drayton Smith VI," in *A History of the Methodist Church in the Toe River Valley*, ed. Lloyd Bailey (Burnsville, NC: Self Published, 1986), 328.
[70] E. Stanly Godbold and Mattie U. Russell, *Confederate Colonel and Cherokee Chief: The Life of William Holland Thomas*, 1st ed (Knoxville: University of Tennessee Press, 1990), 9.

produce ginseng.[71] Thus, there was a strong correlation between population, economic development, and ginseng production. In his social history of Appalachia during the late antebellum era, John Sherwood Lewis has argued that the people who settled these isolated areas did so not because they saw commercial potential in these areas but, rather, because they desired a way of life that balanced freedom and stability. Displaced by economic developments associated with the market revolution elsewhere in the United States, they moved to these isolated areas because, like the hunters before them, they wanted to live off the "spontaneous productions of nature." The forest commons provided access to a wealth of resources that they could not, or would not, produce on a farm.[72]

While rural people drew heavily on many resources from the forest commons, including fish, game, forage, and berries, as part of their subsistence patterns, ginseng had the highest market value and was the most lucrative and, therefore, the most highly sought after. Local historian John Sutton, who grew up in antebellum Braxton County in what would become West Virginia, later claimed that "the value of wild ginseng has been many times greater in a commercial sense to the inhabitants of central West Virginia than all the magnificent timber that has stood as stately sentinels in the forest for a thousand years. Ginseng was the greatest source of income the common people had for a half century after the settlement of the country."[73] Digging ten dollars' worth of roots might take five days to gather, whereas it took a three-year-old steer or ten large walnut trees to bring in the same amount. Ginseng was simply easier to obtain and required little to no overhead investment.[74] Thus, the commons was a vital

[71] U.S. Census Office, *Compendium of the Enumeration of the Inhabitants of the United States, 1840* (Washington: Thomas Allen, 1841).
[72] John Sherwood Lewis, "Becoming Appalachia: The Emergence of an American Subculture, 1840-1860" (PhD Dissertation, University of Kentucky, 2000).
[73] John Davison Sutton, *History of Braxton County and Central West Virginia* (Sutton, W. Va., 1919), 213, http://archive.org/details/historyofbraxton00sutt.
[74] Ibid.

part of the local economy, and ginseng was the most crucial. By the middle third of the nineteenth century, it had replaced skins and furs as the most commonly traded commons commodity in western Virginia.[75]

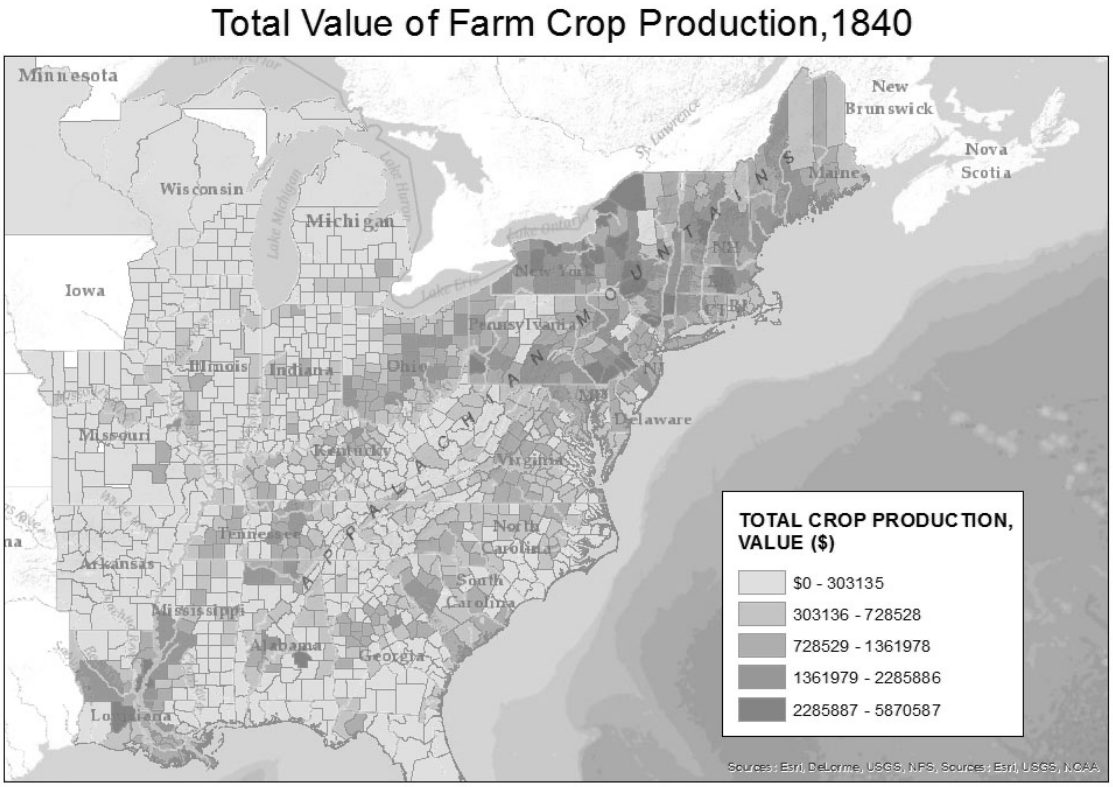

Figure 4. Map of the eastern United States showing total crop production, 1840.

Many observers noted that ginseng helped maintain a lifestyle largely free from dependence on crop markets. Author Anne Royall, who grew up in Monroe County, (West) Virginia before moving to the east coast, wrote that people in the remote mountain

[75] This can be seen in U.S. Census Office, *Compendium of the Enumeration of the Inhabitants of the United States* (Washington: Thomas Allen, 1841). In the 52 counties of western Virginia (now West Virginia), $35,000 worth of ginseng was sold, whereas only $22,000 of skins and furs were sold in 1841. Moreover, exports from 1790 to 1820, as conveyed in letters from the Treasury Secretary to the House of Representatives in the American State Papers indicates a steady decline in skins and furs.

communities of Greenbrier, Monroe, Randolph, Pocahontas, Giles, and Tazewell counties "lack every requisite essential for commercial purposes. They are without capital, system, or enterprise, nor do they seem ambitious of either."[76] Indeed, she acknowledged, they preferred a life dependent on the commons. "Remote from commerce and civilized life," she wrote, "confined to their everlasting hills of freezing cold, all pursuing the same employments, which consist in farming, raising cattle, making whiskey (and drinking it), hunting, and digging sang, as they say, present a distinct republic of their own, every way different from any people."[77] Hunting was their passion, and it could be made to pay, at least in the eighteenth century; but increasingly in many communities like Monroe County, as game grew scarcer, ginseng brought in the cash. Thus, many of the values ascribed to the early hunters in the region did not die with the imposition of private property regimes. Rather, they continued to exist among portions of the population in the more inaccessible districts.[78] These people were indeed enmeshed in a trans-Pacific supply chain, but this did not mean they were all governed by capitalist values. They did not live independent of markets, and they did not oppose markets, per se, but they

[76] Anne Royall, *Sketches of History, Life, and Manners in the United States* (New Haven: Anne Royall, 1826), 72.
[77] Ibid, 56.
[78] Of course, it is difficult to take travelers' accounts of a region, especially a place like Appalachia whose history is rife with stereotypes, at face value. They certainly brought with them cultural baggage that colored the lens they used to view mountain society, and they were typically not in an area long before forming impressions of the people. But there are at least three reasons why this evidence should be considered. First, there was much consistency among these travelers' observations. This was not a case of one person with a literary aim overly romanticizing a people. There was consistency among many writers, from private diarists to book authors to natives of the region, in ascribing to mountain people a set of values that supported a semi-nomadic lifestyle. Secondly, these writers were not overly critical of the region's inhabitants and traded in no particular stereotypes. Royall, in fact, was generally sympathetic to the people and praised them for being "remarkable for moral and inoffensive manners." Thirdly, even if we cannot accept that their descriptions of mountain society reflected a reality in the mountains and we must accept that their writings reveal more about the observers than the observed, perceptions of difference are still important pieces of evidence. It still suggests that these travelers, many of whom were fully enmeshed in an increasingly market-oriented world, believed the people of the mountains operated under a different set of values.

wanted a different relationship to the land than the ambitious agriculturalist, one that blended farm work with the work of hunting, fishing, and foraging.

This impulse created a strong disincentive to cultivate ginseng. Typically, as in the case of cotton, rice, tobacco, or virtually any other lucrative plant, commodification was quickly followed by cultivation, but there is no evidence that anyone in Appalachia cultivated the plant on private property.[79] However, this does not mean that it could not be done. As discussed in chapter one, William Byrd could not do it, but that was because he tried to do it on the Virginia peninsula where it was too warm. As one North Carolina newspaper reported in 1860, "attempts have been made to propagate it by seed, but so far have failed, though an experienced Ginseng dealer informs us that he has no doubt it can be done by adhering to the habits of the plant as to location."[80] This ginseng dealer was correct. Since at least the 1890s, ginseng has been successfully cultivated across the United States, demonstrating that its growing conditions could have easily been replicated by diligent efforts in the mid-nineteenth century. Why, then, did mountain farmers not cultivate such a lucrative crop? Nature certainly played a role. Economics did as well. Many lacked the land tenure that would allow for such delayed returns. Perhaps tenant farmers did not have three to five years to wait on the crop to become profitable. But what about landed farmers? They did not cultivate ginseng, it seems, because they did not want to spend the time necessary to cultivate it. They preferred the freedom of harvesting the plant from the forest commons to the financial profitability of cultivating it, and they could find enough in the wild to bolster their security and independence. Moreover, even if they wanted to assert more ownership over the plants on their property, they

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[79] William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England*, 1st ed (New York: Hill and Wang, 1983); Theodore Steinberg, *Down to Earth: Nature's Role in American History* (Oxford; New York: Oxford University Press, 2002); Mart A. Stewart, *"What Nature Suffers to Groe": Life, Labor, and Landscape on the Georgia Coast, 1680-1920*, Wormsloe Foundation Publications, no. 19 (Athens: University of Georgia Press, 1996).

[80] "Ginseng," *The People's Press* (Winston-Salem, NC), 23 February 1860.

were unlikely to convince their neighbors to acknowledge their right to it. Unimproved land, particularly the shady mountainsides on which ginseng thrived, was treated as common property. By the 1840s, custom had dictated that ginseng was the property of the harvester, rather than the landowner.

Over the first half of the nineteenth century, hunting ginseng became deeply woven into the fabric of rural life throughout the southern mountains. They came to know it intimately, to know its seasonal cycle, to know its ecology, where it grew, what it grew next to, and how it interacted with climate and soil. In order to find it, they had to know the landscape intimately, as it did not grow widely but, rather, in isolated patches, sometimes comprised of hundreds of plants. While diggers were particularly secretive about where they found ginseng, they were more than willing to show off their large roots at the country store and spin tales about the elusive roots. According to one observer, "Wonderful sang patches found in the mountains and lost again, although carefully sought, form the staple of many of the simple legends of these parts."[81] Much like hunting and fishing, digging ginseng blurred the line between leisure and labor. Many rural residents developed an intense fondness for wandering the hills in search of the plant. "A day of sanging had all the fun of gambling with no risk of losing any of your own nickels," one West Virginian later remembered of the antebellum era. "[I]t was similar to an Easter egg hunt with higher stakes for the adults."[82] Some pursued ginseng out of necessity, and others because they enjoyed it, but for most rural folk, it was a false dichotomy. They hunted the root because they needed the money and because they enjoyed it.

Ginseng digging provided mountaineers with a shared experience that formed the basis of community. As a node of commerce and a meeting place, the ginseng factory served some

[81] "The Mountains of West Virginia," *Forest and Stream,* 19 August 1875.
[82] John Nuttall, *Trees Above with Coal Below* (San Diego: Neyenesch Printers, 1961), 18.

important social functions. Allen T. Davidson, who grew up in Haywood County in the 1820s, remembered seeing:

> the great companies of mountaineers coming along the mountain passes…with pack horses and oxen going to the 'factory' as we called it. It was a great rendezvous for the people where all the then sports of the day were engaged in, such as pitching quoits, running foot races, shooting matches, wrestling, and sometimes, a good fist and skull fight. But the curse and indignation of the neighborhood rested on the man who attempted, as we called it, 'to interfere in the fight, or double-team, or use a weapon.[83]

Ginseng factories like these took in large amounts of ginseng. In 1851, Mary Kite stayed a night with the owner of one of these factories—likely Bacchus Smith's who had recently come from the Caney River to open a new branch—and claimed that he "had as much as ten thousand pounds gathered."[84] Suffice to say, it would take several hundreds of people to collect that amount in one season, which further reinforces the idea that ginseng digging was widespread in antebellum Appalachia. Davidson's portrait of the ginseng rendezvous suggests that the shared experience of ginseng digging and trading, based on equal access to the commons, helped strengthen a sense of community among sparsely settled farmers.

Perhaps the best set of sources with which to assess the evolving relationship between mountain communities and ginseng is the country store records of Ely Butcher, a merchant in Randolph County, Virginia (now West Virginia). Spanning the years 1841 to 1857, Butcher's records provide the most comprehensive set of store records from the Ridge and Valley region in the antebellum era, although a few years from the mid-1840s and mid-1850s are missing. To extract meaning from Butcher's account books, however, requires an understanding of the community in which he operated. The landscape of Randolph County was comprised of a series of long, undulating ridges running north and south. From the ridgetops, Shaver's Mountain, Cheat Mountain, and Rich Mountain appeared to the observer as long, unbroken waves, their

[83] Davidson, "Reminiscences…," 5-6.
[84] Mary Kite, "A Visit to North Carolina," *The Friend,* 7 September 1869.

crests of spruce and fir trees reaching 4600 feet in elevation rolling through an ocean of hardwood forests. The Tygart River and the Shaver's and Glade forks of the Cheat River meandered through the forests between the ridges. The most heavily populated areas were in the northwestern end of the county around county seat of Beverly in the wide Tygart Valley, which stretched for 40 miles through the county and averaged roughly one mile in width. Its soils were dominated by relatively acidic Atkins silt loam, which was suited to cultivated crops but better suited to pasture.[85]

Incorporated in 1790 on the east bank of the Tygart River, Beverly grew steadily as the commercial hub of the county, expanding as agricultural development proceeded in the valley. From 1790 to 1840, population in Randolph County grew from 951 to 6,200, and cattle, corn, swine, and wheat emerged as its leading commodities. It was not a prolific producer of these farm commodities in 1840, but it was near average among western Virginia counties.[86] Randolph was also the seventh most productive ginseng county in the state, making nearly $2000 that year in sales.[87] Wagon roads criss-crossed the Tygart Valley, and roads ascended the mountains along all the major tributary creeks. By 1850, Beverly boasted a population of roughly 200, including two wagon-makers, three saddlers, two lawyers, two carpenters, two blacksmiths, and four country stores.[88] The eastern and southern ends of the county, however, remained more sparsely populated and heavily forested. Randolph had one of the lowest population densities in western Virginia in 1850 at nine persons per square mile. Beneath the façade of agricultural development, however, Randolph suffered from unequal land distribution. Tenancy was a persistent problem. Nearly half (49 percent) of all households owned no real

[85] U.S. Department of Agriculture, *Soil Survey of Randolph County Area, Main Part, West Virginia* (August, 1982), 7.
[86] U.S. Census Office, *Compendium of the Enumeration of the Inhabitants of the United States* (Washington: Thomas Allen, 1841).
[87] Ibid.
[88] Determined from manuscript census records, U.S. Census Office, 1850.

estate in 1850, while the average real estate value for those who did own their farms was $2000. A legacy of the land engrossment during the frontier phase, 44 percent of the total real estate value reported to the census in 1860 was owned by less than fifty individuals.[89]

Ely Butcher, whose parents had moved to Randolph County in the 1790s from eastern Virginia, was a commercial and civic leader in Beverly. Sometime around 1840, he opened a store twelve miles southwest in the small and more rural community of Huttonsville on the upper reaches of the Tygart River, and he placed his 14-year-old son, Ely Baxter, in charge of the store.[90] The records of this store reveal a community that was developing its agricultural resources but still very much dependent on the forest commons. For one calendar year, from the spring of 1840 to the spring of 1841, some 64 percent of his revenues came from cash transactions, and 10 percent came from bartering for farm products such as bacon, corn, and wheat. The remainder (26 percent) came from bartering products from the forest commons, including ginseng (9 percent), skins and furs (4 percent), maple sugar (4 percent), and chestnuts (3 percent).[91] The economic impact of the forest commons was greater than these numbers would suggest, however. Much of the cash used by customers, for example, likely came from hogs, of which some $13,000 worth were owned by Randolph County farmers in 1850. Most farmers, as elsewhere in Appalachia, relied on the forest commons to raise them. By marking their hogs' ears, they turned them out into the forests for most of the year to feed on mast such as acorns and chestnuts before rounding them up in the fall to slaughter or drive to overland markets. Additionally, sheep were frequently herded along the mountain tops to graze on

[89] Lewis, *Transforming the Appalachian Countryside*, 85.
[90] Thomas Miller and Hu Maxwell, *West Virginia and Its People, Vol. II* (New York: Lewis Historical Publishing Co., 1913), 157.
[91] Ely Butcher Store Account Books, Randolph County, 1841-1883, West Virginia State Archives, Charleston, West Virginia.

native grasses. Indeed, if we want to measure the overall impact of the forest economy, we might begin with a number considerably more than 26 percent.

Similarly, ginseng played a more important role, both economically and culturally, than Butcher's ledgers would indicate. It may have comprised less than ten percent of Butcher's revenues, but it was nevertheless used by many farmers of all levels of wealth to balance their accounts with Butcher. Of his 305 customers, more than one-third, or 105 of them, paid him in ginseng. Most of these ginseng customers were clustered in the same general area in the mountains west of Huttonsville. Of those 105 customers, some 45 percent owned no land, and of the 55 percent that did own land, 15 percent owned more than $2000 in real estate, a sum that placed them in the top wealthiest quarter of landowners. Most of Butcher's ginseng customers were young heads of household, 20 to 30 years old, with either no children or very young children who owned less than $500 worth of land, if they owned any at all. Both Isaac Dodrell and James Ware, for example, were both 20 years old, landless, and newly married when they first appear in Butcher's records, and they both relied heavily on the forest commons to build their new lives. Every fall, Dodrell brought in a load of ginseng to pay for most of his store purchases, which averaged roughly five dollars per year. Ware, similarly, brought in roots, maple sugar, and venison, as well as corn and one calf. Similarly, Lewis Cowgar covered a $103 bill over a period of five years with $36 in ginseng, $24 in skins, $12 in fish, $4 in beeswax, and the rest in cash, wool, and "merchandise." In 1841, Daniel Wamsley, a 33-year-old tenant farmer with a wife and two young children paid for an $18 bill with $16 worth of ginseng. Thus, the pattern was clear: the county's small and landless farmers, especially those living in the highland areas in the Tygart Valley headwaters, created lives for themselves that integrated the forests into their seasonal agrarian routines, and ginseng was the pillar of their forest economy.

While the county's smallholders leaned heavily on the forest commons to access the national economy, landowners of sizeable wealth also participated in the trade. Samuel Wamsley, a 22-year-old farmer with no children who owned $5,000 in real estate in 1850, paid 22 percent of his $57 bill with ginseng. The family of Jesse Wamsley, who owned $6000 worth of land, brought in regular loads of roots every fall. Jesse's son and three daughters traded a load of roots at Butcher's every September, typically the first of such transactions for the year. Similarly, Henry Vandevender brought his four daughters to the store to trade their ginseng. They used ginseng to cover their entire purchases from 1841 to 1847, which ranged from $3 to $27 per year.[92] John Sutton later recalled that "A great many of the best citizens and successful businessmen of central West Virginia bought their school books and made their first pocket change by digging the greatest of all the herbs known."[93] Thus, many young men and women used ginseng to help them up the socio-economic ladder.

One of the ginseng diggers in interior West Virginia was James B. Hamilton. Born in 1830 and raised on a large farm in Fayette County, West Virginia, Hamilton was, by 1858, a successful farmer, surveyor, and active member of the Ansted Community. His diary from that year indicates that from late August through September, he hunted ginseng almost daily in the hills along the New River near its confluence with the Gauley. On good days, he made as much as $1.37. Although his diary does not reveal the destination of his roots, he likely brought them to a nearby store to pay off his debts. During the rest of the year, he surveyed roads, worked in the fields, tended to livestock, participated in the annual muster, worked the polls on election day, and attended church meetings.[94] An ambitious man, he was determined to "profit" by the

[92] Ely Butcher Store Account Books, Randolph County, 1841-1883, West Virginia State Archives, Charleston, West Virginia.
[93] Sutton, *History of Braxton County and Central West Virginia*, 214.
[94] "Diary of James B. Hamilton," in J.T. Peters and H.B. Carden, *History of Fayette County, West Virginia* (Charleston, WV: Jarrett Printing Co., 1926), 200-212.

advice of Benjamin Franklin. "'Early to bed, early to rise, makes a man healthy, wealthy, and wise' is sound wisdom," he wrote. His almost daily jaunts to dig ginseng in September and October helped him accumulate wealth.[95] By 1860, ginseng and this assortment of other income streams had helped him accumulate $6,000 worth of real estate and $1000 worth of personal property, making him one of the wealthiest landowners in the community.[96]

Shifting our gaze to southwestern North Carolina, we can see another instance in which ginseng helped support a subculture dependent upon the commons. In 1839, Waynesville native William Holland Thomas opened a store in Cherokee County near Fort Butler in the southwestern tip of North Carolina. One of the stockades constructed two years earlier by the U.S. Army to facilitate the removal of the Cherokee from their homes, Fort Butler became the locus around which newly arriving white settlers created the town of Murphy. Thomas, who also owned two other stores in neighboring Haywood County, sold goods to both newly arriving whites and the few hundred Cherokee whom he had helped remain in the mountains. He had traded in ginseng as a clerk for Felix Walker in 1818 and then again in Qualla Town as a teenage store owner in the early 1820s, but in 1839, he encouraged the Cherokee to bring in the root, and he jumped with both feet into the trade. Placing much hope for the article, he ordered his clerks to give it "closer attention than any business you have ever had charge of" and cautioned that it "has more responsibility attached to it" than any other article.[97] In addition to ginseng, he took in other commons commodities for barter, especially skins and furs, chestnuts and pinkroot.[98] While his correspondence does not indicate how much money he stood to make on

[95] James B. Hamilton, "Diary of James B. Hamilton," in J.T. Peters and H.B. Carden, *History of Fayette County, West Virginia* (Charleston, WV: Jarrett Printing Co., 1926), 200-212.
[96] *1860 United States Federal Census* [database on-line] (Provo, UT: Ancestry.com Operations, Inc., 2009).
[97] William Holland Thomas to H. P. King, 9 August 1839, Southeastern Native American Documents, 1730-1842, Galileo Digital Library of Georgia.
[98] William Holland Thomas to Isaac Heylin, 22 November 1839, Southeastern Native American Documents, 1730-1842, Galileo, Digital Library of Georgia.

ginseng, the two counties in which he owned stores produced nearly $2000 worth of ginseng in 1840, according to the census.[99]

Thomas was one of the few merchants in the area who purchased ginseng. Three other area store ledgers have survived from the late 1830s and early 1840s: Jesse Siler's store just across the Cherokee County line in Macon County, William Walker's store on the Valley River, and A.R.S. Hunter's store near Fort Butler. None of them dealt in ginseng.[100] Ginseng was not an ideal medium of exchange, as it was dependent on an unpredictable trans-Pacific trade network. As discussed earlier, John May tried to avoid it, and merchants like Dudley Woodbridge along the Ohio River moved away from ginseng as soon more stable currencies, like specie, could be used. It seems as though many merchants were unwilling to assume the risk of dealing in the root, but Thomas was.

Thomas's records reveal that virtually all the ginseng he purchased came from the Cherokee. According to his store ledgers from 1839 to 1850, Thomas's white customers used cash, bank notes, labor, or some form of farm produce to purchase their goods, whereas the Cherokee relied heavily on ginseng, chestnuts, deer skins, and pinkroot.[101] Thomas's correspondence with his store managers indicates that the bulk of his ginseng came from Shoal Creek, a remote area in western Cherokee County near Wacheesee Town and Turtle Town where a cluster of Cherokee families had resisted the removal orders. Such findings suggest

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[99] U.S. Census Office, *Compendium of the Enumeration of the Inhabitants of the United States* (Washington: Thomas Allen, 1841).

[100] The Siler Store ledger can be found at the Macon County Historical Museum, Franklin, North Carolina. There are two ledgers from William Walker's store that have survived the ages. One is located at the Cherokee County Historical Museum, Murphy, North Carolina. The other, while it is not identified as Walker's ledger, can be found labeled as North Carolina Store Account Book, 1850-1871, North Carolina Department of Archives and History, Raleigh, North Carolina. A.R.S. Hunter's store ledger is located in the Cherokee County Historical Museum, Murphy, NC.

[101] See, for example, Ledger and Indian Accounts, 1840-1858, Quallatown, Haywood County, NC, William H. Thomas Papers, Rubenstein Rare Book and Manuscript Collection, Duke University, Durham, NC; See also Ledger [New Firm], 1839-1843, William Holland Thomas Papers, Rubenstein Rare Book and Manuscript Collection, Duke University, Durham, NC.

that race played a key role in determining commons use in Cherokee County. Interestingly, his white customers were just as likely to purchase chestnuts and pinkroot as the Cherokee were to sell it.[102] Reasons for this racial divide remain unclear. Thomas would have certainly taken ginseng from white customers. Nowhere in his voluminous correspondence with his store managers did he indicate that he wanted ginseng from the Cherokee only.[103] His white customers simply did not supply ginseng like the Cherokee did. Thomas's white customers were relatively well positioned for an income that depended on the sale of farm commodities. The earliest wave of whites to move into the area following Cherokee removal settled on former Cherokee farms on the rich bottomland along the Valley and Hiwassee Rivers, and within two years of removal, the county boasted agricultural production that rivaled her longer-resettled neighbors Macon and Haywood Counties. By 1860, Cherokee was one of the fastest growing counties in western North Carolina. Its inhabitants owned more slaves and slaughtered more livestock than any other western county outside of Buncombe.

The Cherokee, on the other hand, had both the economic incentive and the cultural proclivities to harvest ginseng. Even prior to the arrival of the U.S. Army, they were among the Cherokee Nation's poorest members, if poverty can be measured by a lack of slaves and a lack of merchantable agricultural commodities. While many Cherokee in the north Georgia piedmont owned large plantations and were among the wealthiest individuals in the region, white or Indian, those in the North Carolina mountains tended to cling to a more traditional

[102] Thomas Green, for example, bought five dollars' worth of chestnuts in 1839. See Ledger [New Firm], 1839-1843, William Holland Thomas Papers, Rubenstein Rare Book and Manuscript Collection, Duke University, Durham, NC.

[103] He instructed his manager in Qualla Town to give one cent per pound more for it than what his competitor, Nimrod S. Jarrett, offered. See William Holland Thomas to H. P. King, 9 August 1839, Southeastern Native American Documents, 1730-1842, Galileo Digital Library of Georgia.

lifestyle.[104] They raised a little corn and owned small farms, but they drew more heavily on the forests for their subsistence than Cherokees elsewhere. During the years following removal, the lives of those Cherokee who resisted removal were so disrupted that many faced starvation. According to Thomas's store clerk in Qualla Town, "there came from the towns of Alarka, Nantahalla, Stekoah, and Cheoah, a good many poor and destitute Indians who stated they had been deprived of all their means of support during the emigration."[105] Thomas obliged to loan them corn. Ginseng not only provided them with a readily available means of support, but it also provided them a way to reconcile their traditional forest-based lifestyle with the need to access the consumer economy, much like the Iroquois a century earlier. Therefore, it seems likely that the Cherokee, due to their tenuous economic position and their proclivity for a hunting and gathering lifestyle, harvested the bulk of the ginseng from far southwestern North Carolina in the antebellum era.

Of course, men were not the only individuals who hunted ginseng, although they were typically the only ones who appeared in store ledgers. As Laura Thatcher Ulrich has observed in the eighteenth century, women were the primary conduit through which knowledge of medicinal plants passed down through generations, an appendage to their role as caregivers and healers.[106] Many women translated this into involvement in the ginseng trade, but because social custom dictated that men were in charge of commercial transactions, store ledgers from the antebellum era like Butcher's typically listed only men's names, even though they may have been dug—and traded—by women. Indeed, gendered customs influenced the way men and women used the forest commons. Typically, women gathered plants; men hunted animals.

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[104] John R. Finger, *The Eastern Band of Cherokees, 1819-1900* (Knoxville: University of Tennessee Press, 1984), 13–15.
[105] Johnson W. King, Affidavit, 21 August 1843, Box 2, William Holland Thomas Papers, Rubenstein Rare Book and Manuscript Collection, Duke University, Durham, NC.
[106] See, for example, Bush, *Dorie*.

These expectations had deep roots in Western and non-Western cultures. Indigenous peoples from New England to the Southeast had long adhered to a gendered division of labor in which women tended and gathered plants, while men hunted and fished.[107] Such behavior largely continued among Euro-Americans, but as ginseng became a lucrative cash crop that could facilitate commercial interactions, the stigma for men to gather it diminished. Women, however, did not cede the gathering of this plant entirely to men.

While it is difficult to uncover the gendered dimensions of the ginseng trade based on existing sources, two stories that circulated around Watauga County, North Carolina, in the mid-nineteenth century provide some insight. Sometime in the 1830s, Betsy Calloway married a recent arrival from Kentucky named James Aldridge, who quickly developed a reputation for being a great "marksman, trapper, and backwoodsman." For close to fifteen years, he lived with his family in a small cabin under the Grandfather on Hanging Rock Ridge, having seven children with Calloway. However, a woman arrived from Kentucky, claiming to be Aldridge's real wife, and that revelation destroyed his relationship with Betsy. Calloway took to digging ginseng and other roots and selling maple sugar to develop financial independence from Aldridge. She became known as a "master sanger," often digging ginseng with her youngest child strapped to her back; she also worked several sugar orchards across the mountains and sold maple sugar for ten cents a pound and maple syrup for ten cents a gallon. Aldridge eventually left her, but with the proceeds of ginseng and sugar, Calloway purchased clothes and other necessities, kept a

[107] Carolyn Merchant, *Ecological Revolutions: Nature, Gender, and Science in New England*, 2nd ed (Chapel Hill: University of North Carolina Press, 2010), 38, 81–82. Other scholars have suggested that a similar division existed among the Cherokee. See Theda Perdue, *Cherokee Women: Gender and Culture Change, 1700-1835* (Lincoln: University of Nebraska Press, 1998), 18-21. That women were the primary conduits through which botanical knowledge was passed down can be seen in Bush, *Dorie*.

comfortable house, and, according to the memory of the old-timers, "took care of all preachers who came to her home."[108]

In an unfortunate twist of fate, Betsy's sister Fanny had seven children by her husband, John Holtsclaw, before he eloped with a woman named Delilah Baird. Baird, from Valle Crucis, was aware that he was a married man, but he promised her that they would move to Kentucky and away from his past. However, after deceiving her into thinking they had traveled across the mountains, he settled into a crudely built cabin at the base of Beech Mountain not far away from Baird's family. Holtsclaw kept his mistress secluded while he hunted and roamed, but she took to digging "great quantities" of ginseng, which brought her over the surrounding mountains. Eventually realizing her actual location, she reestablished contact with her family. Instead of leaving Holtsclaw, Baird continued to sell ginseng and maple sugar, eventually making enough money to purchase Holtsclaw's 480 acres along the Elk River for $250.[109] Indeed, many women like Calloway and Baird used ginseng to interact with the cash economy to obtain a certain degree of economic freedom. And as other roots and herbs became marketable in the second half of the nineteenth century, they would find more opportunities to engage with the commercial economy.

By the outbreak of the Civil War, the human-ginseng relationship seems to have evolved beyond the initial smash-and-grab phase of the frontier boom. There is some evidence that ginseng began to grow scarce in parts of southern Appalachia by the outbreak of the Civil War. Ely Butcher's records show a gradual decline through the 1850s, dropping from 500 pounds in

[108] John Preston Arthur, *A History of Watauga County, North Carolina: With Sketches of Prominent Families* (Easley, S.C.: Southern Historical Press, 1976), 190.
[109] Arthur, *A History of Watauga County, North Carolina*, 186–93; see also L. B. Love, "Early Pioneer Days in Watauga County," *Watauga Democrat* (Boone, NC), 5 June 1913.

1849 to 129 pounds in 1851 and 86 pounds by 1857.[110] Observers elsewhere noticed a gradual disappearance as well. Henry Colton remarked in 1859 that, in Yancey County, North Carolina, "the day had been when anybody could gather six or eight pounds, but now it took a right smart hand to get that much."[111] At the same time, however, Butcher's records suggest that mountain communities began to limit their harvests to only September and October, over a decade prior to states passing laws mandating the same ginseng season (beginning in the late 1860s). September 1st seems to have been an unofficial start to the ginseng season at Butcher's store in the 1840s and 1850s. By paying attention to whether ginseng was traded green or dried in his ledger can help the historian approximate when the ginseng was harvested. Throughout the month of September, Butcher accepted only the green root, which indicates it was recently harvested. Starting in October and continuing, in a few cases, into the winter, he took dried root. He took virtually no green and very little dry ginseng out of season. Indeed, the only time green ginseng appears in his books out of season, he apparently felt the need to justify it, scribbling a note in the margin explaining that the customer "had to pay for boy's boat."[112] Thus, in this case, the exception may prove the rule: that an unofficial, locally sanctioned ginseng season had developed since the area's initial settlement.

Waiting until September to harvest the plant would have allowed the plant to go to seed, thus giving it a chance of reproducing and sustaining its population. Of course, this does not prove a conservation ethic was widespread among rural communities. The refusal of merchants to take ginseng before September could have been an attempt to appeal to Chinese tastes. They realized that in the fall, the plant acquires "its full degree of maturity and

[110] Ely Butcher Store Account Books, Randolph County, 1841-1883, West Virginia State Archives, Charleston, West Virginia.
[111] Henry Colton, *The Scenery of the Mountains of Western North Carolina and Northwestern South Carolina* (Raleigh, NC: W. L. Pomeroy, 1859), 97.
[112] Ely Butcher's Account Books, WVSA.

perfection," which is one reason the Chinese harvested it only in the fall of the year.[113] Experts today assert that the young roots can double or triple their size during each of their first few growing seasons, and mature roots expand roughly 20 percent through the course of a year.[114] Waiting until September to purchase ginseng gave these traders added assurance that they were getting the best possible root for shipment. Market forces, in this case, worked in the plant's favor. Yet, the fact that harvesters and storekeepers adhered to this season means something. At the very least, it suggests that social and economic conditions were such that people could wait until the fall to harvest. It also suggests that the most important component to the conservation of ginseng was present in antebellum forests: trust. Garrett Hardin's tragedy of the commons thesis, as applied to ginseng, holds that individual diggers will harvest the plant beyond sustainable rates because they fear that if they do not harvest it someone else will. Apparently, in western Randolph County, there existed enough trust to ensure that ginseng was only harvested in the fall, thus giving the plants a fighting chance to grow and reproduce. This, however, changed following the Civil War.

This chapter has demonstrated that the frontier economy in the Ohio Valley and the greater Appalachian region depended heavily on the Chinese demand for ginseng and the trans-Pacific trade network that it helped establish. As the ginseng boom spread from Canada and New York into the region, the plant served as a medium of exchange that enabled early merchants to sustain their businesses and hunters to access the consumer economy. This chapter also demonstrates that ginseng continued to be an important commodity for mountain communities well into the post-frontier phase of the nineteenth century. It was incorporated into the seasonal routines of agrarian communities and reinforced an economic structure that included both the farm and the forest. Yet, the farm and the forest were not simply two

[113] Michaux, *Michaux's Travels to the West of the Alleghany Mountains*.
[114] Persons, *American Ginseng*, 9.

characteristics that described land use. They represented two differing value systems that coexisted in an uneasy alliance: one rooted in private property and the other in common rights. Some found that by continuing to assert their common right to dig ginseng, they could maintain a way of life largely independent of crop markets, one that placed a higher value on freedom and leisure than on material acquisition and individual aggrandizement. The commitment to the common right to dig ginseng remained widespread in the antebellum era, even as more people continued to invest in private farm production. Thus, it helped give form and substance to a de facto forest commons. This commons system faced increasing pressures as population grew and forests were cleared for livestock and agriculture, but evidence suggests that by 1860, the ginseng commons was still thriving, albeit in a somewhat diminished role. And then Abraham Lincoln was elected president.

CHAPTER 3

Marketing the Mountain Commons: Calvin J. Cowles and the Origins of the Botanical Drug Trade in Appalachia

In September of 1850, Calvin J. Cowles, a merchant from Wilkes County, North Carolina, said goodbye to his wife and two young sons and headed north with his brother, Josiah, leading a wagon with a peculiar cargo. Inside the bales of burlap piled high behind the 29-year-old merchant were seeds from lobelia plants, bark from elm trees, and the roots of wild ginger, ladies slipper, bloodroot, and mayapple. After a long journey through Virginia, he stopped at Washington City, where he met President Millard Fillmore, and pushed on to Philadelphia, where he visited the grave of Benjamin Franklin. He continued north, spent some time shopping in New York City, but he could find only a few buyers for his roots and herbs. "I see I shall have to go to New Lebanon to sell out," he informed his wife, Martha, in November. New Lebanon, New York, the small town some 30 miles east of Albany on the western slope of the Berkshire Mountains, was the emerging center of the manufacturing of botanical medicines. There, he sold the rest of his cargo and began the long journey home. "I think I have made a good trip," he told his wife. "Our prospects for the future are bright enough for substantial good."[1] Indeed, they were.

Cowles made several subsequent journeys like this one, hauling wagonloads of roots, herbs, seeds, barks, and flowers harvested from the forests of western North Carolina to

[1] Calvin J. Cowles to Martha Cowles, 28 October 1850, Calvin J. Cowles Papers, Southern Historical Collection, University of North Carolina, Chapel Hill.

northern manufacturers to be made into tinctures, extracts, ointments, and patent medicines. He established business connections that would grow and expand over subsequent decades. Available evidence suggests that he was the first merchant to connect the plants of Southern Appalachia with the mass markets for botanical drugs emerging in the Northeast and Midwest. Whereas other merchants conducted a limited trade on a local level, Cowles had national ambitions, and he took full advantage of markets for medicinal plants that new manufacturing techniques and transportation improvements had only recently opened up in the North. It was not an easy beginning for Cowles, but his eventual success established a model that subsequent merchants would emulate. This chapter examines the economic, ecological, and cultural dynamics that took Cowles north in 1850. It was indeed a turning point that paved the way for southern Appalachia to become the nation's most prolific supplier of "crude botanical drugs." Profiting from the biodiversity of northwestern North Carolina's forests and the commons custom that enabled widespread access to these resources, Cowles's foray into the botanical drug trade had important impacts on the lives of mountain people. Until mid-century, farmers could only market ginseng and possibly snakeroot, but as men like Cowles expanded the market deep into the forests of Appalachia, it created opportunities for many mountain people to profit from a wide array of medicinal plants, including mayapple, wild ginger, bloodroot, and lobelia.

A New Kind of Merchant

Born in Hamptonville, North Carolina, in 1821, Calvin J. Cowles grew up in a developing world of trade and commerce. His father, Josiah Cowles, had moved from his native Connecticut in 1815 to peddle Yankee wares among Cherokee and Creek Indians and backcountry settlers for skins and furs before settling down and opening a shop in Surry County, North Carolina. The elder Cowles embraced the changes brought by the market revolution and

sought to profit by them. He pushed for internal improvements, opposed the putative backward policies of Andrew Jackson, and became a prominent Whig in Surry County. Largely self-educated, Calvin developed a nose for business. He grew up in and around Josiah's store in Hamptonville and worked there as a clerk from his teenage years into his early twenties. His mother died young, and when his father remarried, his new wife brought three children into the marriage, including the handsome young Martha Duvall. Cowles fell in love with her, and the two married in 1844. Within two years, they gave birth to a son, Arthur Duvall. The marriage would produce six more children.

In 1846, eager to make his own name in business, the young clerk moved, along with his wife and infant son, twenty miles west to Wilkes County, North Carolina, and settled in Elkville where Elk Creek empties into the Yadkin River. There, he constructed a store and began operating under the name "J. & C.J. Cowles," in partnership with his father. In many ways, Elkville in the 1840s was a remote outpost for a commercial enterprise. Located some seven miles from the crossroads of Wilkesboro along a local wagon road, it was a small cluster of farms at the foot of the imposing escarpment known as the Blue Ridge, which quickly rose to over 6,000 feet within a few miles from the Yadkin Valley. Beyond the ridge lay Ashe, Yancey, and Watauga County (in 1850), which included some of the most sparsely populated sections of the state. But Wilkes County was also a community on the make. Wilkesboro, the county seat, was connected to larger commercial centers like Greensboro, Statesville, and Morganton by major thoroughfares, and within a few years, Greensboro would boast a railroad that linked the city to Raleigh, Wilmington, and beyond. Cowles was aware that greater commercial involvement was in store for northwestern North Carolina, and he wanted to be a part of it.

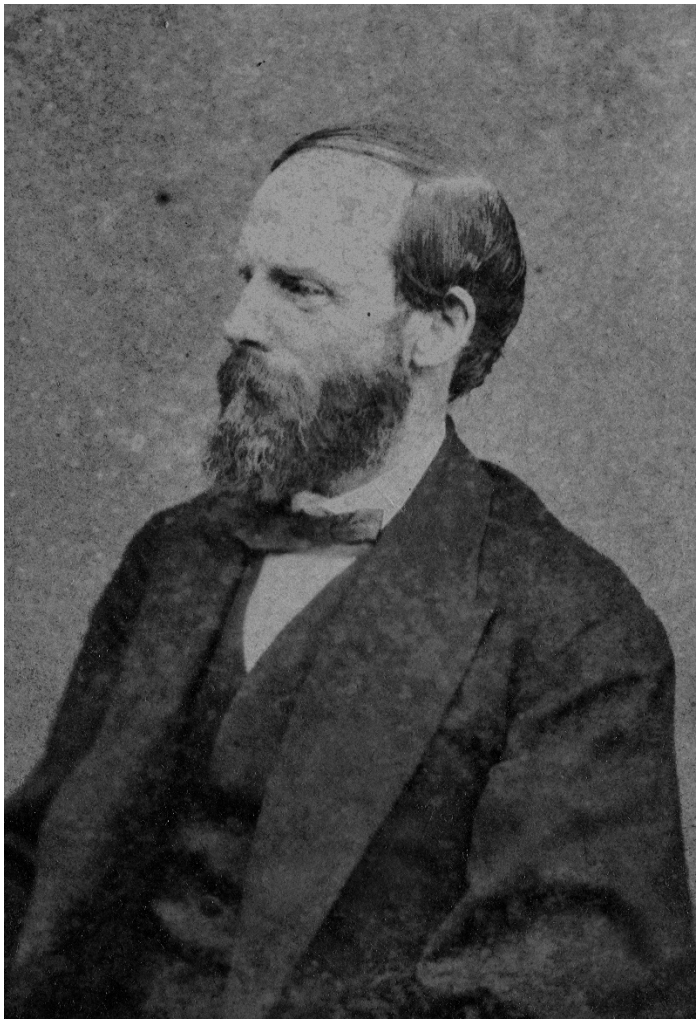

Figure 5. Calvin J. Cowles, Wilkesboro, NC, merchant. Courtesy of North Carolina Collection, University of North Carolina, Chapel Hill.

Cowles was ready to barter for his business, and he began like many other merchants in the area, trading for ginseng, furs, skins, bird feathers, and a variety of other farm and forest goods. Thus, in an area lacking cash, Cowles, like other storekeepers, was compelled to engage in both wholesale goods markets and commodity markets. Not only did he have to purchase wholesale goods at a price from which he could profit, but he also had to find buyers for his produce in order to realize the full value of his sales. Under the watchful eye of his father, he struggled through the first few years in business, but around 1848, he decided to branch out from ginseng and deal in other forest commodities. He purchased chestnuts from customers

and sold them in Greensboro and Raleigh, where they were likely boiled or roasted and eaten. He bought wormseed, or Jerusalem Oak (*Chenopodium anthelminticum)*, a used as a vermifuge to treat worms in children, and the seeds of lobelia (*lobelia inflata),* used as a purgative for stomach troubles. And he traded in Seneca snakeroot and pinkroot, used to treat fevers and worms, respectively.[2]

Initially, the markets he tapped were local. North Carolina doctors and druggists sporadically purchased from him a few pounds of different plants. His earliest business records reveal that he sold snakeroot to a Dr. Carter in Hamptonville and pinkroot and lobelia seeds to another local doctor named Alva Spears.[3] Although documentation is rare, it appears that this kind of local trade was not uncommon in the opening decades of the nineteenth century. According to family lore, David Worth, who would become a leading citizen of adjacent Ashe County, first came to the mountains in the 1830s to purchase roots and herbs for a family druggist in Greensboro.[4] However, the demand for local medicinal plants was limited prior to the 1840s. As we shall see in this chapter, most physicians relied upon imported drugs from Europe, and most lay practitioners—those healers with no formal training in a medical school—harvested the plants themselves.

This local trade was not extensive and produced little income for Cowles. His father, despite occasionally relaying orders, was not enthusiastic about Cowles's move towards the botanical trade and urged caution. "I am not without my misgivings," he wrote to his son in 1849. "The market is liable to become over marked, the article to fluctuate very much in

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[2] "Dr. Carter wants a pound of Seneka Snake Root," his father informed Calvin Cowles after the 1848 season. See Josiah Cowles to Calvin J. Cowles, 21 January 1849, Calvin J. Cowles Papers, North Carolina Department of Archives and History, Raleigh, NC [hereinafter cited as CJCP, NCDAH]; See A List of Produce Sent to Alva Spears, 9 December 1848, CJCP, NCDAH.

[3] Ibid.

[4] "A History of the Worth Family in Ashe County," David Worth Family Papers, W.L. Eury Appalachian Collection, Appalachian State University, Boone, NC [hereinafter cited as WLEAC].

price…You may be destined to labor too hard often on the same article if not in the same action."[5] The elder Cowles's advice was prescient, as the early years of piecemeal trade with local doctors was indeed precarious and unprofitable. What the elder Cowles did not realize was that vast new markets were beginning to open for the plants of western North Carolina. Ever the visionary entrepreneur, Cowles paid close attention to national market trends with a constant eye open for potential profits. Indeed, if there was one consistent characteristic he displayed throughout his life, it was a desire for economic advancement, and by the 1840s, market trends, spurred by changes in medical ideology and practice, as well as transportation improvements, promised to open profitable horizons for the young Cowles.

American Medicine in Crisis

Cowles was certainly aware that during his lifetime, the demand for crude botanical drugs nationwide was on the rise. This was largely the result of what the medical historian Owsei Temkin called the "therapeutic anarchy" of the early nineteenth century, the result of challenges to the medical profession by lay practitioners and patients mostly in the western and rural areas. By the turn of the nineteenth century, medicine in the United States was at a significant crossroads. Would Americans continue to embrace Old World therapeutics based on theories of illness and disease that dated back to the ancient Greeks, or would they move more toward a new, more American, system that drew on empirical observations and utilized a pharmacopoeia with more native American plants.[6] Would the speculative rationalism of Europe or an American-flavored empiricism dominate American medicine? This was more than

[5] Josiah Cowles to Calvin J. Cowles, 29 October 1849, CJCP, NCDAH.

[6] Discussions of this schism can be found in John S. Haller, *Medical Protestants: The Eclectics in American Medicine, 1825-1939* (Carbondale: Southern Illinois University Press, 1994), 24–27; Richard H. Shryock, *Medicine and Society in America, 1660-1860* (New York: New York University Press, 1960), 49–50; Barbara Van der Zee, *Green Pharmacy: A History of Herbal Medicine* (New York: Viking Press, 1982), 132–53.

an academic debate. Rather, it was fueled by and embedded in a culture clash of the first magnitude, and it would have significant ramifications for the forests of southern Appalachia.

In the late eighteenth century, professional physicians trained in a university setting tended to be wealthy elites who jealously guarded their prerogatives against pretenders and quacks. After the University of Pennsylvania established its medical school in 1765, the number of medical schools in America grew, but the fount of most medical knowledge circulating in the U.S. was the University of Edinburgh, Scotland. There, would-be physicians like Benjamin Rush and Benjamin Smith Barton were versed in the ancient theories of Hippocrates, Galen, Dioscorides, and other Greco-Roman physicians dating back to the first century AD. Although the veracity of so-called humoral theory had been undermined by various discoveries over preceding centuries, it still formed the basis for medical practice into the nineteenth. According to humoral theory, the body's health was determined by the balance of four fluids, or "humors": blood, phlegm, black bile, and yellow bile. Illness was the result of imbalances of these humors, and balance could be restored by building up or removing fluids. Physicians employed a number of techniques to balance the humors, including bloodletting, puking, purging, cupping, and sweating. Despite the important advances in medical science in the eighteenth century, particularly in the field of anatomy and in practices such as inoculation, Galen's basic ideas still influenced the way physicians viewed the causes of disease and illness and the methods they used to treat them.[7]

While ancient theories based on speculative rationalism continued to exert influence over western medicine, therapeutics had undergone something of a revolution. Plants are the oldest method of therapy used by humans, and they dominated therapeutics from the time of Galen (129-216 AD) through the sixteenth century, but as a result of the therapeutic revolution

[7] Shryock, *Medicine and Society in America, 1660-1860*, 49–75.

spurred by the sixteenth-century German physician called Paracelsus, physicians in Europe began using increasing amounts of chemicals derived from such minerals as mercury, antimony, Sulphur, and lead. While they also had an impressive botanical *materia medica* at their command, minerals quickly became the most prescribed drugs in their practices. American physicians trained in Europe transferred this practice to the New World. By the 1790s, frustrated by the lack of success in treating diseases, they prescribed greater, or "heroic," doses of various forms of mercury, including calomel, blue mass, and corrosive sublimate, as well as other chemical compounds like camphor, tartar emetic, and arsenic. They also continued to rely on some plant products, such as quinine, ipecac, and calamus, but virtually none of these were native to North America and had to be imported from Europe.[8]

Although the number of university-trained physicians was growing, it was still virtually impossible to find one outside of urban areas around the turn of the nineteenth century. Medical historian John Haller estimates that there were less than 400 trained physicians in the United States at the time of the American Revolution, and probably half of those had earned a medical degree from a university.[9] Lacking access to physicians, the rural landscape, especially in the South and West, was covered with folk healers, midwives, and self-taught "doctors" who placed less faith on ancient theories and more on empirically derived medical knowledge. They were less interested in how these treatments fit into theories of illness than how effective they were at treating specific ailments. Patients, many of whom lacked faith in or knowledge of medical theories, embraced them.

[8] Barbara Griggs, *Green Pharmacy: a History of Herbal Medicine* (New York: The Viking Press, 1981), 133-166.
[9] Haller, *Medical Protestants: The Eclectics in American Medicine, 1825-1939*, 5.

Many were impressed by the ability of Native Americans to heal people.[10] During his explorations in North Carolina, John Lawson observed in 1709 that "an Indian hath been often found to heal an English-man of a Malady…, which the ablest of our English Pretenders in America…have deserted the Patient as incurable."[11] The Indian trader James Adair, who lived among the southeastern tribes for thirty years in the mid-eighteenth century, admitted that he preferred Cherokee doctors to Western-trained doctors in some cases. He remarked that the Cherokee "have a great knowledge of specific virtues in simples; applying herbs and plants, on the most dangerous occasions, and seldom, if ever, fail to effect a thorough cure, from the natural bush… For my own part, I would prefer an old Indian before any surgeon whatsoever, in curing green wounds by bullets, arrows, &c., both for the certainty, ease, and speediness of cure."[12] Some observers, motivated by romantic notions of nature, praised the Indian methods as being the product of a close relationship to nature. Thomas Ashe, a well-born native of England who traveled through the Ohio River valley in 1806 to find "wild nature," was amazed at the ability of the Native Americans to treat diseases and control venomous snakes. "They derive their knowledge and their power from the great book of nature, which a benevolent God has laid open before them," he wrote. "To obtain that skill and those acquirements they have to study nature, and they do so with the most unwearied assiduity and application."[13]

Little by little, this Native American knowledge brought some native plants into general use. Virginia's Dr. John Tennet, who emigrated from England in 1625, learned that the Seneca

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[10] Vogel, *American Indian Medicine*, 129; Anthony P. Cavender, *Folk Medicine in Southern Appalachia* (Chapel Hill: University of North Carolina Press, 2003).

[11] John Lawson, *A New Voyage to Carolina: Containing the Exact Description and Natural History of That Country: Together with the Present State Thereof. And a Journal of a Thousand Miles, Traveled Through Several Nations of Indians, Giving a Particular Account of Their Customs, Manners, &c.* (London, 1709), 10–11.

[12] Adair, *History of the American Indians; Particularly Those Nations Adjoining to the Mississippi, East and West Florida, Georgia, South and North Carolina, and Virginia*, 234.

[13] Thomas Ashe, *Travels in America, Performed in 1806, For the Purposes of Exploring the Rivers Alleghany, Monongahela, Ohio, and Mississippi, and Ascertaining the Produce and Condition of Their Banks and Vicinity* (London: William Sawyer & Co., 1808), 5.

Indians successfully used an inconspicuous native plant to treat respiratory ailments, including tuberculosis. He introduced the plant as Seneca snakeroot (*Polygala senega*) to friends and colleagues, and it became one of the most sought-after medicinal herbs by the end of the eighteenth century. Sir William Johnson, the British agent to northern Indians in the mid-eighteenth century, reportedly discovered the uses of *lobelia syphilitica* from the Iroquois, who used it to treat syphilis. And the Charleston, South Carolina, botanist Alexander Garden claimed to have learned from the Cherokee that the plant pinkroot (*spigelia marylandica)* was an effective cure for worms.[14] Garden shipped a box of pinkroot to his New York colleague Cadwallader Colden, and pinkroot quickly became a popular treatment by century's end. In their studies of North American botany, naturalists such as Colden, Petr Kalm, and John Bartram preserved Indian uses of several plants in mid-eighteenth-century publications.[15] In 1772, Samuel Stearns, a Massachusetts physician, wrote *The American Herbal, t*he first book dedicated to medicinal uses of American plants. These authors relied heavily on Native American ethnobotanical knowledge, although this knowledge often came to them second-hand from the "country people."[16]

Yet, despite sporadic observations like these, the American medical establishment remained woefully ignorant of the medicinal uses of indigenous plants. William Byrd, one of Virginia's wealthiest planters in the mid-eighteenth century, was suspicious of trained physicians because they had little knowledge of herbal medicine. "Here be some men indeed that are call'd Doctors," he wrote of the Virginia peninsula, "but they are generally discarded Surgeons of

[14] Van der Zee, *Green Pharmacy*, 132–34.
[15] Esther Louise Larson and Peter Kalm, "Peter Kalm's Short Account of the Natural Position, Use, and Care of Some Plants, of Which the Seeds Were Recently Brought Home from North America for the Service of Those Who Take Pleasure in Experimenting with the Cultivation of the Same in Our Climate," *Agricultural History* 13, no. 1 (January 1939): 33–64; Christopher Hobbs, "The Medical Botany of John Bartram," *Pharmacy in History* 33, no. 4 (1991): 181–89; Laura E. Ray, "Podophyllum Peltatum and Observations on the Creek and Cherokee Indians: William Bartram's Preservation of Native American Pharmacology," *The Yale Journal of Biology and Medicine* 82, no. 1 (March 2009): 25–36.
[16] Van der Zee, *Green Pharmacy*, 134.

Ships, that know nothing above very common Remedys. They are not acquainted enough with Plants of other parts of Natural History, to do any Service to the World."[17] The eighteenth-century countryside was generally not under the sway of trained physicians and remained disconnected from the medical theories espoused in Edinburgh and other founts of speculative rationalism.

From the late eighteenth century through the mid-nineteenth century, American physicians became much more familiar with the medicinal plants surrounding them. A number of historical events combined to produce this trend. First, the American Revolution demonstrated the liabilities of relying so much on medicines imported from Europe. Cut off from their traditional sources of medicines, many practitioners realized that more knowledge of native plants and a more dependable domestic supply of medicines were needed.[18] Secondly, the wave of nationalism that swept across the nation following the Revolution awakened a spirit of scientific inquiry into the natural products of the United States. Naturalists like Thomas Jefferson realized that much of what Americans knew about their native plants came from foreign sources, and they undertook a campaign of more systematic study to remedy this deficiency. Among the many topics pursued in the American Academy was medical botany.[19]

A third reason the medical establishment moved to embrace native plant remedies was to strengthen their authority over medical knowledge. Fearing that the people were being seduced by "mere empiricism," some medical botanists began to realize that in order to regain confidence in the populace and secure their hegemony over medical knowledge, they needed to investigate more thoroughly the medical uses of native plants. Johann Schoepf noted with disdain this proclivity to follow Indian remedies. He lamented that "the observers and

[17] Quoted in ibid., 138.
[18] Ibid., 152.
[19] The best account of this is Richard William Judd, *The Untilled Garden: Natural History and the Spirit of Conservation in America, 1740-1840* (Cambridge: Cambridge University Press, 2009),94-109.

panegyrists of the so much belauded Indian methods of therapy are commonly ignorant people who find things and circumstances wonderful because they cannot offer explanations from general principles."[20] Obviously unhappy with this tendency, Benjamin Rush, the most influential medical figure of the late eighteenth century, gave a speech in 1774 to the American Philosophical Society that, not surprisingly, disparaged "savage beliefs" and praised "civilized medicine." While he acknowledged that Indians had great ability in the savage arts of hunting and war, he declared that in the civilized art of medicine, they were decidedly lacking. "I have taken pains to enquire into the success of some of these Indian specifics, and have never heard of one well attested case of their efficacy," he told the crowd, which likely included Benjamin Franklin and John and William Bartram.[21] To these observers, the battle for the therapeutic soul of America had begun, and hanging in the balance was civilization itself.

Rush, Schoepf, and other trained physicians seemed to agree that in order to counteract these tendencies, they needed to acquire more knowledge of the medicinal properties of native plants. In 1785, Schoepf called on American physicians to cast "a patriotic eye to the completer knowledge and more general use of their native materia medica."[22] He continued:

> It betrays an unpardonable indifference to their fatherland to see them making use almost wholly of foreign medicines, with which in large measure they might easily dispense, if they were willing to give their attention to home-products, informing themselves more exactly of the properties and uses of the stock of domestic medicines already known. They would then have the pleasure of showing their fellow-citizens how unreasonable it is to envy the poor Indians their reputed science, and they would be working usefully for the community and beneficiently for the poor if they made it their business to further the employment of the manifold wealth afforded by nature in its precious gifts to them.[23]

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[20] Schoepf, *Travels in the Confederation, 1783-1784*, 1:285–86.
[21] Benjamin Rush, *An Oration, Delivered February 4, 1774, before the American Philosophical Society, Held at Philadelphia. Containing, an Enquiry into the Natural History of Medicine among the Indians in North-America, and a Comparitive View of Their Diseases and Remedies, with Those of Civilized Nations. : Together with an Appendix, Containing, Proofs and Illustrations. / By Benjamin Rush, M.D. Professor of Chemistry in the College of Philadelphia. ; [Four Lines from Malebranche in French]*, 2008, 35–37, http://name.umdl.umich.edu/N10722.0001.001.
[22] Schoepf, *Travels in the Confederation, 1783-1784*, 1:289.
[23] Ibid.

In 1787, Schoepf pointed the way with his *Materia Medica Americana potissimum regni vegetabilis.* Two years later, Benjamin Rush published his *Medical Inquiries and Observations* in which he instructed physicians to search the "untrodden fields and forests of the United States…, [for] the Seneka and Virginia snake-roots, the Carolina pink root, the spice wood, the sassafrass, the butternut, the thoroughwort, the poke, and the stramonium are but a small part of the medicinal productions of America." He continued:

> I have no doubt but there are many hundreds other plants which now exhale medical virtues… Who knows but it may be reserved for the American to furnish the world, from her productions, with cures from some of those diseases which now elude the power of medicine? Who knows but that, at the foot of the Alleghany mountain, there blooms a flower, that is an infallible cure for the epilepsy? Perhaps on the Monongahela, or the Potowma, there may grow a root that shall supply, by its tonic powers, the invigorating effects of the savage or military life in the cure of consumptions?"[24]

These physicians were not opposed to the use of indigenous plant medicines. They simply had little knowledge of them, and they felt as if the reputation of their budding profession was at stake if Americans continued to embrace Native American therapies.

Over the next three decades, American medical thinkers responded to this call and undertook a more systematic study of America's medicinal plants. In 1798, Benjamin Smith Barton, professor of medical botany at the University of Pennsylvania, took a great leap forward with the publication of his "Collections for an essay towards a materia medica of the United States," in which he laid out some of the more promising vegetable remedies in use in America. In 1818, two influential works appeared that greatly influenced the medical study of the United States' indigenous medicines: William P.C. Barton's *Vegetable Materia Medica* and Jacob Bigelow's *American Medical Botany*. These works drew heavily on Native American uses of plants and subjected them to chemical analysis and scientific scrutiny, thus giving them an air of respectability that physicians could get behind.

[24] Quoted in Haller, *Medical Protestants: The Eclectics in American Medicine, 1825-1939*, 10.

Nevertheless, despite this push for more study of indigenous plants, the medical establishment was slow to embrace them in practice, as they remained under the sway of ancient theories and mineral therapies. Orthodox physicians bled patients seemingly without reflection and prescribed sometimes fatal doses of mercurials, such as calomel, to treat a variety of illnesses. When an outbreak of yellow fever decimated Philadelphia in 1793, Dr. Benjamin Rush, despite his call for greater study of indigenous medical plants, doubled down on this theory and began bleeding his patients even more. More than three decades later, these practices remained standard in orthodox medicine. During the cholera epidemic of 1836, one Ohio physician remarked that "We have drawn blood enough to float a steamboat and given enough calomel to freight her."[25] Frustration with regular physicians' inability to confront serious illness and disease (and, in many cases, making it worse) led many Americans into what Haller has called a "crisis of faith" in American medicine.[26] Many patients, as well as some physicians, came to believe that, with its continued reliance on bloodletting, purging, and mercury treatment, American medicine had lost its ability to cure, which severely eroded the relationship between regular physicians and their patients. As they lined up behind different theories of health and wellness, they ushered in an era of "therapeutic anarchy." Botanical medicine was the beneficiary of this loss of faith in medical science. While the medical establishment was slow to embrace indigenous medicines, patients in the rural South and West demanded more indigenous plants in their treatment options.

[25] Quoted in Van der Zee, *Green Pharmacy*, 172.
[26] John S. Haller, *Medical Protestants: The Eclectics in American Medicine, 1825-1939* (Carbondale: Southern Illinois University Press, 1994), 14-17, xv.

The Rise of Botanical Medicine

Two trends in American culture combined to greatly increase the popular demand for botanical therapies: the flourishing of democratic sentiment and nationalism typically associated with Jacksonian democracy and the revival of religious enthusiasm referred to as the Second Great Awakening. Jacksonian democracy and the Second Great Awakening helped fuel the emergence of what scholars have called America's first Botanico-Medical movement.

The so-called "Age of the Common Man" brought forth an intense skepticism of anything that reeked of elitism and privilege, and many people directed their ire at regular doctors. "Has it not occurred even to physicians of the learned order, that every man may and ought, at a proper age and to a certain extent, to become his own physician?" quipped J.W. Cooper in his *The Experienced Botanist, or Indian Physician* (1840).[27] No one harnessed that Jacksonian ire better than Samuel Thomson. Born and raised in rural New England to an evangelical father, Thomson grew acquainted with plant medicine through a widow named Benton whom his family employed as a healer. After spending years experimenting with herbal remedies and utilizing such methods as the steam bath, he developed a system of medical treatment that relied heavily on steaming, purging, and botanical remedies. He obtained a patent for his system in 1813, and he employed agents to travel the country selling the rights to use his remedies and formulas. He initiated a public relations onslaught against the "poison" of regular medicine by telling people they could "be their own physician," and imploring them to pay attention to "those medicines that grow in our own country, which God of nature has prepared for the benefit of mankind."[28] By the 1840s, at the height of his popularity, he had

[27] J. W. Cooper, *The Experienced Botanist, or Indian Physician* (Lancaster, PA: J.W. Cooper, 1840), vi.
[28] Samuel Thomson, *New Guide to Health, or Botanic Family Physician: containing a Complete System of Practice, Upon a Plan Entirely New with a Description of the Vegetables Made Use of, and Directions for Preparing and Administering Them to Cure Disease,* New Edition (London: Simpkin, Marshall, & Co., 1849), 6.

sold some 100,000 patents, and an estimated three million people were using his system.[29] His personal charisma and abrasiveness and his marketing prowess forced American doctors to reckon with botanical medicine. His successes invigorated many disillusioned healers and encouraged imitators, and by the 1840s, a wide variety of physicians and lay healers were operating under the title of botanic practitioners, including physio-medicals and Neo-Thomsonians. The most important of these post-Thomsonian groups called themselves Eclectics. They believed strongly in the efficacy of indigenous medicinal plants, but they did not go so far as to claim that "every man could be his own physician." They were committed to medical science and helped organize several medical colleges in the 1830s and 1840s to train a new generation of physicians that relied on indigenous plants, as well as other proven therapeutics.[30] Although by then the botanico-medical movement had devolved into factional infighting and internal squabbles, the growth of the movement clearly indicates that the American people demanded more plant-based medicine.

With the outpouring of religious enthusiasm brought about by the Second Great Awakening, many Americans came to see the use of native vegetable remedies as something akin to a religious exercise. After all, they were God's medicine, not man's. Mormons, Shakers, Disciples of Christ, and other sects evinced a commitment to botanical medicine.[31] As the stern, vengeful God of the eighteenth century awakening gave way to the more benevolent, merciful God of the nineteenth, more Americans embraced the ancient idea that He had endowed the land around them with vegetable remedies to all their ailments. John C. Gunn, author of the

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[29] The best account of Thomson and Thomsonism is in John S. Haller, *The People's Doctors: Samuel Thomson and the American Botanical Movement, 1790-1860* (Carbondale: Southern Illinois University Press, 2000). See also Alex Berman and Michael A. Flannery, *America's Botanico-Medical Movements: Vox Populi* (New York: Pharmaceutical Products Press, 2001).

[30] For monographs on Eclecticism, see Haller, *Medical Protestants: The Eclectics in American Medicine, 1825-1939*; John S. Haller, *American Medicine in Transition, 1840-1910* (Urbana: University of Illinois Press, 1981); Berman and Flannery, *America's Botanico-Medical Movements*.

[31] Haller, *Medical Protestants: The Eclectics in American Medicine, 1825-1939*, 51.

imminently popular *Gunn's Domestic Medicine* (1830) and a resident of east Tennessee, more effectively than most, harnessed the religious sentiments of Jacksonian democracy and the Second Great Awakening. Referring to pious Americans as "God's patients," he declared that "Piety towards God should characterize every one who has any thing to do with the administering of medicine." He was convinced that "God, in the infinitude of his mercy, has stored our mountains, fields, and meadows, with simples for healing our diseases, and for furnishing us with medicines of our own, without the use of foreign articles."[32] He likened the discovery of these medicines to the processes by which religion was revealed to believers. Gunn's pitch was tremendously popular. By the time *Gunn's Domestic Medicine* ceased publication in 1924, it had gone through 234 editions and was translated into German.[33]

In addition to Gunn's, dozens of self-help medical guides, including Samuel Thomson's *New Guide to Health* (1827), Morris Mattson's *The American Vegetable Practice* (1841), and Peter Good's *Family Flora* (1854), were published between 1820 and 1860 and became immensely popular. With names like the *Indian Doctor's Dispensatory* (1813), *The Experienced Botanist, or Indian Physician* (1840) and *The Cherokee Doctor* (1849), some displayed the continued reverence for Native American medical wisdom. Playing up themes associated with Jacksonian democracy and the Second Great Awakening, they insisted that average Americans could take control of their own health and introduced them to native plants with hopeful—and, in some cases, unrealistic—promises of their medicinal value. Indeed, these medical guides helped lift botanical medicine to unprecedented popularity among the general public. While regular physicians, now referred to as allopathic physicians, were still reluctant to embrace botanical medicine, American consumers had succeeded in pushing American medical therapy

[32] John C. Gunn, *Gunn's Domestic Medicine, or Poor Man's Friend* (Pittsburg: J. Edwards & J.J. Newman, 1839), 13.
[33] Ben H. McClary, "Introducing a Classic: 'Gunn's Domestic Medicine,'" *Tennessee Historical Quarterly* 45, no. 3 (Fall 1986): 210–16.

in a botanically friendly direction. The cures to American ailments, they asserted, were not to be found in a chemists laboratory or in universities but, rather, in nature, in the fields and forests of the American countryside.

Patent medicine makers worked to further these trends and profited from them. They assured customers that they did not have to rely on physicians to manage their own health. All they had to purchase was Carpenter's Vermifuge or Bristol's Sarsparilla or Bull's Cherry Pectorals or any number of the thousands of patented medicines that graced the shelves of drug stores.[34] Advertisements for McLean's Strengthening Cordial and Blood Purifier assured potential buyers that it was "nature's own remedy, curing disease by natural laws."[35] William Swain's Panacea was one most popular. He claimed that his remedy consisted of only vegetable ingredients, specifically sarsaparilla and oil of wintergreen, although it was later revealed that another secret ingredient included the mercurial corrosive sublimate.[36] Although many of these patent drug makers were ridiculed by the medical establishment, politicians, and other reformers, for obscuring their ingredients and making absurd claims about their products' efficacy, their popularity attest to the fact that Americans wanted vegetable drugs.[37]

As they had done to Indian medicine in the eighteenth century, regular physicians lambasted the "illiterate quacks" who dispensed botanic remedies and the nostrum-makers who preyed on naïve consumers. At their mildest, these attacks denounced the sectarians' myopic obsession with botanical remedies, which, they claimed, neglected other perfectly good therapies. At their sharpest, they claimed that the Thomsonians fundamentally threatened medical science. "The Root-and-Herb Doctors have undertaken to reform the Science itself, as

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[34] James Harvey Young, *The Toadstool Millionaires: A Social History of Patent Medicines in America before Federal Regulation* (Princeton, N.J: Princeton University Press, 1961), 34–37.
[35] See, for example, the advertisement in *The Louisville Daily Courier,* 22 February 1859.
[36] Young, *The Toadstool Millionaires: A Social History of Patent Medicines in America before Federal Regulation*, 60–68.
[37] Still the best historical account of the patent medicine industry is ibid., 52–75.

if the great principles of Science were capable of being reformed by them, any more than those of Natural Philosophy or Moral Government," railed *The Boston Medical and Surgical Journal* in 1829.[38] Much of their attacks were tinged with politics. Dr. Worthington Hooker, a Yale professor of Medicine and later president of the American Medical Association, asserted that Thomson's followers embodied the "spirit of radicalism."[39] Oliver Wendell Holmes took it a step further, labelling the movement the "common sense scientific radicalism of the barn-yard."[40] The medical establishment was shocked that such an uneducated group of healers was winning the loyalty of the populace and threatening their hegemony over medicine. Nevertheless, it was hard for the medical establishment to ignore the popular demand for accessible and empirically tested remedies.

Drawing on the knowledge of Native Americans and "country people," botanic practitioners and domestic medical guides succeeded in expanding the use of a handful of indigenous plants in American medical practice. Lobelia (*lobelia inflata*) became something of a panacea to followers of Samuel Thomson, who claimed to have discovered the medicinal properties of the plant himself when he was a child. While many regular physicians relied on drugs such as tartar emetic, a derivative of antimony, and ipecac, a South American shrub, to produce vomiting, Thomson believed that lobelia could produce emesis without the harsh side effects, and he used it to treat virtually every ailment he encountered. "It is the most important article made use of in my system," he wrote in his *New Guide to Health.*[41] Thomson is generally

[38] "Roots and Herbs," *The Boston Medical and Surgical Journal,* 2, 24 (18 July 1829), American Periodicals, 381.
[39] Quoted in Berman and Flannery, *America's Botanico-Medical Movements*, 25.
[40] Ibid.
[41] Samuel Thomson, *New Guide to Health: Or, Botanic Family Physician, Containing a Complete System of Practice, Upon a Plan Entirely New; with a Description of the Vegetables Made Use Of, and Directions for Preparing and Administering Them to Cure Disease. To Which Is Prefixed A Narrative of the Life and Medical Discoveries of the Author* (House, 1825), 38.

credited with introducing it into common use.[42] As the "divine remedy" of the Thomsonians, lobelia became a lightning rod for critics of the irregular botanics. Some regular physicians refused to prescribe it. Some wrote diatribes against it, calling it a poison. However, after sectarianism quieted down and eclecticism brought an air of respectability to botanic practice, most physicians could agree that lobelia was a highly effective emetic that should only be prescribed by an educated doctor.[43]

Two other important herbs promoted by botanic practitioners that made their way into common use were may apple (*podophyllum peltatum*) and bloodroot (s*anguinaria Canadensis)*. May apple, a perennial herb that grows throughout eastern North American forests, was well known to rural people. The medical botanist C.S. Rafinesque declared that "many use it frequently in the country."[44] By the 1820s, botanics were championing it as an excellent cathartic, or laxative, that could replace jalap, an imported Mexican plant then commonly used by both regular and irregular physicians. Not only could it be obtained much cheaper than jalap; many claimed that it was much gentler, inducing catharsis without the stomach pain that typically accompanied jalap. By the late 1840s, many Eclectic physicians began prescribing may apple root instead of mercurials, specifically calomel, in treating bilious complaints, earning it a reputation as the "Eclectic calomel."[45] Bloodroot (*sanguinaria Canadensis*), a perennial herb that grows chiefly in the mountainous regions of eastern North America, was the subject of vigorous debate among all kinds of medical circles beginning in the 1820s, when physicians began using its root to treat a wide variety of ailments, from jaundice and croup to bronchitis,

[42] Haller, *The People's Doctors*, 14–15, 19, 20–21, 24-25.
[43] Stephen W. Williams, "Indigenous Medical Botany, No. 3: The Lobelias," *New York Journal of Medicine and Collateral Sciences,* 7, 20 (Sept. 1846), 175-182.
[44] C. S. Rafinesque, *Medical Flora; Or; Manual of the Medical Botany of the United States of North America.* (Philadelphia: Atkinson & Alexander, 1828), 60.
[45] John U. Lloyd, "Resin of Podophyllum and Podophyllin," *American Journal of Pharmacy,* 62, 12 (Dec. 1890), 606.

pertussis, typhoid fever, influenza, and pneumonia. Eclectics considered it a "very active agent…, capable of exercising a powerful influence on the system."[46] In his *Medical Flora,* C. S. Rafinesque hailed it as "one of the most valuable medical articles of our country."[47] One of the plants whose reputation extended well beyond irregular doctors, bloodroot attracted the attention of Yale professors William Tully and Eli Ives, who conducted numerous experiments with the plant in the 1820s and promoted its use in treating diseases of the lungs and the liver.[48]

Interestingly, despite enthusiasm for the plant in the seventeenth and eighteenth centuries among people like William Byrd, ginseng was not among those plants that enjoyed widespread use during the botanico-medical movement of the nineteenth. John C. Gunn dismissed it as "nothing more than…a pleasant bitter," and John King as a "mild tonic and stimulant."[49] In his highly influential *American Medical Botany,* Jacob Bigelow, a student of Benjamin Smith Barton at the University of Pennsylvania, declared that "its virtues do not appear, by any means, to justify the high estimation of it by the Chinese."[50] Evidence suggests that some rural people self-medicated with ginseng, and there were some medical thinkers who were not ready to dismiss ginseng so readily, but it was not used widely in the United States.[51] There are a few reasons for this. The first is the sheer profitability of the root. To the rural

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[46] John King, *The American Eclectic Dispensatory* (Cincinnati : Moore, Wilstach, Keys & Co., 1856), 843–44, http://archive.org/details/americaneclectic00kinguoft.

[47] Rafinesque, *Medical Flora; Or; Manual of the Medical Botany of the United States of North America.*, 79.

[48] see, for example, William Tully, "An Essay, Pharmacological and Therapeutical, on Sanguinaria-Canadensis,with a Plate. SANGUINARIA-CANADENSIS," *The American Medical Recorder (1818-1829)* 13, no. 1 (January 1828): 1.

[49] *Gunn's Domestic Medicine, or Poor Man's Friend; Describing in PLain Language, the Diseases, of Men, WOmen, and Children, and the Latest and Most Approved Means Used in Their Cure; Designed Especially for the Use of Families.* (Pittsburgh: J. Edwards and J. J. Newman, 1839), 454; King, *The American Eclectic Dispensatory*, 704.

[50] Jacob Bigelow, *American Medical Botany: Being a Collection of the Native Medicinal Plants of the United States, Containing Their Botanical History and Chemical Analysis, and Properties and Uses in Medicine, Diet and the Arts, with Coloured Engravings* (Cummings and Hilliard, 1817), 94.

[51] The exception was Rafinesque, who performed many studies on ginseng and concluded that "this article appears…to deserve further attention, instead of total neglect." See Rafinesque, *Medical Flora; Or; Manual of the Medical Botany of the United States of North America.*, 56.

mountain people who knew how to find the plant, ginseng was worth much more as a tradable commodity than as a medicine. Second, ginseng lacked the properties that most botanics looked for in a medicinal plant. They wanted action. Plants like may apple, bloodroot, lobelia, and hellebore, produced powerful reactions like vomiting and diarrhea, which, according to common medical thought, indicated that it was working to bring the body back into balance. Botanic medicine, no less than regular medicine, remained under the sway of humoral theory. Ginseng produced none of these reactions. "[I]t is not a very active substance," Bigelow asserted. "A whole root may be eaten without inconvenience."[52] Thirdly, members of all medical circles—from botanics to regulars—maintained a prejudice against Chinese practices that may have precluded a thorough consideration of the Chinese panacea. In his *Vegetable Materia Medica* (1818), medical botanist William P.C. Barton admitted that Western doctors "refer the numerous beneficial effects ascribed to it by the Chinese, to the imagination of a people remarkable for their prejudices, civil, moral, and religious."[53] Gunn agreed: "These people are remarkable for their superstitious prejudices," he declared.[54] Thus, it appears that while nineteenth century Americans could embrace the empirical medical wisdom of Native Americans, trusting Chinese wisdom was a step too far. Until the twentieth century, ginseng remained almost entirely an export product with little domestic use.

Although the American botanico-medical movement did not succeed in upending doctor's reliance on chemically prepared mineral drugs, it did influence the American medical establishment to incorporate more indigenous plants into general practice. In 1830, a group of practicing and academic doctors and professional pharmacists, dominated by men from the

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[52] Bigelow, *American Medical Botany*, 94.
[53] William P. C. Barton, *Vegetable Materia Medica of the United States; or Medical Botany* (Philadelphia: M. Carey & Son, 1818), 200.
[54] *Gunn's Domestic Medicine, or Poor Man's Friend; Describing in PLain Language, the Diseases, of Men, WOmen, and Children, and the Latest and Most Approved Means Used in Their Cure; Designed Especially for the Use of Families.*, 453.

northeastern United States, met in Washington City to create the first United States Pharmacopeia, which listed all the drugs commonly used in standard practice. They divided the list into two parts: Materia Medica included the most commonly prescribed drugs, and a Secondary List included the less common. Of the 220 medical preparations in the Materia Medica, only thirty-one were indigenous to the United States, including may apple, bloodroot, lobelia, Virginia snakeroot, and pinkroot. Nearly seventy preparations on the list were made from foreign plants, and forty-one from minerals. However, the secondary list was dominated by indigenous plants. All but eleven of the eighty-seven preparations on this list were indigenous to the United States.[55] Thus, although native plants remained secondary to minerals and foreign plants among the nation's medical establishment, they had clearly earned a reputation well above what it had been thirty years earlier. In 1854, Cincinnati physician John King published the *American Eclectic Dispensatory,* a seminal work for American medical history that detailed the botanical preparations commonly used by Eclectic physicians.

The Origins of Botanical Pharmaceutical Manufacturing

The popular rise of botanical medicines in the first half of the nineteenth century stimulated the emergence of manufacturing firms to supply ready-made tinctures, powders, ointments, syrups, extracts, salves, teas, and other botanical preparations to retail druggists and physicians. At the turn of the nineteenth century, most physicians compounded botanical preparations themselves, and a few, if available, purchased them from a nearby apothecary or druggist. Laboratories in Europe supplied most of their mineral preparations, and, after they learned to isolate alkaloids in the late eighteenth century, a few botanical preparations like quinine (Peruvian bark), strychnine (Nux Vomica), and caffeine (Coffee), made from foreign

[55] *The Pharmacopoeia of the United States of America* (Philadelphia: John Grigg, 1831), 1-38.

plants, found their way from Europe to American markets. A trade in the few indigenous plants they used—Seneca snakeroot, pinkroot, sarsaparilla, and sassafras—had emerged that brought plants from the interior, where they grew most abundantly, to eastern population centers. However, most medicinal plants used by botanic practitioners and lay healers were gathered locally. By the 1840s, however, a network of wholesale and retail druggists and manufacturers had emerged to fulfill the demands of the growing number of botanic practitioners. The rise of Eclecticism in the 1830s, specifically, was a significant catalyst for the expansion of botanical pharmacy. Through the 1840s and 1850s, the botanical pharmaceutical industry rapidly expanded, creating opportunities for businessmen like Calvin J. Cowles to profit from the collection and supply of a wide variety of what those in the business called "crude vegetable drugs," that is, raw, unprocessed, medicinal plants.[56]

One of the earliest businesses to manufacture botanical preparations on a large scale was the United Society of Believers in Christ's Second Appearing, better known as Shakers. The Shakers had been believers in botanical medicine since they first began forming communities of believers in the 1780s and 1790s, and they established physic gardens as integral parts of these communities to serve their own medical needs. By 1800, there were eleven Shaker communities scattered around the Northeastern and Midwestern United States, each with its own physic garden. Under the able leadership of the medical botanist Garret K. Lawrence, the gardens at New Lebanon, New York, grew to become the most elaborate and comprehensive of the Shaker physic gardens. By the early 1820s, the Shakers had all but abandoned their original

[56] The following discuss important developments in the rise of botanical pharmacy, although none discuss the supply of crude drugs: Berman and Flannery, *America's Botanico-Medical Movements*, 115–47; John P. Swann, "The Evolution of the American Pharmaceutical Industry," *Pharmacy in History* 37, no. 2 (1995): 76–86; John Uri Lloyd, "The Eclectic Alkaloids, Resins, Resinoids, Oleoresins, and Concentrated Principles," *Bulletin of the Lloyd Library of Botany, Pharmacy, and Materia Medica* 12, no. 2 (1910): 1–54; Amy Bess Williams Miller, *Shaker Herbs: A History and a Compendium*, 1st ed (New York: C. N. Potter : distributed by Crown Publishers, 1976); Michael A. Flannery, *Civil War Pharmacy: A History of Drugs, Drug Supply and Provision, and Therapeutics for the Union and Confederacy*, Pharmaceutical Heritage (New York: Pharmaceutical Products Press, 2004).

sectarian aims of total self-sufficiency and complete withdrawal from "the world" and engaged in the wholesale botanic drug business, among other commercial endeavors. [57]

Around 1821, Lawrence began harvesting, processing, and distributing herbs throughout the area of New York and New England.[58] Within six years, Shaker communities at Harvard, Massachusetts, and Watervliet, New York, had also entered the trade. Dividing up territory, New Lebanon Shakers sold medicines to druggists and physicians across New York, from New Lebanon to New York City.[59] Harvard Shakers, with Elisha Myrick in charge of the herb department, sold medicines to druggists and physicians across Massachusetts, from Boston to Worcester to Lowell.[60] Most of their early products were fresh and dried herbs, roots, seeds, flowers, and other plant parts, but they also prepared a small assortment of oils and extracts. One of the more popular in the 1820s was Syrup of Liverwort, used to treat liver complaints, coughs, and respiratory ailments. The productivity of their gardens, the quality of their products, and their botanical knowledge quickly gained a national reputation. Constantine Rafinesque, Professor of Medical Botany at Transylvania University, visited the gardens at New Lebanon in 1827 and 1828 and proclaimed them to the "best medical gardens in the United States" in his 1828 *Medical Flora,* which was quickly becoming a handbook of Eclectic practitioners.[61]

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[57] Miller, *Shaker Herbs*; Edward D. Andrews, *The Community Industries of the Shakers*, New York State Museum Handbook 15 (Albany, NY: THe University of the State of New York, 1933), 87-95.

[58] The Shakers may have been the first to produce and distribute manufactured plant medicines on a wide scale, although the historical record is not clear about it. Based on claims made in the mid-nineteenth century by Shakers, author Ann Miller argues that Shakers had begun to their operations shortly after the turn of the nineteenth century, making them the first by several years. However, written records for that period of Shaker history are rare, and there is no mention of the industry until the early 1820s, at which point New Lebanon became the first to enter the trade. Regardless, it is safe to say that the Shakers were one of the, if not the, first to mass manufacturer plant medicine. See Miller, *Shaker Herbs*, 5–7.

[59] Ledger, New Lebanon, 1827-1838, Edward Deming Andrews Shaker Collection, Winterthur Museum, Garden, and Library, Winterthur, Delaware [hereafter cited as WMGL].

[60] This can be seen in Harvard Herb Dept Accounts, 1847-1853, Edward Deming Andrews Shaker Collection, Winterthur Museum, Garden, and Library, Winterthur, Delaware.

[61] Rafinesque, *Medical Flora; Or; Manual of the Medical Botany of the United States of North America.*, 17.

The Shakers had an unmistakable influence on another New Lebanon drug maker, Tilden & Company, which, from its beginnings in the 1830s, would grow to become one of the largest botanical concerns in the nation.[62] The early success of the Shakers convinced Elam Tilden and his sons Henry A. and Moses Y. to abandon their sheep farming business and enter the business of crude drug production. In the 1840s, Tilden constructed an herb garden, invested in heavy machinery to manufacture medicines, and by 1855, the firm produced 20,000 pounds of extracts a year.[63] Tilden was the first to use a vacuum evaporator to produce extracts, which enabled them to distill plants into concentrated form faster and without exposure to the atmosphere to produce an ostensibly purer extract. The *American Journal of Pharmacy* declared his laboratory as being "now known all over our country as the source of the best medicinal extracts prepared in vacuo."[64] The Shakers followed suit, invested in a vacuum evaporator, and began distributing concentrated remedies throughout the northeast.[65] Shaker account books reveal that, despite the friction that existed, the two firms regularly purchased

[62] There is some dispute about the details of the company's founding. Some scholars have cited the date as 1824 when Elam Tilden, the father of future New York Governor and Democratic Presidential Candidate Samuel J. Tilden, purportedly opened an botanical manufacturing establishment. However, several nineteenth century sources suggest that Henry A. Tilden, a son of Elam, started the business around 1847 with the help of a "seceder" from the New Lebanon Society. The truth lies somewhere in between. In 1838, a former Shaker named Josephus Seeley, who had lived with the New Lebanon Society for 20 years, wrote a deposition in which he laid out details of a conspiracy in which he helped Tilden, who was then owner of a store in New Lebanon, establish himself in the herb business. He confessed that after leaving the society in 1835, he and another "seceder" from the Shakers named Aaron Gilbert aided Tilden & Company in purchasing herbs at wholesale prices from a Hancock Shaker named Lewis Wheeler, who was, in turn, pocketing the money. Regardless of the veracity of the details, it is clear that Tilden's business began sometime prior to 1835 amidst auspicious circumstances and that the he was heavily influenced by, if not a replica of, the Shaker model. See Flannery, *Civil War Pharmacy*, 30–33; "Tilden & Co. and the Medical Journals," *American Journal of Pharmacy,* 31 (Jan. 1859), 86: Josephus Seeley, Letter regarding the illegal sale of herbs, 1838, Edward Deming Andrews Shaker Collection, WMGL.

[63] "The Valley of New Lebanon (N.Y.) as a Source of Medicinal Plants," *American Journal of Pharmacy*, November 1855, 567A.

[64] "The Valley of New Lebanon (NY) as a Source of Medicinal Plants," *American Journal of Pharmacy* (Nov., 1855), 567; "New Lebanon; Its Physic Gardens and Their Products," *American Journal of Pharmacy* (Oct. 1851), 386.

[65] The Shakers actually claimed that they should be credited for the development of vacuum evaporation, but Tilden & Company vigorously denied this. The *American Journal of Pharmacy* sided with Tilden in this debate. See Ibid; "Tilden & Co. and the Medical Journals," 86; "Extracts Prepared in Vacuo," *American Journal of Pharmacy* (Apr., 1852), 187.

herbs from each other through the 1850s, suggesting that they expanded together rather cooperatively to make New Lebanon a center for production of botanical products in the Northeast.[66]

Aside from the Shakers and Tilden & Company, most entrepreneurs who entered the botanical drug manufacturing business during this time were retail druggists. Typically located in Midwestern cities like Cincinnati and St. Louis, where the Botanico-Medical movement was strongest, druggists such as William S. Merrell, T. C. Thorpe, George M. Dixon, William J. M. Gordon, and F. D. Hill, began branching out to become wholesale suppliers of crude drugs and botanical preparations. Historians estimate that as much as half of the population of Ohio was using the Thomsonian system in the 1830s, and Cincinnati was quickly developing into the heart of Eclecticism, so demand for botanical preparations was heavily concentrated there. By the 1840s, botanic retailers in Boston, including William Johnson, and B. O. & G. C. Wilson & Co., entered the wholesale business, and New York's Hosea Winchester, a former Shaker, began dispensing Thomsonian and Eclectic remedies from his store on John Street. In addition to selling preparations to physicians, many botanic druggists entered the patent medicine business and sold directly to patients. B.O. & G.C. Wilson specialized in manufacturing patent medicines such as Wilson's Sarsaparilla, Wilson's Cherry Bitters, and Wilson's "Dysentery Syrup." Lowell, Massachusetts's druggist, James C. Ayer, became one of the most prolific patent medicine entrepreneurs. He advertised his long list of medicines, including Ayer's Cherry Pectorals, and Ayer's Vermifuge, in entire columns in the nation's major daily newspapers. Pittsburg's B.A. Fahnestock began producing his own line of patent medicines, including Fahnestock's Vermifuge.

[66] See Account Books, New Lebanon, NY, 1855-1871, Edward Deming Andrews Shaker Collection, WMGL.

The late 1840s saw some important developments in botanical pharmaceutical manufacturing and, indeed, the history of the pharmaceutical industry in general. Despite the advancements in wholesale botanical drug preparation and distribution, most practitioners, if they did not harvest the plants themselves, still received their orders in crude form—that is, in the form of herbs, leaves, roots, and other plant parts—and had to compound them for each patient from supplies in their saddlebags. Moreover, patients often had to take large doses of syrups, teas, and other preparations that had a very disagreeable taste. Indeed, distributing and administering botanical medicine was more difficult than, say, pouring a teaspoonful of calomel. European pharmacists had discovered in the late eighteenth century how to isolate alkaloids, the so-called "active ingredient" in a few exotic plants like Peruvian bark, thus enabling smaller doses of more concentrated medicines to be distributed and administered. Nothing comparable had been accomplished for those indigenous American plants favored by the Eclectics, but in the 1830s and 1840s, the momentum began to shift.[67] William S. Merrell, a chemist from New York who opened a drug store in Cincinnati in 1828, made a breakthrough in the production of concentrated remedies in 1847. Merrell claimed to discover, based on instructions from eclectic physician John King, how to isolate the alkaloid of may apple, transforming it into a resinous material that he called podophyllin. As a substitute for calomel, podophyllin quickly became an "indispensable and highly important Eclectic remedy." Dr. John Uri Lloyd, an influential Eclectic author and practitioner in Cincinnati, later called it "perhaps the most prominent of Eclectic

[67] In 1828, Rafinesque encouraged pharmacists to more thoroughly investigate the chemical properties of plants. "The active principles of medical plants may be obtained in a concentrated form by chemical operations," he wrote. Quoted in Edward Kremers, George Urdang, and Glenn Sonnedecker, *Kremers and Urdang's History of Pharmacy*, 4th ed (Philadelphia: Lippincott, 1976), 175.

drugs." Merrell's accomplishment had brought hope to these physicians that they might be able to match the alkaloidal pharmacy of the regulars.[68]

Figure 6. May apple (*Podophyllum peltatum*), the source of the chemical *podophyllin.*

Merrell's successful marketing campaign prompted many drug firms to enter the business of manufacturing what they called "concentrated remedies," which included alkaloids, resins, resinoids, and oleoresins, for the Eclectic market. Cincinnati firms of T.C. Thorpe, H. H. Hill, and George Dixon, entered the business in the early 1850s, and the business quickly spread to the east coast. The New York firms of B. Keith & Company, William Elmer's American College of Pharmacy, Hosea Winchester, and Tilden & Company soon followed. In addition to

[68] Berman and Flannery, *America's Botanico-Medical Movements*, 126–128; John Uri Lloyd, "The Eclectic Alkaloids, Resins, Resinoids, Oleoresins, and Concentrated Principles," *Bulletin of the Lloyd Library of Botany, Pharmacy, and Materia Medica* 12, no. 2 (1910): 20.

podophyllin, drug makers soon claimed that they had learned how to create alkaloids of Culver Root (Leptandrin), Blue Flag Iris (Iridin), Bloodroot (Sanguinarin), Goldenseal (Hydrastin), Black Cohosh (Cimicifugin), and some two dozen other plants. Regular physicians and some Eclectics quickly criticized many of these preparations by calling into question the manufacturing methods used to produce them, but there was no question that they were an important advancement in not only Eclectic pharmacy but pharmacy in general. Initially specializing in Eclectic preparations, Merrell eventually began selling them to allopathic doctors as well. After the Civil War, William S. Merrell & Company grew and expanded, and Merrell became a founding member of the National Wholesale Druggists' Association.

Without question, the technological advancements made by the Shakers and Tilden & Company, as well as the manufacturing of podophyllin and other alkaloids served to substantially increase the demand for crude drugs. Although statistics that could illuminate the size of this industry are not available, Edward Fowler, the Shaker agent in charge of the New Lebanon herb business, estimated in 1852 that the quantity of manufactured plant medicines used in the United States had doubled over the previous decade.[69] The American Pharmaceutical Association noted in 1860 the "general increase on the Atlantic seaboard, as well as in the West, of the use of so-called Eclectic remedies; this practice among regular practitioners is an indication of greater liberality, and a disposition to avail themselves of all the resources at their command, while it has induced a greater number of pharmaceutists to prepare them as the demand rises."[70] The growing demand for crude drugs was increasingly coming from a handful of manufacturers, a development that had important implications for the

[69] "New Lebanon: Its Physic Gardens, and their Products [Editorial]," *American Journal of Pharmacy,* Vol. 24, No. 1 (1852), 88.
[70] "Report on the Drug Market," *Proceedings of the American Pharmaceutical Association at the Ninth Annual Meeting, held in the City of New York, September 1860* (Philadelphia: Merrihew & Thompson, 1860), 86.

merchants of southern Appalachia. Prior to the 1840s, anyone who wanted to engage in the crude drug business, as Cowles found out, was limited by distribution problems owing to geography. What manufacturing that existed was performed on a relatively small scale by druggists around the country. It was simply not profitable to make dozens of different shipments, each consisting of a box or two of plants to small-scale druggists and practitioners around the country. The emergence of large-scale botanical drug firms with national and international ambitions created opportunities for businessmen like Cowles to specialize in extracting wagonloads of plants from America's fields and forests.

Poised to ride the wave of botanical reform, Calvin J. Cowles found ready buyers for his crude drugs across the Northeast and Midwest. Analysis of his account books reveal that from 1850 to 1860, he sold some 150,000 pounds of crude drugs to roughly thirty parties in the emerging botanical drug network. The most common, not surprisingly, were bloodroot (17,000 pounds), lobelia (13,000 pounds), ladies slipper (11,000 pounds), may apple (8,000 pounds), and wild ginger (7,000 pounds). Over half of the roots and herbs Cowles sold in the 1850s went to two firms: the Shakers and Tilden & Company. Five different communities of Shakers purchased a total of 40,000 pounds of crude drugs; most (17,000) went to New Lebanon. Henry Tilden also purchased 40,000 pounds. At least four of his buyers were patent medicine makers. Between 1851 and 1855, James C. Ayer and B. A. Fahnestock purchased more than 5,000 pounds of bloodroot from Cowles to make their blood purifiers. Philadelphia's John R. Rowand, an M.D. who became the proprietor of a variety of patent medicines in the 1830s, purchased over 12,000 pounds of blackberry roots from Cowles over a two-year period to make his "Syrup of Blackberry Root," which he advertised as an "inestimable remedy for bowel complaints." Cowles also sold crude drugs to wholesale botanic drug houses and emerging leaders in botanical drug manufacturing in the West and the East. William S. Merrell purchased some

11,000 pounds of twenty-two different species of plants over a two-year period. Jacob S. Merrill, who founded a wholesale botanical drug house in St. Louis in 1845, ordered 2300 pounds of roots, barks, and herbs. The Boston firm of B.O. & G.C. Wilson and the New York firm of Coolidge, Adams, and Bond were two of Cowles most consistent buyers. Clearly, Cowles was tapping into emerging national markets created by pioneers in botanical drug manufacturing.

The Appalachian Pharmaceutical Landscape

The first years in the trade were anything but smooth for Cowles. As his father warned, success meant that he had to navigate the notoriously difficult botanical drug markets. He had to know, often without a purchaser or a purchase price, how much to pay his storekeepers for a wide variety of plants so that he could realize a profit. Anticipating the market prices for each plant required a working knowledge of not only the demand for the plant but also how much of the plant was currently on the market nationwide. He had to ensure that the roots were correctly gathered and dried and that they would reach their destination without getting wet or, in some cases, lost. In order to attract orders, he assumed the liability of shipment, and this frequently meant trouble. In the winter of 1849, for example, he shipped eighteen bales and five boxes of roots and herbs to a Boston drug maker. When he finally heard from the company, they said that at least two bales were damaged so badly on the trip that they were now worthless. Furthermore, they said, the quality of the roots in five other bales was so bad that they could not sell it and would therefore not buy it.[71] "The root business so far has made us so

[71] B.O. & G.C. Wilson, Letter to Calvin J. Cowles, 1 March 1850, Fol. 9, Calvin J. Cowles Papers, Southern Historical Collection, Wilson Library, University of North Carolina—Chapel Hill.

much trouble and no Money that our friends persuade us to quit it but we will stick another year at least," he wrote to one of his buyers in 1851.[72]

By the mid-1850s, however, Cowles had settled into a trading pattern that brought him a measure of success in this burgeoning new industry. He bartered with harvesters for some roots and herbs at his own store in Elkville, but the bulk of his supply came from country storekeepers to the west, on the Blue Ridge. Located just out of the mountains closer to turnpikes and railroads, he promised them cheap goods at low prices that he procured from northern commission merchants. By the late 1850s, he was purchasing roots and herbs from more than three-dozen middlemen, mostly storekeepers. Ginseng was consistently the most lucrative herb in the forest, earning anywhere from twenty-five to sixty cents per pound in the antebellum era. Other plants drew from two cents to twenty cents per pound, and their value varied from year to year.[73] Throughout the growing season, mountain families would bring their harvest to the nearest store in sacks and barter for a variety of goods, primarily fabric, coffee, powder, lead, and luxury items such as candy. Once or twice a year, each storekeeper took a wagon-load of this produce down from the Blue Ridge to Cowles's store and exchanged it for boxes of goods. The storekeepers then took their goods back across the mountains to their stores to begin the bartering cycle again. Cowles, meanwhile, pressed his loads of roots and herbs from the Blue Ridge into 300-pound bales and shipped them via wagon, railroad, and steamboat to his northern and midwestern buyers.[74]

With his store located in the shadow of Grandfather Mountain, one of the oldest mountains in one of the oldest mountain chains on earth, Calvin J. Cowles was well positioned geographically to become a major national supplier of roots and herbs. Due to the region's

[72] Calvin J. Cowles, Letter to Tilden & Co., 25 January 1851, Fol. 111.25.1, Calvin J. Cowles Papers, North Carolina State Archives, Raleigh.
[73] For pricing, see Root Accounts, Cowles Papers, SHC.
[74] Barter Book, 1853-1856, Vol. 73, Cowles Papers, SHC.

unique geology and ecological history, southern Appalachia generally and northwestern North Carolina specifically contained some of the most botanically diverse temperate forests in the world. To the east and around Elkville, he could find many of the plants native to the Southern states, whereas only a few miles to the north and west in the high mountains, he could obtain species that grew in Canada.

Some 12,000 years of human interaction with the Blue Ridge environment altered the landscape in many ways, but by 1846, it had done relatively little to reduce the floral bounty of the forests. Paleoecological studies suggest that Native peoples may have even enhanced the region's floral diversity through deliberate landscape manipulation. According to studies of tree ring data, pollen, and charcoal remains, humans began using fire frequently to alter the landscape during the late Woodland period (ca. 1000 AD), a practice carried into the nineteenth century by Native Americans, Euro-Americans, and African Americans.[75] They started fires in order to attract game and open the forest understory for better hunting and, later, livestock herding. Recent scholarship has suggested that these frequent, low-intensity fires may have had the effect of increasing plant diversity, as they temporarily opened the forest canopy and reduced competition among understory plants, allowing more species of plants to proliferate.[76] The arrival of Europeans in the region in the late eighteenth century brought non-native species of plants like dandelions and plantains and a system of mixed agriculture that turned the forests of the Blue Ridge into an open range for cattle and hogs. These changes had a significant effect on the forest understory, but the forests were vast and population density so sparse that one

[75] Susan Yarnell, "The Southern Appalachians: A History of the Landscape," General Technical Report (Southern Research Station: U.S. Forest Service, 1998). Kurt Fesenmyer and Norman Christensen, "Reconstructing Holocene Fire History in a Southern Appalachian Forest Using Soil Charcoal," *Ecology* 91, no. 3 (March 2010): 662–70; Hazel Delcourt and Paul Delcourt, "Pre-Columbian Native American Use of Fire on Southern Appalachian Landscapes," *Conservation Biology* 11, no. 4 (August 1997): 1010–14;
[76] Matthew Reilly, Michael Wimberly, and Claire Newell, "Wildfire Effects on Plant Species Richness at Multiple Spatial Scales in Forest Communities of the Southern Appalachians," *Journal of Ecology* 94, no. 1 (January 2006): 118–30; M.M. Dobbs and Albert Parker, "Evergreen Understory Dynamics in Coweeta Forest, North Carolina," *Physical Geography* 25, no. 6 (2004): 481–98.

1840 visitor to the Blue Ridge could still call it a "secluded region, isolated and forgotten, a mountain wilderness, showing only here and there the first rude touches of civilization." The vegetation on its "forest-clad mountains" was "singularly rich and varied."[77] Although not the untouched Eden that Euro-American observers made it out to be, the region still retained much of its botanical richness.

By the time Cowles opened his store in Elkville, the diversity and abundance of plant life in the southern Appalachians had attracted the attention of the international scientific community. Indeed, the 1840s was an especially pivotal time for the study of Appalachian flora, as a second wave of botanical exploration brought the region's botanical uniqueness into the public eye. The first wave of botanical exploration in the late eighteenth century, which included the likes of William Bartram, Andre and Francois Michaux, and John Fraser, had established the region as something of a botanical wonderland, containing a remarkably wide variety of flora. While ascending the mountains en route from Charleston in 1775, Bartram remarked that the soil is "of an excellent quality for the production of every vegetable suited to the climate" not only of the southern uplands but also of "Pennsylvania, New York and even Canada."[78] Western North Carolina began to excite the imagination of the botanical community after the French botanist Andre Michaux discovered several new species of plants during seven trips to the mountains and foothills in the 1780s and 1790s, including the famous *rhododendron catawbiense.*[79] An extensive explorer and hunter of American plants, Michaux summited the Grandfather on August 30, 1794, during one of his several trips to the region. He, too, was

[77] Susan Fenimore Cooper, *William West Skiles: A Sketch of Missionary Life at Valle Crucis in Western North Carolina, 1842-1862* (New York: James Pott & Co, 1890), 5–6.
[78] William Bartram, Francis Harper (ed.), *Travels of William Bartram* (Athens: University of Georgia Press, 1997), 213.
[79] Reuben Gold Thwaites, ed., *Travels West of the Alleghenies: Made in 1793-96 by Andre Michaux; in 1802 by F. A. Michaux; and in 1803 by Thaddeus Mason Harris, M.A.,* (Cleveland: Arthur Clark Co., 1904), 288.

amazed at the range of plants he found there, remarking that he did not see many of those plants again until he reached Canada.[80] In 1802, following largely in his father's footsteps of six years prior, Francois observed when he reached the mountains of Watauga County that the soil was "perpetually moist and very fertile," unlike the "flinty" soil of the mountains of Pennsylvania and Virginia.[81] Following the Michauxs' visits, there was a general hiatus in the botanical exploration of the mountains of western North Carolina, as botanists ventured further west to explore territories recently acquired by the U.S. government.

In 1839, however, two events occurred that would have significant implications for the rediscovery of Appalachian botanical otherness and the development of the botanical drug industry in northwestern North Carolina. In March, Asa Gray, recently appointed professor of botany at the new University of Michigan, was in Paris studying the herbarium of the late Andre Michaux. Gray, one of the emerging lights in American botany, was on a mission to examine the collections of American plants in foreign herbaria as part of his work on a comprehensive North American botany textbook when he noticed a peculiar specimen among a collection of unidentified plants. The only clue to the flower's identity that the Frenchman left was the tag, "Hautes montagnes de Carolinie," the "high mountains of Carolina." Intrigued, Gray christened the new genus *shortia* after Dr. Charles Short of Transylvania University and wrote in his journal, "it is from that great unknown region, the high mountains of North Carolina."[82] Indeed, despite a few memorable journeys through the region in the late eighteenth century, much of the high mountains of North Carolina remained unexplored by naturalists. But that began to change with the other event of 1839 that renewed botanical interest in Appalachia.

[80] Ibid.
[81] Ibid.
[82] Charles F. Jenkins, "Asa Gray and His Quest for Shortia Galacifolia," *Arnoldia* 2, no. 3,4 (1946): 18–28.

While Gray was busy perusing the Michaux herbarium, an amateur botanist from Hillsborough, North Carolina, named Moses Ashley Curtis set off on a four-month botanical expedition into the mountains. Curtis was an acquaintance of Elisha Mitchell, professor of geology at the University of North Carolina, and he had been to the mountains at least twice for short periods, so he was familiar with the region and aware that naturalists were only beginning to understand its rich flora and fauna. Disillusioned with his teaching job at a private school in Raleigh, Curtis hoped to make a name for himself among botanical circles. He explored the area around Grandfather Mountain and Black Mountain (now Mt. Mitchell) in July before exploring the mountains further west, and along the way, he identified several new species of plants and collected specimens previously catalogued by Michaux and others. Upon his return, he initiated a correspondence with Asa Gray and other botanists and helped generate renewed interest in Appalachian botany. Two years later, Gray, anxious to find a living specimen of *shortia* in the high mountains of Carolina, enlisted Curtis's help in planning his own botanical exploration.[83] "No living botanist…is so well acquainted with the vegetation of the southern Alleghany Mountains, or has explored those of North Carolina so extensively, as the Rev. Mr. M. A. Curtis," Gray later wrote.[84]

Following Curtis's advice and guidance, Gray, then at Harvard College, explored the region around Grandfather Mountain in July of 1841 just a few years before Cowles began purchasing medicinal plants there. Traveling south through the Great Valley through flora largely dubbed as "uninteresting," Gray finally made it to North Carolina and "found a marked change in the vegetation on crossing the Blue Ridge." He was wholly impressed by the plant diversity around Grandfather Mountain. "[T]he vegetation is essentially Canadian," he

[83] Ronald H. Peterson, "Moses Ashley Curtis's 1839 Expedition into the North Carolina Mountains," *Castanea (Southern Appalachian Botanical Society)* 53, no. 2 (June 1988): 110–21.
[84] Asa Gray, "Notes of a Botanical Excursion to North Carolina," in *Scientific Papers of Asa Gray*, ed. Charles Sprague Sargent, vol. II: Essays, Biographical Sketches (Boston: Houghton Mifflin Co., 1889), 34.

remarked, "with a considerable number of peculiar species intermixed."[85] In 1842, Gray published his "Notes of a Botanical Excursion to North Carolina" in the *London Journal of Botany,* which enhanced the botanical reputation of the southern Appalachians. Although he failed to find *shortia,* he did succeed in identifying dozens of rare and undiscovered species that he included in his monumental *Gray's Manual of Botany* in 1851. Most importantly, Gray, who became the most significant figure in American botany in the nineteenth century, became a lifelong fan of the region's flora.[86] On the forested mountainsides of Appalachia, he later wrote, one can find "a greater variety of genera and species than any other temperate region, excepting Japan. And in their shade are the greatest variety and abundance of shrubs, and a good share of the most peculiar herbaceous genera."[87] Furthermore, he was the first to draw scientific attention to the east Asian-eastern North American floral disjunction discussed in chapter one.[88]

Botanist Samuel B. Buckley, who had made a name for himself exploring the Peaks of Otter in Virginia in the late 1830s, traveled through the same region the year after Gray with a German immigrant doctor named Ferdinand Rugel.[89] Unable to procure guidance from Gray, Buckley turned to Curtis, who generously provided him with notes, maps, and contacts.[90] Buckley published his journal notes in the *Southern Agriculturist* and *The Cultivator* in 1845 and

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[85] Ibid, 53.-54.
[86] A good biography of Gray is A. Hunter Dupree, *Asa Gray, American Botanist, Friend of Darwin*, Johns Hopkins Paperbacks ed (Baltimore: Johns Hopkins University Press, 1988).
[87] Gray, "Characteristics of the North American Flora," in *Scientific Papers of Asa Gray*, II: Essays, Biographical Sketches, 276.
[88] D.E. Boufford and S.A. Spongberg, "Eastern Asian--Eastern North American Phytogeographical Relationships: A History from the Time of Linnaeus to the Twentieth Century," *Annals of the Missouri Botanical Garden* 70 (1983): 423–39.
[89] S. B. Buckley, "Notes of a Botanical Tour," *Southern Agriculturist, Horticulturist, and Register of Rural Affairs,* Jul., 1846; S. B. Buckley, "Notes of a Botanical Tour, No. II," *The Cultivator,* Jul., 1845; S. B. Buckley, "Notes of a Botanical Tour, No. III," *The Cultivator,* September 1845; S.B. Buckley, "Botanical Tour, No. IV," *The Cultivator,* November 1845; S. B. Buckley, "Notes of a Botanical Tour, No. V," *The Cultivator,* Jun., 1846.
[90] Peterson, "Moses Ashley Curtis's 1839 Expedition into the North Carolina Mountains," 117.

1846. “The traveler cannot fail to be struck with the luxuriant appearance of the vegetation,” he wrote.[91] Thus, the efforts of Curtis, Gray, and Buckley, among others, went far in publicizing the botanical richness of the southern Appalachians. Anyone working in botany, including medical botanists, pharmacists, and physicians, would have been aware of the region’s flora.

The growing reputation of northwestern North Carolina as a botanical hotspot was certainly not lost on Calvin J. Cowles. Realizing that his location on the edge of the Blue Ridge Mountains gave him a leg up on the competition, he did not hesitate to sell potential customers on this fact. “We can get almost everything indigenous to the U. States,” he told the medicine manufacturers B. O. & G. C. Wilson of Boston. “Our locality is in the Mountains midst a profusion of plants heretofore unexplored.”[92] He once bragged to a potential London buyer that “We can get over one hundred sorts of Roots, Herbs, &c.” from these woods.[93] Cowles’s account books reveal that he dealt in some eighty-five different species of plants, a number that grew every year.[94]

Geography certainly made Cowles’s entrance into the crude drug industry possible, but he would not have been able to procure his supplies without the ethnobotanical knowledge of the region’s inhabitants. Anthropologist Anthony Cavender examines Appalachia as a “therapeutic landscape,” a term he borrowed from cultural geographers to describe places that have “an enduring reputation for achieving physical, mental, and spiritual healing.”[95] Indeed, Americans since the early nineteenth century have viewed Appalachia has a particularly salubrious region and have flocked to the region’s cooler air, healing springs, and beautiful

[91] S.B. Buckley, “Botanical Tour, No. IV,” *The Cultivator,* November 1845.
[92] Calvin J. Cowles to B.O. & G. C. Wilson, 15 March 1851, Cowles Papers, NCDAH.
[93] Calvin J. Cowles to Mr. Arthur, 6 July 1852, Cowles Papers, NCDAH.
[94] Accounts of Cowles’s botanical drug customers can be found in Root Accounts, 1851-1860, Calvin J. Cowles Papers, Southern Historical Collection, Wilson Special Collections Library, University of North Carolina, Chapel Hill.
[95] Cavender, *Folk Medicine in Southern Appalachia*, 55.

scenery to rejuvenate their health. However, the idea of a therapeutic landscape can also be used to examine how mountain residents themselves came to know the natural communities around them and imbue the landscape with meaning. Cowles was able to start selling "one hundred sorts" of roots and herbs because the people in the region already had a working relationship with those plants.

Like many rural Americans, the people of southern Appalachia were firm believers in botanical remedies. In the antebellum era, as Cavender has found, the medical profession in the region was somewhat diverse ideologically, but most relied heavily on plant medicine. A survey conducted in 1850 revealed that of 201 practitioners in eastern Tennessee, thirty-five had graduated from a medical school and forty-two had attended at least one course of medical lectures. Nearly a majority, ninety-five, were self-taught doctors who learned medicine by reading self-help medical books, most likely *Gunn's Domestic Medicine*. Furthermore, twenty-five were "botanics or steamers" (Thomsonians), and two were homeopaths.[96] According to Cavender, these physicians adhered to a "mishmash of humoral, miasmatic, and atmospheric theories of illness causation," and many of them practiced bloodletting, cupping, blistering, and other remnant therapies of the era of heroic medicine.[97] However, tinctures, ointments, teas and other preparations made from local flora formed the basis of most treatments.[98]

The health care infrastructure was poorly developed in southern Appalachia, and most rural residents rarely, if ever, saw a professional doctor, most of whom were clustered in the towns and cities in the region. "Nobody went to the doctor for anything except appendicitis or amputations," remembered Florence Cope Bush, who grew up in western North Carolina

[96] Ibid., 25.
[97] Ibid.
[98] Ibid., 24–25.

around the turn of the twentieth century.[99] These people relied heavily on folk botanical knowledge, as well as domestic medical guides, to maintain their own health. "It is not a stretch to say that the two most widely read books in Southern Appalachia at one time were the Bible and *Gunn's Domestic Medicine,"* Cavender writes.[100] Bush recalled in her memoir the great variety of plants her mother taught her how to use to treat common ailments: cockleburs for colds and coughs, sassafrass for strengthening the blood, spignet for kidney ailments, and catnip and boneset for fretful babies and nervous disorders. "Everything we needed was all around us," she wrote.[101] Cavender has identified a core of around fifty-eight commonly used plants in Appalachian folk medicine, while Judith Bolyard, who examined practices in eastern Kentucky, has identified around ninety.[102] It must be said that mountain residents did not rely exclusively on botanical remedies. Their therapeutics were a combination of herbal medicine, commercial medicines, including patent medicines, and other mineral- and animal-based medicines, but they clearly maintained a special relationship with plants as a primary means of maintaining their health.

Like many Appalachian people, the Cowleses were firm believers in botanical medicine. In their correspondence, Calvin and his father Josiah displayed a suspicion of regular doctors and evinced some faith in botanical medicines. When his son suffered from a fever in 1849, Calvin wrote to his father, inquiring about the best approach. "Don't go to a Doct. with it," Josiah replied. "Get some Red Oak, make a strong paste or plaster from the inner bark and apply it."[103] A few months later, when Calvin's wife appeared to suffer from headaches, the elder Cowles

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[99] Florence Cope Bush, *Dorie: Woman of the Mountains* (Knoxville: University of Tennessee Press, 1992), 25.
[100] Cavender, *Folk Medicine in Southern Appalachia*, 33.
[101] Bush, *Dorie*, 25.
[102] Cavender, *Folk Medicine in Southern Appalachia*, 197–201; Judith Bolyard, *Medicinal Plants and Home Remedies of Appalachia* (Springfield, Ill.: Charles C. Thomas, 1981).
[103] Josiah Cowles to Calvin J. Cowles, 19 March 1849, CJCP, NCDAH.

approved of him treating her with a homemade tincture of Ladies Slipper (*Cypredium acaule),* a favorite prescription employed by Thomsonian physicians.[104] When he first branched out from ginseng and sought to find more stable markets for medicinal plants, the first plant he marketed was lobelia, the most revered herb in the Thomsonian arsenal. Throughout his immense correspondence with his buyers, Cowles demonstrated a perceptive knowledge of both botany and medicine. He regularly read the *American Journal of Pharmacy,* and he did not hesitate to sell drug manufacturers on the medical virtues of certain plants. "Turkey pea has become a great medicine among the 'Eclectics,' he told one potential buyer.[105] "Devils shoe string…is of great repute here in venereal diseases," he told another.[106] His experience with botanical medicine undoubtedly helped him navigate drug markets and, in some cases, expand them.

Euro-American settlers of the southern Appalachians initially obtained some of this knowledge, either directly or indirectly, from the Cherokee, whose ancestors had been the chief human inhabitants of the mountain region for at least nine centuries. The Cherokee maintained a relationship to an estimated 800 different species of plants, and they believed that every plant possessed healing properties, even though they might not know what those properties were.[107] They developed a complex classification system that grew organically out of the uses to which they put these plants, and they concocted elaborate formulas that often contained more than ten different types of plants.[108] James Mooney, the Smithsonian ethnographer who spent his career studying the Cherokee and other native tribes, observed that due to the especially

[104] Josiah Cowles to Calvin J. Cowles, 11 May 1849, CJCP, NCDAH.
[105] Calvin J. Cowles, Letter to James Kaime, 24 May 1855, Fold. 111.26, Calvin J. Cowles Papers, North Carolina State Archives, Raleigh.
[106] Calvin J. Cowles, Letter to Mr. McAllister, 15 July 1852, Fold. 111.25.3, Calvin J. Cowles Papers, North Carolina State Archives, Raleigh.
[107] Gary Goodwin has provided the estimate of 800 species used by the Cherokee. Gary C. Goodwin, *Cherokees in Transition: A Study of Changing Culture and Environment Prior to 1775* (Chicago: Univ of Chicago, 1977), 60.
[108] Cozzo, "Ethnobotanical Classification System and Medical Ethnobotany of the Eastern Band of the Cherokee Indians."

"luxuriant flora" of their homeland, the "vegetable kingdom…holds a far more important place in the mythology and ceremonial of the [Cherokee] than it does among the Indians of the treeless plains and arid sage deserts of the West."[109] Appalachian floral diversity and Cherokee cosmology exerted an unmistakable influence on each other. Indeed, this ethnobotanical knowledge, gleaned from centuries of interaction with the region's flora, would play a large role in stimulating the botanical drug industry in southern Appalachia.

Backcountry residents readily learned the Native American uses of various plants. When a group of Moravians arrived in the North Carolina backcountry from Pennsylvania in the 1750s, they adopted ethnobotanical knowledge from local residents, who had learned it from the Indians. They referred to no less than fourteen different medicinal plants as a "snakeroot." According to one of the settlers, this was because "practically all plants which the Indians are known to use as medicine are called 'Snakeroot.'"[110] Cavender has found that rural residents drew heavily on Native American plant medicine, even while they rejected Indians' explanation of disease. Early botanists traveling through the region often discovered plants they sought when locals recognized the description of a common medicinal. Asa Gray, for example, found that locals considered many of the plants he sought to be "common and disregarded herbs."[111] He discovered *silene stellata,* for example, after locals showed him a specimen they called Thurman's snakeroot used by an "old Indian doctor" to treat snake bites.[112] When Cowles posted his advertisements offering to purchase these plants, he typically did not elaborate about where they could be found and what they looked like. He largely assumed that locals knew how to find them. And so they did. The long relationship between white residents and

[109] Mooney and Mooney, *James Mooney's History, Myths, and Sacred Formulas of the Cherokees*, 420.
[110] See Adelaide Fries, ed., *Records of the Moravians in North Carolina, Vol. 2, 1752-1775* (Raleigh: Edwards & Broughton Printing Co., 1925), 571.
[111] Gray, "Notes of a Botanical Excursion to North Carolina," 47.
[112] Ibid, 66.

the Eastern Band of the Cherokee since the early nineteenth century facilitated a cultural syncretism that has expanded ethnobotanical knowledge throughout the region.

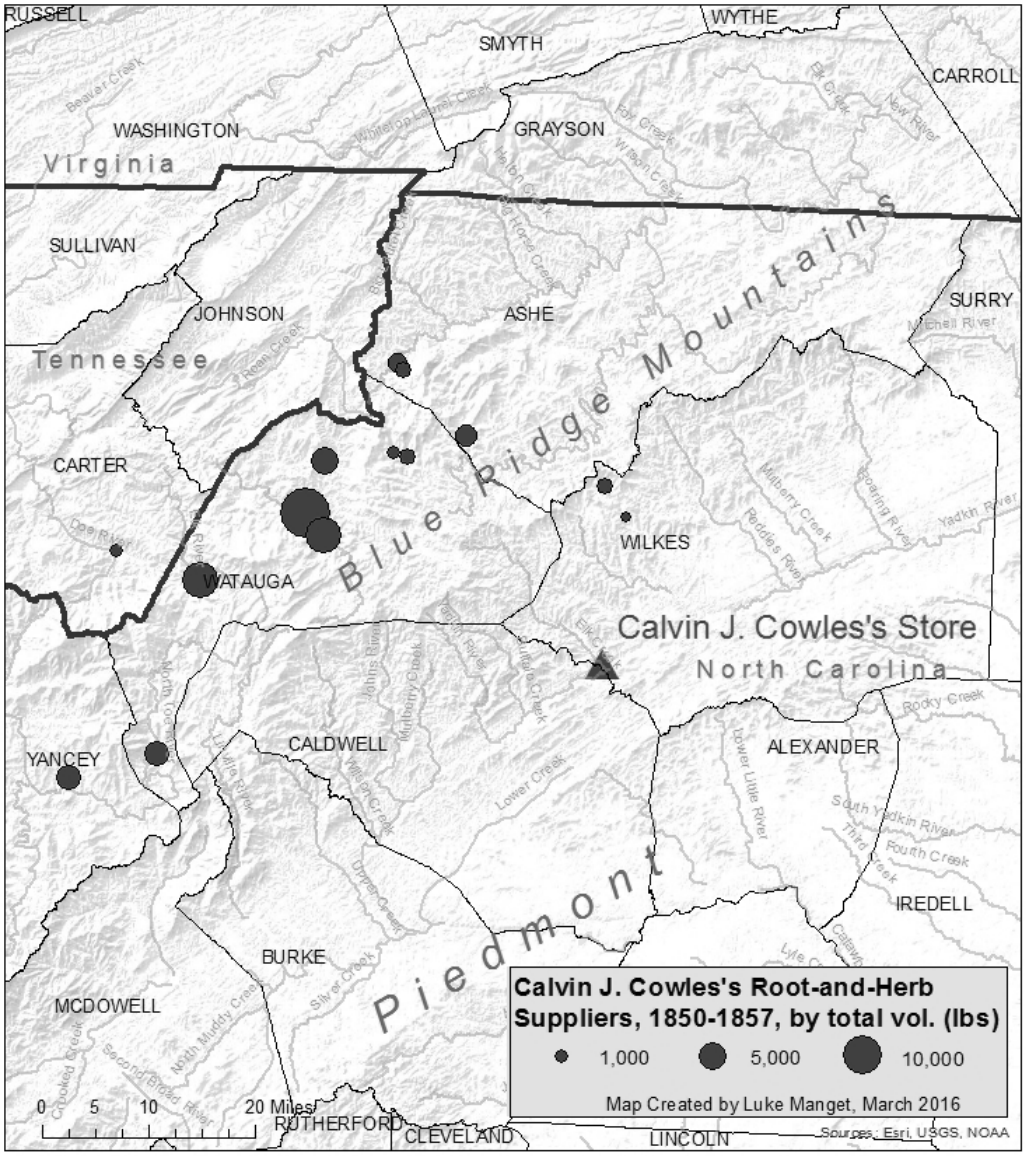

Figure 7. Map showing the locations of Cowles's root-and-herb suppliers.

Learning how to heal themselves with plants required mountain residents to develop a detailed knowledge of the various plant communities around them. Most knew how to recognize and find common plants like boneset, pennyroyal, sassafras, pokeweed, heal-all, and

others that grew at the edges of nearby fields and along roadsides. Other plants, however, grew deeper in the forest and could be gathered on demand only by those who knew the forest landscape well. While some plants, such as ginseng, blue cohosh, and Seneca snakeroot, grew in higher elevation forests dominated by northern hardwoods, others, such as goldenseal, prefer lower elevation forests. Blue flag prefered open, wetland areas, and pinkroot grew in the soil of low elevation forests with a neutral pH, whereas wild ginger was found mostly in acidic soils in higher elevation forests.[113] There were at least a few people in each Appalachian community with this kind of ecological knowledge.

Cowles built his business not only on locals' knowledge of medicinal plants but also on the custom that medicinal plants could be harvested from the wild on anyone's property. Much like fish, game, and ginseng, they were considered the property of the harvester rather than the landowner.[114] The persistence of large swaths of unimproved land in the mountains helped preserve this custom from its frontier phase. In 1850—over half a century after initial settlement—unimproved acreage outnumbered improved acreage by a ratio of more than five to one in the area in which Cowles procured his roots and herbs, whereas in North Carolina as a whole, the ratio was nearly half that.[115] Cowles did not refer to the forests as a "commons,"—he preferred the term "backwoods"—but he realized that the concept was key to his extraction efforts. "We procure most of our Drugs from the woods," he told a London herb dealer, whereas "You raise yours in extensive gardens." He asserted that his methods enabled him to

[113] For a great discussion of Appalachian plant communities, see Spira, *Wildflowers & Plant Communities of the Southern Appalachian Mountains & Piedmont*, 345–46, 388–89, 417, 445–46.
[114] The clearest evidence for this comes from the ginseng trade in West Virginia. See Ely Butcher Account Books, Ms 79-42, West Virginia State Archives, Charleston, WV.
[115] 1850 Census, accessed through University of Virginia's Historical Census Browser, http://mapserver.lib.virginia.edu/ [accessed 8/2/2015]

purchase a much wider variety of plants.[116] Without this custom, his business would not have met with the success it did.

This commons culture, combined with the floral diversity and abundance of the mountains, enabled Cowles's root business to provide drug manufacturers with a level of flexibility in their supply chain that they could not get from either northern forests or physic gardens. There were so many different types of wild plants readily available in large quantities that manufacturers could afford to take a risk on new trends in medical science without Cowles or any other suppliers having to invest land, labor, and capital in cultivation. Furthermore, manufacturers could place an order for certain plants that may have never been cultivated without having to wait for cultivation methods to be perfected. In many cases, cultivation was impractical, as consumer demand for certain plants waxed and waned, following the popularity of the theories that supported it. For example, American Hellebore (*Veratrum viride)* was not used until the early 1850s when a South Carolina doctor demonstrated its effectiveness in treating pneumonia and typhus.[117] Shortly thereafter, Cowles sold 7,000 pounds of Hellebore to manufacturers. For one year in 1856, Cowles purchased some 16,000 pounds of "staggerweed" (probably *Delphinium staphisagria*) because it held promise in treating venereal diseases, but in no other year did he even buy it.[118] Demand for many of these plants was so inconsistent that cultivation was largely impractical. Throughout the second half of the nineteenth century, the botanical drug industry and Appalachian commons culture maintained a symbiotic relationship, as the nature of each served to reinforce and support the other.

The emergence of southern Appalachia as a significant supplier of medicinal plants to the growing trans-Atlantic trade network was made possible by a combination of cultural,

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[116] Calvin J. Cowles, Letter to Mr. Arthur, 6 July 1852, Fol. 111.25.3, CJCP, NCSA.
[117] W. C. Norwood, "Veratrum Viride, or American Hellebore," *New Jersey Medical Reporter and Transactions of the New Jersey Medical Society (*Feb. 1853), 154.
[118] See, for example, Calvin J. Cowles, Letter to Larkin Maxwell, 24 May 1855, Fol. 111.26, CJCP, NCSA.

technological, and ecological forces. Changes in therapeutic practices stimulated mass demand for crude vegetable drugs, better transportation and improved manufacturing technology provided the means of delivering them, and the southern Appalachian commons supplied them. However, not all Appalachian residents had access to these markets in the 1850s. The botanical drug trade was yet in its infancy. The trade was not extensive in the region, and people living outside of Cowles's network might not have had the same opportunities to market the mountain commons as those inside it. While virtually all mountain residents could still find some ginseng and perhaps a little snakeroot to trade, their options were limited. The Civil War, however, would initiate widespread changes to the industry and bring these larger markets to more of the mountain region.

When Confederate guns opened fire from the Charleston battery on April 9, 1861, launching shells toward the U.S. Army garrison at Fort Sumter, the medicinal plants of Appalachia stood poised for big changes. By the outbreak of the Civil War, the southern Appalachian region was only beginning to emerge as a significant supplier of crude drugs, but the events of the war and its aftermath would put the region on the pharmaceutical map.

CHAPTER 4

The Botanical Drug Boom in Southern Appalachia, 1861-1919

The Civil War spurred the development of crude drug production in the South. Botanical medicine—and, specifically, indigenous botanical medicine—enjoyed a surge in popularity due, in part, to wartime necessity. Lacking a pharmaceutical industrial infrastructure and languishing under the pressure from the Union naval blockade, southern physicians found ways to replace foreign imports like quinine with native southern plants. The Confederate government, led by Surgeon General Samuel P. Moore, implemented a program to develop the region's indigenous medicines, but the effort met with mixed results and ultimately died with military defeat. However, it did have important long-term impacts on the trade in crude botanicals. First, it introduced more southerners into the business of harvesting and processing medicinal plants, some of whom became leaders in the business following the war. Second, the United States' wartime policies facilitated the expansion of existing drug firms in the North and introduced new ones to the business. When the war ended, the pharmaceutical industry entered a period of rapid and sustained expansion that drove up demand for crude indigenous medicines, along with all kinds of other medicines. As normal commercial relations resumed and demand for commercial vegetable medicines accelerated, many southerners drew on their wartime experiences to enter the business of crude drug production. Influenced by the model established by Calvin J. Cowles and attracted by the region's floral abundance, many

entrepreneurs rushed into the business in western North Carolina, and by the 1880s, they had succeeded in making the region the most important supplier of crude drugs in the nation.

Wartime Pharmacy in the North

Despite the advances made by the botanical drug manufacturing in the 1850s, by the outbreak of war, the industry was still in its infancy. Most drugs were still compounded by either physicians or retail pharmacists, and most physicians were allopathic practitioners who relied heavily on mineral-based medicines. As discussed in chapter three, a network of wholesale and retail druggists and botanical manufacturers had emerged to supply those physicians disposed to prescribe botanical remedies. Business grew as demand rose. Some antebellum firms were sizeable compared to what came before. Tilden & Company employed around forty individuals, while the Shakers utilized the labor of dozens, if not hundreds, across their six herb producing communities to produce its medicines.[1] Yet, compared to the firms that emerged after the war these antebellum firms were tiny. Firms such as Eli Lilly, Pfizer, Parke, Davis, & Co., and Wyeth grew to tremendous size after the war. Squib & Company, for example, a New York City drug firm that received a major boost from wartime government contracts, employed 6,000 workers in the early twentieth century.[2] Indeed, in the years following the war, the pharmaceutical landscape would look much different.

The outbreak of war disrupted the supply of crude vegetable drugs from the South. Indeed, the abrupt halt of medicinal plants flowing North made many pharmacists realize their growing dependence on the South for medicinal plants. New York druggist John Maisch, a vice president of the American Pharmaceutical Association who became the Chief Chemist for the

[1] "The Valley of New Lebanon (N.Y.) as a Source of Medicinal Plants"; "New Lebanon; Its Physic Gardens and Their Products," *American Journal of Pharmacy*, October 1851, 386–88.
[2] Flannery, *Civil War Pharmacy*, 31.

U.S. Army drug laboratory in Philadelphia, reported to the APA in 1864 that he could barely find many of the native medicinal plants, including American hellebore, blood root, and black cohosh, around Philadelphia. "[I]n years gone by, senega [Seneca snakeroot], spigelia [pinkroot], serpentaria [Virginia snakeroot], ginseng and probably other drugs used to be collected in the East, but have become almost completely extinct there, so that we had been compelled to look to the South for a sufficient supply, and since this source has been shut off, to the young and growing states of our great West [we must look]," he told the Cincinnati convention.[3] Yet, despite these concerns, most northern pharmacists did not suffer appreciably by the war's disruption. While Tilden & Company and the Shakers were abruptly deprived of the roots and herbs they obtained from Cowles, they adjusted their practices accordingly and continued to rely on the produce of their gardens for the manufacturing of extracts. The outbreak of hostilities in April 1861 prompted one New Lebanon herb department worker to remark, "These are the beginning of terrible times…God only knows what the result will be of the Civil War now being inaugurated." Yet, an examination of the Shaker account books at New Lebanon suggest that their wartime business did not suffer much from the war, as they continued to sell to many of their old customers.[4] By 1863, their business was producing more extracts than they had previous to the war and even received new orders from California and Chicago.[5] In general, although it deprived some of their southern supplies, the war had little

[3] John Maisch, "Report on the Drug Market," in *Proceedings of the American Pharmaceutical Association at its Twelfth Annual Meeting held in Cincinnati, O., September 1864* (Philadelphia: Merrihew & Son, 1864), 197-198.

[4] This can be seen most readily in Inventory of the Money and Stock Held at the Beginning of each year, 1839-1864, Vol., 38, The Shaker Manuscripts, Case Western Reserve University, Cleveland, OH; It can also be observed in the day book kept at the New Lebanon herb department from 1860 to 1862, which suggests business continued as usual, Account Book, New Lebanon Community, 1860-1862, ASC 839, Edward Deming Andrews Shaker Collection, Winterthur Museum, Garden, and Library, Winterthur, DE.

[5] This observation is gleaned from Account Book, New Lebanon Community, 1860-1862, ASC 839, Edward Deming Andrews Shaker Collection, Winterthur Museum, Garden, and Library, Winterthur, DE. An entry for Oct. 25, 1861: "Received an order from California for over 100 lbs fluids." In June of 1861, there was another mention of sending 960 lbs of extracts to Chicago. In the fall of 1860, the Shakers of New

effect on the ability of the North to produce botanical medicines. They simply utilized other sources located in friendlier territory.

The biggest change wrought by the war on northern drug manufacturing was in the area of mineral-based chemical drugs. As medical historian Michael Flannery has found, the needs of the army drove the expansion of chemical drug manufacturers, as the army strictly followed allopathic practices and took pains to keep irregulars out. In order to subdue and conquer roughly 750,000 square miles of Confederate territory, the U.S. government had to reckon with the logistics of supplying medicines and health care to a growing number of soldiers increasingly located further from their home territory. Following the appointment of Jonathan Letterman as medical director of the Army of the Potomac in June 1862, a reliable three-tiered system of hospitals, consisting of field hospitals, post hospitals, and general hospitals, served the Union army for the duration of the war. In order to supply medicines to these hospitals, the Surgeon General (Clement Finley then reformed by his successor William A. Hammond) created a system of medical purveyors and medical storekeepers who were responsible for the distribution of drugs to the hospitals according to the official standard supply table of the U.S. Army. This supply table mandated that field hospitals keep on hand some 80 medicines. Most were mineral-based chemicals, six were made from foreign plants, and only one (extract of Seneca snakeroot) was made from indigenous plants. General hospitals carried a few more, five in total out of around 130 medicines.[6] The most commonly prescribed medicines among Union physicians included quinine, ipecac, ether, chloroform, calomel, and various opiates.[7]

Botanical medicine was almost entirely left out of the Union Army's medical apparatus. The term "botanic" was a term of derision among the Union medical community. Indeed, the

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Lebanon were producing roughly 500-600 pounds of extracts monthly, and by 1862, the number had risen to 600-700 pounds of solid and fluid extracts.

[6] "Union and Confederate Standard Supply Tables," reprinted in Flannery, *Civil War Pharmacy*, 239–48.

[7] Ibid., 117–18.

army's allopathic physicians guarded the army from any perceived threat posed by sectarians, and anyone attempting to substitute indigenous plant medicines for their cherished minerals were seen as irregulars and often fired. Surgeon General William Hammond even fell victim to this tension when in May 1863, he issued the infamous Circular No. 6, which removed calomel and antimony from the supply table. Viewed as professional treason by physicians, it was one of the primary factors that led to his court martial and dismissal in March 1864.[8] In such a professional atmosphere, indigenous plant medicines had little place in the Union army.

The desire for lucrative army contracts fueled the growth of private and public drug laboratories. According to Flannery, while many chemical drug firms derived material benefits from wartime demands, Rosengarten and Sons, Powers and Weightman, and Squibb were the firms that benefitted the most from army contracts, especially the growing demand for quinine, an antimalarial drug derived from the South American cinchona tree.[9] Under Surgeon General Hammond, the army also got into the business of manufacturing drugs, establishing at least two large drug laboratories in Philadelphia and New York. In March 1863, the U.S. Army took over a drug lab owned by Philadelphia drug makers Powers and Weightman and appointed John M. Maisch to head the laboratory.[10] These labs served as a training ground for several pharmacists who would grow to influence after the war. In short, the Civil War gave pharmaceutical manufacturing in the North a shot in the arm, but botanical medicine did not benefit immediately.

[8] Ibid., 150–55.
[9] Ibid., 98–109.
[10] Ibid., 109–14.

Wartime Pharmacy in the South

In the South, however, the war had a more significant impact on botanical medicine, at least in the short term. Physicians, patients, and apothecaries found themselves cut off from northern pharmaceutical suppliers by official United States policy and from foreign suppliers by the Union naval blockade. A few foreign drugs, patent medicines, and northern-made goods continued to trickle in throughout the war due to the efforts of blockade runners and overland smugglers, and a thriving illicit trade developed for valuable drugs like quinine and morphine.[11] However, the majority of southerners were forced to turn to southern fields and forests for their remedies. One surgeon posted in a small town railroad hospital during the war recalled having virtually no access to commercial medicines. "I perused my dispensary and called into requisition an old botanic practice that had been handed down as a relic of the past," he told Atlanta druggist Joseph Jacobs in the 1890s. "I confess to have received valuable aid and very many useful hints in regard to the medical virtues of our native plants."[12] Jacobs interviewed several pharmacists and physicians who operated in the South during the war and reported to the American Pharmaceutical Association in 1898 that they had found ready substitutes for commercial medicines growing around them. Instead of digitalis, an imported plant-based drug that had (and still has) powerful cardiopulmonary effects, they prescribed bloodroot, wild cherry, and pipsissiwa. In place of calomel, they used may apple, dandelion, and butterfly weed. And instead of using quinine for intermittent fevers, they used tulip tree bark, dogwood bark, and willow bark, among others.[13]

[11] Ibid., 192–202; Joseph Jacobs, "Drug Conditions During the War Between the States," in *Proceedings of the American Pharmaceutical Association at the Forty-Sixth Annual Meeting Held at Baltimore, MD, August 1898* (Baltimore: American Pharmaceutical Association, 1898), 198–200.
[12] Jacobs, "Drug Conditions During the War Between the States," 195.
[13] Ibid., 204.

As happened in the North, the Confederate war effort played a key role in streamlining drug production, but unlike in the North, this had a more beneficial effect on indigenous botanical medicines. To supply the army's need for drugs, the Confederate government established a system of medical purveying depots around the Confederacy, each one overseen by a medical purveyor. By November 1864, there were thirty-two depots stretching from Richmond to San Antonio. Purveyors were charged with procuring and distributing crude drugs to army hospitals, where hospital stewards compounded the medicines for soldier use in the field.[14]

Early in the war, purveyors procured a variety of medicines from nearby druggists and blockade runners, but as the blockade tightened and existing stocks were exhausted, Confederate Surgeon General Samuel P. Moore took measures to promote indigenous remedies. As early as January 1862, the Confederate government began constructing drug laboratories, first in Richmond, then Columbia, Atlanta, Macon, Charlotte, and Lincolnton, North Carolina, and by mid-1863, there were as many as ten laboratories in operation across the South, stretching to Tyler, Texas. These laboratories were charged with manufacturing medicines of all kinds, but they paid special attention to making botanical preparations from native and naturalized plants.[15] In March 1862, Surgeon General Moore established a medical purveyor depot in Charlotte under the direction of a Virginia surgeon, Marion Howard. The purpose of the depot, in addition to supplying Confederate hospitals, was to provide indigenous plants for the new medical laboratory at Lincolnton. Under the direction of A. Snowden Piggot, the Lincolnton laboratory manufactured tinctures, extracts, and other products made from

[14] Flannery, *Civil War Pharmacy*, 173.
[15] Scott Legan, "Drugs for Louisiana: The Louisiana State Laboratory, 1864-1865," *Louisiana History* 48, no. 2 (Spring 2007): 193–202; Guy Hasegawa, "'Absurd Prejudice': A. Snowden Piggot and the Confederate Medical Laboratory at Lincolnton," *North Carolina Historical Review* 81, no. 3 (July 2004): 313–34; Guy Hasegawa, "The Confederate Medical Laboratories," *Southern Medical Journal* 96, no. 12 (December 2003): 1221–30.

indigenous plants, in addition to carbonate of soda, chloroform, rum, sulfuric acid, and various opiates.[16] In April of 1862, Moore issued a circular to all medical officers, imploring them to investigate "indigenous medicinal substances of the vegetable kingdom." "It is the policy of all nations at all times, especially such as at present exists in our Confederacy," he wrote, "to make every effort to develop its internal resources and to diminish its tribute to foreigners by supplying its necessities from the production of its own soil."[17] In early 1863, facing the reality of life behind the blockade, Moore revised the army's standard supply table and printed a supplement that listed ninety-two native and naturalized plants to be used "when the articles of the original Supply Tables cannot be procured from the Purveyors, or when they are deficient in quantity."[18]

Moore viewed the development of indigenous botanical medicines as a wartime necessity, but like many other southern nationalists, it also fit within his broader goals of national self-sufficiency. He was no sectarian. He was pragmatic. Although Moore did not see botanical medicine as inherently better than regular medicine, he nevertheless helped stimulate a movement that brought botanical medicine into alliance with Confederate nationalism. At the same time he revised the standard supply table, Moore authorized F. Peyre Porcher to write a guide to the medicinal uses of indigenous plants in the South. A Charleston medical botanist who had made a name for himself in in the 1850s among scientific circles for his microscopic study of disease, Porcher was one of those who believed the South should develop its own indigenous medicines. In 1847, he completed a detailed study of the medicinal plants and ferns in Berkeley County, South Carolina," and in August 1861, he penned an article for *De Bow's*

[16] Hasegawa, "'Absurd Prejudice': A. Snowden Piggot and the Confederate Medical Laboratory at Lincolnton," 327.
[17] Quoted in Norman Franke, "Official and Industrial Aspects of Pharmacy in the Confederacy," *The Georgia Historical Quarterly* 37, no. 3 (September 1953): 179.
[18] The CSA Supply Table is reprinted in Flannery, *Civil War Pharmacy*, 249–56.

Review in which he laid out 119 plants with medical value and urged southerners to learn them.[19] "[M]uch may be supplied by the Southern States if proper attention is directed to the subject," he wrote.[20]

Porcher was working as a field and hospital surgeon in the opening year of the war when Moore tapped him to write the book on southern resources. Working with great speed, he published *Resources of the Southern Fields and Forests* in late 1863. It was Porcher's magnum opus, a massive repository of botanical information that included four hundred known medicinal plants.[21] In addition to the knowledge he gleaned from years of research and other scholarly publications, he relied heavily on knowledge from Native Americans and from enslaved African Americans on his family's plantation in Berkeley County, South Carolina. In fact, according to historian Marcia Goodson, as many as one-third of the plants he mentioned came from the slaves' *materia medica*.[22] No plant held more promise than bloodroot. "I employ no vegetable substance more constantly," he wrote. Yet, Porcher was no sectarian either. He admitted that he employed very few vegetable medicines. "My endeavor is not so much to avoid a great multiplicity of agents, as to do no injury with any," he wrote. "The more full and

[19] F. Peyre Porcher, "A Medico-Botanical Catalogue of the Plants and Ferns of St. John's, Berkeley, South Carolina," *Southern Journal of Medicine and Pharmacy,* 2 (1847), 255-417; Allan D. Charles, "The Man with the Microscope," *Sandlapper* (Winter 1997-98), 33-35.
[20] F. Peyre Porcher, "Resources of the Southern Fields and Forests," *De Bow's Review,* 6, 2 (August 1861), 2.
[21] Francis Peyre Porcher, *Resources of the Southern Fields and Forests, Medical, Economical, and Agricultural; Being Also a Medical Botany of the Southern States with Practical Information on the Useful Properties of the Trees, Plants, and Shrubs*, New edition (Charleston, SC: Walker, Evans, and Cogswell, 1869).
[22] A good discussion of the influence of slaves on Porcher's medical knowledge can be found in Martia Goodson, "Enslaved Africans and Doctors in South Carolina," *Journal of the National Medical Association* 95, no. 3 (March 2003): 225–33.

accurate our knowledge, the more skillful is our application, whether the substance used be vegetable or mineral."[23]

Porcher's book met with critical acclaim, but it suffered from limited distribution. During the war, Porcher himself sold the book and solicited orders from the interested public. It was not widely read by the public during the war, but Moore told Porcher in 1864 that it "has been distributed widely among Medical Officers."[24] It also gained a reputation among southern botanists. In a letter to Porcher, Henry Ravenel, the Charleston botanist who was one of the South's most distinguished, wrote: "The connection between practical Medicine and Botany opens a vast, very vast, and almost unexplored field, and your book lays the foundation for its study and application."[25] South Carolina's William Gilmore Simms, perhaps the South's most famous literary son at the time, lauded Porcher's effort and envisioned the development of the South's botanical resources as both a short-term expedient and a long-term goal. He encouraged southerners to turn to the "resources of the Southern fields and forests…not merely as expedients during the pressure of war and blockade, but continuously, through all time, as affording profit, use, interest and employment to our people."[26] Reflecting the religious nationalism of the early nineteenth century, William Gilmore Simms told the *Charleston Courier* that Porcher's book "takes rank with absolutely necessary histories of the country; and where they exhibit little else than the strifes, the struggles, the wars, and the miserable politics of society, this volume throws us back upon God; shows us what have been the blessings and

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[23] Francis Peyre Porcher, *Resources of the Southern Fields and Forests, Medical, Economical, and Agricultural. Being Also a Medical Botany of the Confederate States; with Practical Information on the Useful Properties of the Trees, Plants, and Shrubs* (Charleston, SC: Evan and Cogswell, 1863), 33–34.
[24] Communication from Surgeon General S.P. Moore, CSA, to the author upon completion of the task assigned him, in Reviews of F.P. Porcher's Resources of the Southern Fields and Forests, in Porcher Family Collection, South Carolina Historical Society, Charleston, SC.
[25] The Opinion of Mr. Ravenel as expressed in a letter to the author, Reviews of F.P. Porcher's Resources of the Southern Fields and Forests, in a file in the Porcher Family Collection, South Carolina Historical Society, Charleston, SC. Many thanks to Dr. Lester Stephens for sending me this file.
[26] Porcher, *Resources of the Southern Fields and Forests*, x.

bounties we owe to his hands; shows us where to turn for resource at the hour of need."[27] Interest in Porcher's book prompted him to revise it and republish it in 1869, providing valuable information to many southern crude drug suppliers that emerged after the war.

Appalachia and the Civil War Botanical Drug Trade

By late 1863, the infrastructure was in place to provide a steady flow of crude botanical drugs through the Confederate medical apparatus, but obtaining those supplies was another challenge altogether. Orders were given to medical purveyors to appoint "from one to three trustworthy agents to go through the country in their districts, to collected and encourage the Country people to cultivate, collect, and prepare the indigenous plants needed."[28] Some enterprising men and women began cultivating valuable plants like poppies, but the vast majority of plants were only to be found growing wild. Beginning in the summer of 1862, purveyors published price lists for some sixty plants in newspapers, calling on loyal southerners to aid "The Cause" by harvesting medicinal plants. The prices offered were certainly remunerative. In some cases, the C.S.A. offered three to four times what Cowles had paid prior to the war. Whereas Cowles paid six cents per pound of bloodroot in the 1850s, for example, the Confederate government offered forty cents per pound. Similarly, may apple fetched seventy-five cents per pound, and wild ginger twenty-five cents per pound, whereas Cowles paid six and twelve cents, respectively.[29]

Because much of the records from the Confederate Medical Purveyor's Offices were burned along with the city of Richmond in 1865, it is virtually impossible to know where the bulk

[27] William Gilmore Sims, "Porcher's Resources of the South," *Journal of Materia Medica,* [1869], undated clipping in reviews of F.P. Porcher's Resources of the Southern Fields and Forests, in Porcher Family Collection, South Carolina Historical Society, Charleston, SC
[28] Quoted in Flannery, *Civil War Pharmacy*, 66.
[29] A price list can be found in *Carolina Watchman,* 28 July 1862.

of the roots and herbs sold to purveyors were harvested. However, it appears that the Appalachian region emerged as an important supplier of the Confederate drug trade. Virtually all of the plants requested by the medical purveyors in North Carolina could be found in and around the mountains, and Porcher frequently identified "the mountains" as the heart of the range of many medicinal plants.[30] One Confederate botanist working in western North Carolina during the war recalled that "the collections became rather larger than anticipated."[31] Indeed, the region clearly had a lot to offer the medical purveyors, and it played an important role in the Confederate experiment.

As he did with the Shakers and other buyers before the war, Calvin J. Cowles used his location near the Blue Ridge to solicit orders from Confederate Medical Purveyors. As early as December 1861, Cowles sent a list of his roots and herbs to Dr. James J. Waring, the medical purveyor attached to a depot in Goldsboro, North Carolina. "On the list, you may find some things that you can not get elsewhere, many equivalents of scarce and expensive medicines," he told Waring.[32] Waring responded in February with an order for bloodroot, American hellebore root (*Veratrum viride*), lobelia, Virginia snake root, and Pipssessewa, and hopeful promises for more orders. "A large quantity of the above articles is desired not only to furnish my department but the army generally," he wrote.[33] Cowles sent Waring a catalogue of Shaker preparations and tried to sell him on the medical merits of other plants, notably Balm of Gilead buds, star root, beth root, and turkey pea.[34] In July of 1862, Cowles responded to a newspaper

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[30] For example, Porcher identifies the mountains as the primary location of spikenard (*Aralia racemose),* wild sarsaparilla (*Aralia nudicaulis*), ginseng, blue cohosh (*Caulophyllum thalictroides*), willow herb (*Epilobium augustifolium),* Seneca snakeroot (*Polygala senega*), Indian Physic (*Gillenia trifolata*), American Ipecac (*Gillenia stipulacea),* and many more. See Porcher, *Resources of the Southern Fields and Forests,* 51, 52, 54, 59, 91, 175 .

[31] M.E. Hyams, "The Botanic Business of Western North Carolina," *The Charlotte Democrat*, November 23, 1877.

[32] Calvin J. Cowles to James J. Waring, 25 December 1861, Calvin J. Cowles Papers, NCDAH.

[33] James J. Waring to Calvin J. Cowles, 15 February 1862, Calvin J. Cowles Papers, NCDAH.

[34] Ibid.

advertisement from Marion Howard, the medical purveyor in Charlotte, offering to sell him some 14,000 pounds of plants, including 5,000 pounds of may apple, 2000 pounds blood root, 1000 pounds each of wild ginger, wintergreen, and black snake root.[35] Without waiting for a reply, Cowles began shipping Howard small packages of bloodroot, sassafras pith, turkey pea, and Balm of Gilead buds. Howard was receptive to the large order, but Cowles's records do not indicate whether he ever fulfilled his promise. He did, however, send Howard several smaller orders over the course of 1862 and 1863, including one thousand pounds of American Hellebore, which, according to Porcher, "grows in mountain streams," and eight hundred pounds of bloodroot.[36] In the fall of 1862, Cowles sent two wagonloads of roots, including 1200 pounds of wild ginger, to Howard and informed him that "It was dug in the mountains and can not be got elsewhere."[37] Cowles's location at the foot of the Blue Ridge helped him cash in on the Confederate effort to develop the resources of the southern fields and forests.

For thirteen months, Cowles sold the Confederate government a steady supply of roots and herbs, but in March of 1863, Moore himself informed Cowles that "more indigenous plants are not needed at present."[38] In the same letter, Moore conveyed news that Waring had resigned his post. Cowles lost touch with the Confederates and never sold them roots again. This may have been due less to declining demand for indigenous plant medicines and more to the fact that Cowles was pulled in different directions during the war. As postmaster general in Charlotte, Cowles remained busy in that city for most of the year and relaxed his involvement with the trade, becoming more interested in minerals. He may have decided that doing

[35] Calvin J. Cowles to Marion Howard, 16 July 1862, Calvin J. Cowles Papers, NCDAH.
[36] Porcher, *Resources of the Southern Fields and Forests*, 606; J. & C.J. Cowles, Contract with Medical Purveyor, 25 November 1862, Calvin J. Cowles Papers, NCDAH; for another list of Cowles orders from Howard, see entry for M. Howard in Root Accounts, 1850-1860, Calvin J. Cowles Papers, Southern Historical Collection, Wilson Special Collections Library, Chapel Hill, NC.
[37] Calvin J. Cowles to Marion Howard, 7 November 1862, Calvin J. Cowles Papers, NCDAH.
[38] Samuel P. Moore to Calvin J. Cowles, 6 March 1863, Fol. 111.6, CJCP, NCDAH.

business with the Confederate government was not profitable. The orders coming from Waring and Howard were nowhere near as large as those he regularly filled for the Shakers and other northern manufacturers. Furthermore, Cowles's relationship with the Confederate government was one of continual frustration. Howard refused to pay for at least one shipment of bloodroot because it was wet and moldy, a claim that Cowles denied.[39] Their correspondence was one misunderstanding after another over missing and mislabeled packages, discrepancies in weights, and tardy payments.[40] In January 1863, Cowles traveled to the purveying depot himself and, finding Howard away, convinced his assistant to let him examine the books, whereupon he discovered that Howard had crossed off a shipment of 200 pounds of bloodroot received from Cowles. Howard agreed to pay for the 200 pounds, but it did not change Cowles's opinion of him.[41] "Dr. Howard…seemed to be affected with a moral distemper worse than ignorance," he told one acquaintance in the business. "He cheated me out of two whole pkgs and about 20% of everything else sold him, and Dr. Waring of Goldsboro neglected to pay for about $50 worth of goods he got of me."[42]

Cowles was not the only person knowledgeable of the botanical drug trade who was highly critical of the Confederate purveyors. Moses A. Curtis, the Hillsborough, North Carolina, botanist who helped resuscitate botanical interest in the southern Appalachians, accused the department of "ignorance and charlatanery."[43] In letters to Cowles, he indicted purveyors for advertising for plants that did not grow in the South and using common names unknown in the South. In an attempt to expose the purveyors' lack of knowledge in the trade, Curtis placed an anonymous advertisement in newspapers, offering to pay fifty cents per pound for all the

[39] See Marion Howard to Calvin Cowles, 4 October 1862, Calvin J. Cowles Papers, NCDAH; Calvin J. Cowles to Marion Howard, 10 October 1862, Calvin J. Cowles Papers, NCDAH.
[40] See Calvin J. Cowles to Marion Howard, 26 September 1862, CJCPNCDAH.
[41] Calvin J. Cowles to Marion Howard, 22 January 1863, CJCPNCDAH.
[42] Calvin J. Cowles to M.A. Curtis, 5 February 1863, CJCPNCDAH.
[43] M.A. Curtis to Calvin J. Cowles, 17 February 1863, CJCPNCDAH.

bittersweet, or *solanum dulcamara*, sent to him. He hoped to prove that bittersweet, a plant requested by the purveyors, did not grow in the South, but the joke was on him when Cowles shipped him a few hundred pounds of the herb. "I was taken not a little by surprise," he told Cowles. "I knew very well that the plant had never been found in the U. States by any botanist."[44] Cowles replied that he himself had introduced it to his father's garden in Hamptonville in the mid-1840s, and now it is "found trailing about the doors of Cabins on Beaver Creek."[45] He was so pleased with Curtis's attempt to "expose their ignorance," he only charged Curtis ten dollars for the plants.[46] Curtis also accused the Confederate government of setting prices for roots and herbs that reflected the medical value of the plants rather than the effort it took to find it, which did little to ensure that the variety of roots and herbs they needed would be collected. "It is evidence on their prices that these gentlemen did not understand the business they had undertaken, and that they would not be able to authenticate half the species on their list," he wrote.[47] While paying seventy-five cents for a relatively common herb may apple, they paid twenty cents for skunk cabbage, an incredibly rare plant in North Carolina.

In assessing the historical significance of the Confederate effort to develop the resources of southern fields and forests, it is important to be mindful of the yardstick we use to measure it. Historians have almost unanimously examined the Confederate effort from the perspective of medical history and, thus, have little to say about its long-term impacts. Norman Franke, whose 1956 dissertation was the first scholarly examination of the subject, was critical of Confederate pharmacy for failing to introduce any new indigenous plants into the materia medica. Michael Flannery has been more conciliatory, calling it a "reasonable and concerted effort to deal with the harsh realities of providing a well-stocked supply table of reliable

[44] Ibid.
[45] Calvin J. Cowles to M.A. Curtis, 26 February 1863, CJCPNCDAH.
[46] Calvin J. Cowles to M.A. Curtis, 5 February 1863, CJCPNCDAH.
[47] M.A. Curtis to Calvin J. Cowles, 29 December 1862, CJCPNCDAH.

remedies."[48] It was certainly a reasonable effort, albeit one plagued by inefficiencies and, in some cases, incompetence. Yet, as Flannery briefly touches upon, perhaps the greatest long-term impact of the Confederate pharmaceutical program was that it raised the stature of botanical medicine in the South, which sustained the growth of the crude vegetable drug trade following the war. Furthermore, the wartime effort introduced many southerners to the practice of gathering roots and herbs for the market and the business of selling them, and it provided a handbook, Porcher's *Resources of the Southern Fields and Forests,* to guide the new industry. When normal North-South trade relations resumed, many would draw on their experiences to make Appalachia the nation's most important supplier of indigenous medicinal plants. The Confederate pharmaceutical apparatus may have produced few medical advancements of note, but it did induce more people in and around the southern mountains to enter the trade.

The Post-Civil War Botanical Drug Boom in Appalachia

After the Civil War, as a result of the stimulating effects of the Union Army's medical apparatus, the pharmaceutical industry grew by leaps and bounds. Many pharmacists who gained experience in that apparatus, such as Eli Lilly, E. R. Squibb, Frederick Stearns, John Wyeth, John Maisch, and others, went on to create successful drug firms after the war, almost exclusively in northern and midwestern states. Many other druggists and chemists, most notably the Detroit-based firm Parke, Davis, & Co., rushed into the business during the post-war years to capitalize on the growing markets for pharmaceutical products.[49] Technological innovations during and after the war further enhanced the profitability of pharmaceutical manufacturing by, for example, improving the extraction process and the making of compressed

[48] Flannery, *Civil War Pharmacy*, 229.
[49] Kremers, Urdang, and Sonnedecker, *Kremers and Urdang's History of Pharmacy*, 327–31.

and coated tablets. Following the war, pharmacists became more organized and made significant strides toward recognition as scientific-based professionals. Specialized retail drug stores became more common fixtures in American towns, and they increasingly received their stock from wholesale drug houses for cash, rather than commission. Under pressure from trade groups, states began to regulate the industry.[50] In such a climate of rapidly increasing competition, wholesale druggists organized trade associations to better coordinate the activities of its members, first with the Western Wholesale Druggists Association in 1876 and, less than a decade later, the National Wholesale Druggists' Association.[51] All of this occurred within two decades of the war's end, giving birth to the modern pharmaceutical industry.

The general thrust of this rapid postwar expansion was in the direction of chemistry, and minerals continued to play a central role in pushing innovation. However, botanical preparations from indigenous plants did not decline. In fact, the spirit of eclecticism and medical sectarianism continued to influence the study of indigenous plants and the manufacture of their medicines. As Edward Kremers and George Urdang noticed some sixty years ago, all of the emerging postwar drug firms began by producing lines of vegetable tinctures, extracts, and other galenical preparations. Wholesale drug firms emerged in the North that specialized in botanical preparations, including Wilson & Burns and Cheney, Myrick, & Hobbs of Boston, which replaced the partnership of Heath and Cheney in 1870. These joined other botanical specialists like Tilden & Company and Coolidge, Adams, and Bond. Until synthetic organic chemistry took hold in the United States following World War I, indigenous plants played an important, yet statistically small, role in American pharmaceutical manufacturing.[52]

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[50] Ibid., 294–98, 327–33.
[51] Mahlon Kline, "The Origin and History of the National Wholesale Druggists' Association," *American Journal of Pharmacy*, November 1900, 520–30.
[52] Kremers, Urdang, and Sonnedecker, *Kremers and Urdang's History of Pharmacy*, 330.

Rural physicians increasingly chose to purchase commercially made medicines rather than relying on locally gathered plants. Even in southern Appalachia, that bastion of folk medicine, doctors jumped on the commercial bandwagon.[53] One merchant in Ashe County, North Carolina, reported that in 1877 that he was developing a lively business with local physicians in commercial medicines. He was supplying six physicians in the county with "all the medicines and drugs they are making use of."[54]

Patent medicines, many of which touted their indigenous vegetable origins, became a "veritable craze" following the war.[55] In 1859, the proprietary medicine industry manufactured roughly $3.5 million worth of medicines per year. By 1904, the annual manufactured value of proprietary medicines jumped to $74.5 million.[56] The number of different nostrums rose from 2700 in 1880 to some 38,000 by World War I.[57] Historian James Harvey Young attributes this surge partly to the restoration of the Union (or, more specifically, the reunification of northern patent drug makers with their southern consumers), partly to the emergence of patent drug makers in the South, and partly to the revolution in journalism and advertising that followed the war.[58] The influence of the Civil War and the expanded railroad network also played a role in lowering transportation costs.

American consumers demanded products like "Pinkham's Vegetable Compound," "Samaritan's Root and Herb Juices," and "Dr. Bristol's Sarsparilla." Many of the companies who placed advertisements in newspapers appealed to consumers' therapeutic sentimentalisms. St. Louis-based Z. H. Zeilin & Co., the proprietors of Simmons Liver Regulator, assured customers that this "unrivalled Southern Remedy is warranted not to contain a single particle of MERCURY,

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[53] Cavender, *Folk Medicine in Southern Appalachia*, 70–77.
[54] Arthur D. Cowles to Calvin J. Cowles, 4 December 1877, Fol. 87, Calvin J. Cowles Papers, SHC.
[55] Flannery, *Civil War Pharmacy*, 235.
[56] Young, *The Toadstool Millionaires*, 110.
[57] Kremers, Urdang, and Sonnedecker, *Kremers and Urdang's History of Pharmacy*, 325.
[58] Young, *The Toadstool Millionaires*, 93-144.

or any injurious mineral substance, but is purely vegetable, containing those Southern Roots and Herbs, which an all-wise Providence has placed in countries where Liver Diseases most prevail."[59] The Swift Specific Company, an Atlanta drug-maker, attempted to sell their blood purifier by telling consumers that their ingredients came from "the mountains, from the forests, from the swamps," and assured them that ".S.S.S. is made entirely of nature's gentle-acting, healing, purifying roots, herbs, and barks."[60] The sheer frequency with which patent medicine makers used these selling points suggests that the public's desire for natural indigenous remedies was greater than ever.

Southern merchants, many of whom lived in and around the mountains, stepped in to supply this growing demand. One Boston newspaper claimed in 1871 that the three wholesale root-and-herb dealers in that city (it is unclear to which three it was referring exactly), which purchased $200,000 worth of crude drugs annually, had tripled their business over the previous three years, and the bulk of their supplies came from North Carolina and Tennessee. [61] Wendover Bedford, a New York pharmacist who drafted the committee report on the drug market for the American Pharmaceutical Association in 1874, found that "the trade in botanic articles appears to be increasing each year" and that "the East and North are fast giving way to the South as a source of supply to the wholesale trade."[62] He also noted that shipping practices had changed since the war. Whereas southern dealers had previously shipped their herbs in bags, they were now packing them into bales with the use of cotton presses. Bedford believed that lower labor costs had much to do with this southern shift.

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[59] See, for example, the advertisement in *The Lenoir Topic* (Lenoir, NC), 17 February 1881.
[60] *Tulsa Daily World,* 8 November 1916.
[61] "Roots and Herbs," *The Farmer's Cabinet,* 20 September 1871.
[62] "Report of the Committee on the Drug Market," *Proceedings of the American Pharmaceutical Association at the Twenty-Second Annual Meeting, Held in Louisville, KY, September 1874* (Philadelphia: Sherman & Co., 1875), 617.

The southern mountains, specifically, were fast becoming a reliable source of crude vegetable drugs to pharmaceutical companies and patent medicine makers. One North Carolina physician estimated in 1871 that four-fifths of the medicinal plants utilized by the large manufacturers came from the piedmont and mountains of North Carolina.[63] This number was likely an exaggeration considering the boosterish language of the source, but others were noticing it as well. Louisville druggist Lewis Diehl noted that the mountainous regions were becoming important suppliers of indigenous drugs. "In many of the Southern States this branch of trade appears to attract considerable attention since the war, mainly in mountainous and swampy sections," he told the American Pharmaceutical Association at their annual meeting in 1870.[64] He noted that the mountainous region in eastern Kentucky supplied a large amount of medicinal plants to western druggists and cited brisk trades in East Tennessee and around the mountain town of Walhalla, South Carolina. Diehl also took notice of a growing trend in the drug supply chain. Whereas the neighborhoods around Louisville once supplied druggists and wholesale dealers in the city with their crude vegetable drugs, the city now depended heavily on wholesale jobbers in New York, which, as we will see, purchased supplies from western North Carolina.[65] Thus, as the demand for crude vegetable drugs increased after the war and the national market expanded, the southern mountains began to emerge as the most important supplier.

Like many of those in the South, Calvin Cowles's root-and-herb business suffered from the war. His stocks were exhausted, as he had made no attempt to replenish them with the cessation of orders from the Confederate government, and he had little money to restart it.

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[63] Andrew A. Scroggs, "A Report to the Agricultural Society of North Carolina on Medicinal Plants, Roots, Etc., Dated October 18, 1871", RG 5029, N.C. Department of Archives and History, Raleigh, NC.
[64] C. Lewis Diehl, "Indigenous Drugs," *Proceedings of the American Pharmaceutical Association at the Eighteenth Annual Meeting, held in Baltimore, MD, September 1870* (Philadelphia: Sherman & Co., 1870), 137-138.
[65] Ibid.

"Our business is torn up badly," he told B. Keith & Co. in 1865, "but still have vitality enough left to do a small business."[66] In the months following the Confederacy's collapse, Cowles reestablished contact with his northern buyers and offered them a diminished variety of roots and herbs, requesting that they advance him the money to pay for shipping. At the same time, he instructed his son, Arthur, to travel to stores around Elkville and buy up all the roots and herbs he could find.[67] He also wrote to several acquaintances in the botanical drug trade, including Surgeon General Moore, asking to buy up what roots and herbs were left in the medical purveyor depots in Charlotte, Montgomery, and Columbia.[68] By the fall of 1865, he had cobbled together enough stock to send small shipments to familiar buyers—Tilden & Co., the New Lebanon Shakers, William S. Merrell, and B.O. & G.C. Wilson—as well as a few new customers in the war's aftermath, most notably George W. Swett, a Boston wholesale dealer in botanic medicines who began marketing "Dr. Swett's Original Root Beer" in the 1870s.[69]

Despite his partially successful reentry into the botanical drug trade, Cowles was gradually pulled in other directions. A series of personal and political misfortunes followed the war. His wife, Martha, died in April 1866 from a prolonged illness, and later that year, he was defeated by a single vote in an election for state senate that reeked of corruption. Although a slaveholder, Cowles was never in favor of secession, and during the war, he had become involved with the peace movement led by William W. Holden. During the 1866 election, he was painted by conservative governor Jonathan Worth as a staunch Unionist and was "very badly treated" in portions of the 45th district.[70] Yet, he became active in the state's Republican Party,

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[66] Calvin J. Cowles to B. Keith, 30 September 1865, CJCPNCDAH.
[67] Calvin J. Cowles to Arthur Cowles, 11 November 1865, CJCPNCDAH.
[68] Calvin J. Cowles to Samuel P. Moore, 19 September 1865, CJCPNCDAH.
[69] Root and Herb shipments, 1865-1867, Vol. 96, CJCPSHC.
[70] *Weekly North Carolina Standard,* 7 November 1866; see also Ellen McGrew, "Calvin J. Cowles," entry in William Powell, ed., *Dictionary of North Carolina Biography* (Chapel Hill: University of North Carolina Press, 1979), 444-445.

led by Holden, and was elected a delegate to the state's 1868 constitutional convention, riding the wave that elected Holden governor that year. Holden appointed him president of the convention, and Cowles married his daughter, Ida Holden, later in July. Following the convention, he was appointed to head the U.S. Branch Mint in Charlotte, and he increasingly became involved in developing the mineral resources of western North Carolina, which took him further away from the root business that had helped him become one of the state's political leaders.[71]

But the Cowles root-and-herb dynasty did not peter out. It continued and grew under the management of Cowles's son, Arthur D. Like his father before him, Arthur entered the family business and moved west to open his own store. In 1868, he constructed a store and herb warehouse in Gap Creek, located on the Blue Ridge in Ashe County closer to the roots and herbs he hoped to buy. The store at once became the largest in the county.[72] Cowles sold a variety of about 200 roots and herbs to many of the same buyers that patronized his father, and he added a few more, including the large wholesale botanic druggists Garrison & Murray, of Chicago, before their establishment was burned in the Chicago fire of 1871.[73] Yet, by the time he opened his store, competition for the root-and-herb trade in northwestern North Carolina had already begun to accelerate.

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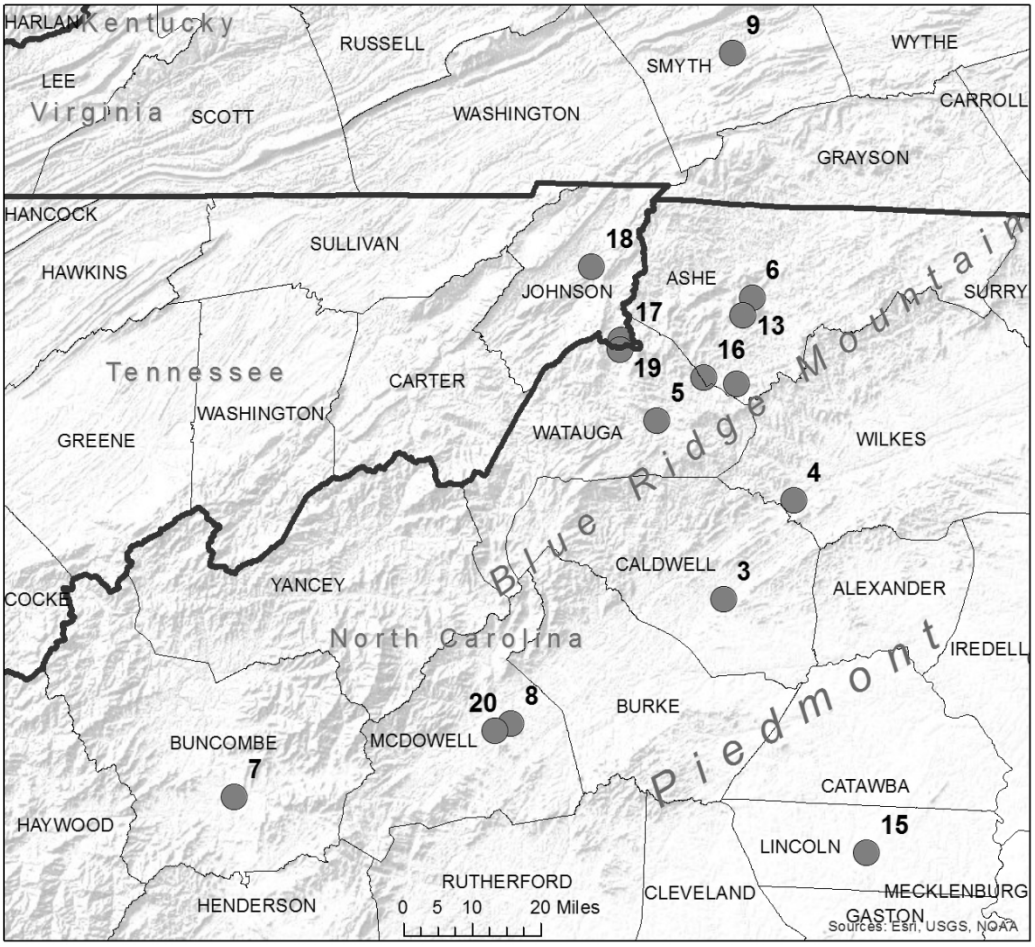
[71] Ibid; see also Susan Sokol Blosser, "Calvin J. Cowles's Gap Creek Mine: A Case Study in Mine Speculation in the Gilded Age," *The North Carolina Historical Review,* 51, 4 (October 1974), 379-400. A good discussion of Cowles's postwar career can be found in Steven E. Nash, *Reconstruction's Ragged Edge: The Politics of Postwar Life in the Southern Mountains*, Civil War America (Chapel Hill: The University of North Carolina Press, 2016).

[72] Arthur Lloyd Fletcher, *Ashe County: A History*, New ed, Contributions to Southern Appalachian Studies 14 (Jefferson, N.C: McFarland & Co, 2006), 233.

[73] Unfortunately, I have been unable to locate the records of Arthur D. Cowles, but some of his correspondence has been preserved in the Calvin J. Cowles Papers, Southern Historical Collection. See Messrs Garrison & Murray, Chicago, Ill., in a/c with A.D. Cowles, 10 August 1871, Fol. 72, CJCPSHC; see also Price List, 6 June 1870, CJCPSHC.



Dealers in Botanical Drugs, 1847-1919

1 - Wallace Brothers, 1867-1940s
3 - GWF Harper, 1868-1880s
4 - Calvin J. Cowles, 1847-1867
5 - Grant Wilcox, 1902-1917
6 - Wiley P. Thomas, 1870-?
7 - S.B. Penick, 1917-1966
8 - M.M. Teague, 1866-?
9 - R.T. Greer & Co., 1918-1947
11 - Parke, Davis, & Co., 1876
13 - R.T. Greer & Co.
14 - Arthur D. Cowles, 1867-1878
15 - Confederate Botanical Laboratory, 1864-1865
16 - Grant Wilcox, 1905-1919
17 - Grayson & Crawford, 1904-?
18 - Hutcher Bros, 1902-?
19 - McGuire, Greer, & Co., 1902-?
20 - S.B. Penick, 1914-1917

Figure 8. Dealers in Botanical Drugs, 1847-1919.

Several firms jumped into the business following the war, all of whom, according to one observer, "received their tuition and induction in this trade directly or indirectly from Mr. Cowles."[74] Although the exact number is impossible to tell from existing sources, it seems safe to assume there were more than a few. In 1869, state geologist W.C. Kerr estimated that the amount of income derived annually by harvesters from the root-and-herb trade in the mountains of North Carolina was $250,000.[75] And over the subsequent two decades, the medicinal herb trade grew and expanded to heights unparalleled before or since. *Branson's North Carolina Business Directory* from the years 1869 to 1890 lists medicinal herbs in the top five commercial staples of nearly every mountainous county.[76] Indeed, the trade in roots and herbs became so important for western North Carolina communities that it came to define commercial life of the region. One member of the N.C. Board of Agriculture reported in 1896 that "In traveling through the mountains bales of these herbs may be seen collected about the country stores as bales of cotton are seen in the middle and eastern regions."[77] A look at the prominent merchants in the trade can give form and color to this otherwise opaque business and illuminate the influences of both Appalachian biodiversity and the Civil War in stimulating it.

Within a year of returning from fighting for the Confederacy, George Washington Finley Harper jumped with both feet into the trade. Born in 1835 to a prominent merchant in Lower Creek, Caldwell County, North Carolina, near the foothills town of Lenoir, Harper grew up tending his father's store. Although store ledgers do not indicate that he dealt in many roots or herbs prior to the war, he undoubtedly knew about the business carried on by Cowles, just

[74] Andrew A. Scroggs, "A Report to the Agricultural Society of North Carolina on Medicinal Plants, Roots, Etc., Dated October 18, 1871" RG 5029, N.C. Department of Archives and History, Raleigh, NC.
[75] W.C. Kerr, "Communication from the State Geologist to the State of North Carolina," *Legislative Documents,* No. 27, Session 1868-69 (Raleigh: State Printer, 1870), 50-51.
[76] *Branson's North Carolina Business Directory for 1872* (Raleigh: Branson & Jones, 1873).
[77] State Board of Agriculture, *North Carolina and its Resources* (Raleigh: M. I. & J.C. Stewart, 1896), 23.

thirty miles to the northeast.[78] In the spring of 1862, Harper joined the 58th North Carolina regiment and fought for the remainder of the war, receiving a wound in the Battle of Resaca near Atlanta in the spring of 1864.[79] After his parole in May 1865, he returned to Lenoir, took charge of his father's store and immediately expanded his dealings in roots and herbs. It is unclear why he decided to enter the root-and-herb business in 1866. In an area that struggled for economic traction with little money stirring, he may have found it unavoidable. After all, the rural residents of northwest North Carolina had grown used to being able to trade them, and in order to compete with neighboring merchants for the barter trade, he had little choice.

Harper established a brisk root business over the ensuing years and followed the same pattern as Cowles. Bartering for some roots and herbs at his store in Lenoir, he purchased most of his commodities from storekeepers across the Blue Ridge in the same territory as Arthur Cowles, including S.M. Silver in Yancey County, Henry Taylor in Valle Crucis, Watauga County, and Hugh Dobbins and Joel Norris in Ashe County. He maintained regular correspondence with them and even hunted and fished with them on occasion.[80] These storekeepers made regular trips to his Lenoir store, where they exchanged their roots and herbs and other country produce for goods. From 1868 to 1871, Harper sold some $28,000 worth of roots and herbs to many of the same wholesale drug firms in New York, Boston, Baltimore, and Cincinnati.[81] Like Cowles, Harper regularly touted the botanical features of his native Appalachia. We can get "almost anything that grows from this climate to that of Canada, which is identical to Watauga, an

[78] See, for example, Ledger, James Harper, 1856-1858, Vol. 18 and Ledger, J. Harper & Son, 1859-1861, Vol. 22, Harper Family Account Books, Southern Historical Collection, Wilson Special Collections Library, University of North Carolina, Chapel Hill.
[79] Richard A. Shrader, "George Washington Finley Harper," entry in Powell, ed., *Dictionary of North Carolina Biography, Vol. III* (Chapel Hill: University of North Carolina Press, 1979), 37-38.
[80] See G.W.F. Harper diaries, Volumes 17-26, G. W. F. Harper Papers, Southern Historical Collection, Wilson Special Collections Library, University of North Carolina, Chapel Hill.
[81] See Ledger, G.W. & S.F. Harper, 1868-1871, Vol. 28, Harper Family Account Books, Southern Historical Collection, Wilson Special Collections Library, University of North Carolina, Chapel Hill. These included: Coolidge, Adams, and Bond (New York); Cheney, Myrick, and Hobbs (Boston); William Peek & Co. (New York); Wilson & Burns (Baltimore); B. Keith & Co. (New York); William S. Merrell (Cincinnati).

adjoining county to us."[82] Harper's diary reveals that a few of these buyers made personal visits to his store. In 1869, he even went on a botanizing tour of Watauga County with Gardner S. Cheney, the Boston wholesaler who founded the firm Cheney, Myrick, & Hobbs.[83]

Perhaps no individual other than Cowles had a greater role in making western North Carolina the center of the post-war herb trade than Mordecai Hyams, whose story illustrates the frenzied atmosphere of herb collecting in the region during those years. Born in 1819 into the Jewish community in Charleston, South Carolina, Hyams developed an interest in botany, undoubtedly influenced by the Charleston circle of botanists that included Porcher and Ravenel, and began collecting plants in his early twenties. He may have studied at the University of South Carolina, although no record exists of him there.[84] The outbreak of war found him teaching school in Florida, and the 41-year-old joined the Confederate army as a private. Due to his botanical knowledge, he was detailed to Charlotte, where he was employed as a botanist, overseeing the collection of roots and herbs under medical purveyor Marion Howard. He was in contact with Cowles throughout the war, and after the Confederate surrender, he moved to Wilkesboro and attempted to continue in the root and herb business for two years. At least one scholar has asserted that he formed a partnership with Cowles, but Cowles's records do not indicate that this was the case.[85] He did purchase herbs from Cowles during the war and sold him herbs immediately after, so his relationship to Cowles was probably no more than a seller of

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[82] G.W.F. Harper to Joel Curtis, 6 March 1871, Fol. 54, Bernhardt-Seagle Company Records, Southern Historical Collection, Wilson Special Collections Library, University of North Carolina, Chapel Hill.
[83] See entry for 26 May 1869, Vol. 19, G.W.F. Harper Papers, SHC.
[84] James R. Troyer, "The Hyams Family, Father and Sons, Contributors to North Carolina Botany," *The Journal of the Elisha Mitchell Scientific Society* 117, no. 4 (2001): 240.
[85] See Ibid; Although Troyer does not attribute this claim, he undoubtedly relied on William S. Powell, "Mordecai E. Hyams," entry in Powell, ed., *Dictionary of North Carolina Biography, Vol. 3* (Chapel Hill: University of North Carolina Press, 1988), 246. Primary sources disagree on this topic. In 1891, the Wilkesboro *Chronicle* asserted that Hyams had received "training and experience while with Mr. Cowles in this county," but Charles Hyams, Mordecai's son, rebutted this claim in the Statesville *Landmark,* saying that Hyams received no training or experience from him. See Charles Hyams, "Historical Facts," *Statesville Record and Landmark,* 17 September 1891.

roots and herbs.[86] Wilkesboro proved too remote, its transportation facilities too primitive for Hyams, so for the next five years, he traveled through the region, collecting herbs for several different companies in piedmont towns, including M.M. Teague of Marion (1867-68) and Phifer & Turrentine of Statesville (1869-1870).[87] Located near the western end of the Western North Carolina Railroad line, Statesville proved a better commercial location for Hyams, and he soon found an employer with ambitions as grand and creative as his: the Jewish dry goods merchants, brothers David and Isaac Wallace.

The entrance of the Wallace Brothers into the root-and-herb business is obscured by history. According to historian Gary Freeze, one local tradition claims that they began by selling herbs from their Statesville store to the Confederate government. Another asserts that the New York drug firm Olcott, McKesson, and Company induced the Wallaces to sell them herbs.[88] Hyams himself took credit for convincing the Jewish merchants to enter the trade.[89] Whatever the origins, their involvement in the trade remained relatively small until 1871, when they constructed a two-story warehouse and hired Hyams as botanist. Under Hyams's expert guidance, the Wallaces began a widespread and systematic extraction of roots and herbs from the mountains of western North Carolina. With a price list of roughly 200 plants, the Wallaces sold 160,000 pounds of roots, herbs, barks, seeds, and flowers annually in the early 1870s, but Hyams and the Wallaces were poised for rapid expansion. In 1873, Hyams prepared an exhibit of indigenous medicines for the annual meeting of the APA, and attendees were duly impressed. The committee on specimens reported to the body that they had "found more material for

[86] See, for example, entry on pg. 55 of Day Book, 1867-1868, Vol. 99, Calvin J. Cowles Papers, SHC; M.E. Hyams to Calvin J. Cowles, 29 January 1863, Fol. 111.6, Calvin J. Cowles Papers, NCDAH.
[87] Hyams, "Historical Facts;" see also Freeze, "Roots, Barks, Berries, and Jews: The Herb Trade in Gilded-Age North Carolina," 112–13.
[88] Ibid., 113.
[89] Hyams, "Historical Facts."

study in this extensive collection of herbs, roots, &c. than in any other portion of the room."[90] Three years later, Hyams prepared another exhibit for the Centennial Exhibition in Philadelphia, which won a bronze medal for its "extent, variety, and general perfection of the exhibit," and two years after that, another exhibit at the Paris Exposition won another medal. These exhibits brought international attention to the Statesville firm, as well as to western North Carolina in general.

From the mid-1870s through the end of the 1880s, the Wallace Brothers' herb business grew by leaps and bounds. Selling primarily to patent medicine makers, as well as wholesale druggists, business quickly doubled following the Philadelphia exhibition, and the Wallaces expanded sales to England, Germany, Austria, Prussia, and other European nations.[91] By the late 1880s, they had quit their retail dry goods business to specialize in collecting and selling herbs and constructed a three-story, 44,000 square-foot warehouse. A glance at their books suggests why. In 1879, they received an order from Germany for ten tons of may apple roots. Another buyer ordered an unlimited amount of liverwort and another ordered two tons of dried maidenhair ferns.[92] One observer in the early 1890s noted that in one month, the Wallaces had sold 50,000 pounds of may apple, 5,000 pounds of black cohosh, 12,000 pounds of wild cherry bark, 12,000 pounds of Pennroyal, 8,000 pounds of Witch Hazel, 8,000 pounds of Yellow Dock, and 8,000 pounds of unicorn root, among others.[93] These were voluminous shipments that dwarfed anything Cowles had done prior to the war. By the late 1880s, they were dealing in

[90] "Report of the Committee on Exhibition of Specimens," *Proceedings of the American Pharmaceutical Association at the Twenty-First Annual Meeting, held in Richmond, VA., September 1873* (Philadelphia: Sherman & Co., 1874), 453.
[91] M.E. Hyams, "The Botanic Business of Western North Carolina [a paper read before the N.C. State Agricultural Society," *Charlotte Democrat,* 23 November 1877.
[92] Asa Gray, "Roots and 'Yarbs'—In the Mountains of North Carolina," *American Agriculturist,* September 1879.
[93] William Simpson, "The Names of Medicinal Plants of Commercial Value That Are Gathered in North Carolina: Their Value, and Relative Amount Sold in This Country and Exported," *American Journal of Pharmacy*, (October 1894), 488.

roughly 2,000 varieties of plants, selling two million pounds and clearing $100,000 (some $2.2 million today) annually.[94] They had become the most well-known wholesale root-and-herb dealers in the country. Raleigh physician Dr. William Simpson told the APA in 1894 that they were "the firm doing the largest business as herbalists in the world."[95]

Observers noted the Wallaces' location at the edge of the mountains as the reason for their voluminous business. In 1877, Hyams himself said that "the botanic resources of N. Carolina are more than all the other States combined in the extent and variety, and the medical products are inexhaustible."[96] Simpson noted that there were eighty-eight indigenous plants in the primary and secondary list of the official U.S. Pharmacopoeia, and "all but one are found in North Carolina."[97] Some believed that the medicinal plants growing in the state were more efficacious than plants from other localities. In 1871, Lenoir physician Andrew Scroggs told the North Carolina Agricultural Society that drug makers preferred the roots and herbs of the state because "they possess an inherent intrinsic medicinal value beyond those coming from other sources."[98] Indeed, the location was so attractive to drug firms that the Detroit-based drug giant Parke, Davis, & Co. opened an herb depot in Charlotte in 1888 and hired Hyams away from the Wallace Brothers to manage it. Within a year, he conducted $35,000 worth of business

[94] Freeze, "Roots, Barks, Berries, and Jews: The Herb Trade in Gilded-Age North Carolina," 114–15.
[95] Simpson, "The Names of Medicinal Plants of Commercial Value That Are Gathered in North Carolina: Their Value, and Relative Amount Sold in This Country and Exported," 488.
[96] M.E. Hyams, "The Botanic Business of Western North Carolina [a paper read before the N.C. State Agricultural Society," *Charlotte Democrat,* 23 November 1877. C. E. Wiley, a resident of North Carolina who worked for the U.S. Treasury Department, visited the Wallaces and reported to the U.S. House of Representatives that "while many of the articles are found in other States, most of them abound chiefly in this, some are peculiar to this region, and no other locality is so favorable to the business as a whole." See C. H. Wiley, "North Carolina," *The Executive Documents of the House of Representatives for the Second Session of the Forty-Ninth Congress, 1886-87* (Washington: GPO, 1887), 231.
[97] Simpson, "The Names of Medicinal Plants of Commercial Value That Are Gathered in North Carolina: Their Value, and Relative Amount Sold in This Country and Exported," 488.
[98] Scroggs, "A Report to the Agricultural Society of North Carolina on Medicinal Plants, Roots, Etc., Dated October 18, 1871."

before the Wallaces purchased their entire stock, closed the depot, and brought Hyams back to Statesville.[99]

Like Cowles and Harper, the Wallaces contracted with country stores throughout the Blue Ridge, but whereas Cowles dealt with just two dozen or so country stores in four counties, the Wallaces purchased herbs from some 400 stores in thirty counties.[100] Hyams estimated that the number of people gathering herbs for him numbered in the "many thousands."[101] One source claimed the number was around 40,000.[102] Hyams frequently traveled the roads and turnpikes through the mountains and foothills, tromping through the woods looking for new and rare herbs. In the process, he played a key role in expanding botanical knowledge of the region. "Many of these medicinal plants were unknown as being indigenous," he explained to the N.C. Agricultural Society, "and discovered by perseverance and industry, not enumerated in any botanic books of the present day."[103] Whereas Cowles was content to rely on rural residents' existing ethnobotanical knowledge, Hyams initiated an educational outreach campaign to instruct collectors in how to find certain plants and the proper ways of harvesting and preparing them for the market. He also grew a test garden near his Statesville herbarium that served as a laboratory where collectors could come learn more about herbal care and preservation.[104] Thus, one of the reasons the Wallace Brothers were able to take the business to heights Cowles or Harper had never seen was Hyams's botanical training and educational outreach.

Hyams's familiarity with the mountain flora earned him national fame as a botanist. In 1887, he became the first botanist to discover *Darbya umbellata* [now *Nestronia umbellula*]

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[99] See "The Herb Depot," *The Charlotte Observer,* 19 December 1888.
[100] "A Singular Southern Industry," *The Atlanta Constitution,* 9 December 1886.
[101] Hyams, "The Botanic Business of Western North Carolina."
[102] "A Singular Southern Industry," *The Atlanta Constitution,* 9 December 1886.
[103] Hyams, "The Botanic Business of Western North Carolina."
[104] Freeze, "Roots, Barks, Berries, and Jews: The Herb Trade in Gilded-Age North Carolina," 115.

since Moses A. Curtis found it growing in the 1840s, and he was the first to find *Iris florentina,* a species of white iris, growing in the United States.[105] In 1878, Hyams sent waves of excitement through the botanical world when news reached Prof. Asa Gray of Harvard that Hyams, or rather his son, had discovered the holy grail of American botany, *Shortia galacifolia,* growing on a forested hillside near Marion in McDowell County. The previous May, Hyams was traveling with his son, Charles M. Hyams, a budding botanist in his own right, when he asked his son to climb a hillside and bring whatever was in flower. He returned with a peculiar plant that the elder Hyams had never seen. Indeed, no botanist had seen it since Andre Michaux in 1788. He sent the specimen to a botanist friend in Rhode Island, Joseph Crogdon, who forwarded it to Gray, and the Harvard botanist was elated. This "has given me a hundred times the satisfaction that the election to the [Academie des Sciences of the Institut de France] did," he wrote to Crogdon.[106] Gray quickly contacted Hyams and arranged to meet them in Statesville the following May, from whence they would journey to the place of discovery to the west. When Gray saw the *Shortia* blooming amidst a sea of galax plants, he felt like he had recovered "a long lost child."[107] Gray was also duly impressed by the botanical business carried out by the Wallaces. "A visit to the root and herb warehouse belonging to Wallace Brothers and under the charge of Mr. Hyams furnished evidence that this branch of industry has reached an extent and importance of which few are aware."[108]

[105] "The Late Prof. M. E. Hyams," *The Landmark* (Statesville, NC), 21 May 1891.
[106] Jenkins, "Asa Gray and His Quest for Shortia Galacifolia," 9.
[107] Ibid., 10.
[108] J. H. Redfield, "Notes of a Botanical Excursion into North Carolina," *Bulletin of the Torrey Botanical Club,* Vol. 6, No. 55/56 (Jul.-Aug., 1879), 333. Gray's description of the Wallace Brothers' business can be found in Asa Gray, "Roots and 'Yarbs'--in the Mountains of North Carolina," *American Agriculturist* 38, no. 9 (September 1879): 337–38.

Figure 9. Wallace Brothers Herb Warehouse, ca. 1910. Courtesy of William and Benjamin Stimson Collection, Southern Historical Collection, University of North Carolina, Chapel Hill.

The Panic of 1893 proved devastating to the Wallace Brothers, ushering in a significant shift in the business of Appalachian medicinal plants. The panic hurt many merchants in the business, forcing fellow Statesville herb dealer, Louis Pinkus, for example, to sell his herbarium to the Wallaces in 1894. For a time, the Wallaces felt they could withstand the downturn, but margins had always been thin for them, and as they expanded, their debt load had increased to unsustainable levels. By 1895, they could no longer meet their short-term obligations to nervous New York creditors, and they filed for bankruptcy. Citizens "of all classes" in Statesville

were "thrown into an unusual state of excitement" with the news of the assignment.[109] The bankruptcy generated widespread interest and concern throughout the mountains. The *Hickory Press* called it the "worst calamity that has befallen Western North Carolina. The effect of it permeates every nook and corner" of the region. "There is not a store in the country or at a crossroads in this section but what buys roots and herbs."[110] Pressure to revive the company mounted, and within a few months, David and Isaac Wallace had succeeded in garnering enough financial support from northern capitalists to form another company, the Wallace Brothers Company. After selling off land and buildings to satisfy creditors, the new firm purchased the remaining stock of roots and herbs and continued in a somewhat diminished capacity.[111]

The Wallace Brothers Company continued to purchase roots and herbs into the 1940s, but they would never again enjoy the near monopoly of the western North Carolina trade they had in the 1880s. From the 1890s through World War I, a handful of other merchants who lived on the Blue Ridge and who had participated in the trade with the Wallace Brothers emerged to fill the vacuum left by the bankruptcy and reorganization. Ashe and Watauga Counties became a hive of activity, as merchants jostled to take control of the botanical drug trade. George W. Greer grew up in Watauga County gathering roots and herbs for his family in the 1870s and selling them to Arthur Cowles and the Wallace Brothers. Following the Wallace Brothers' bankruptcy, he formed a partnership with J.Q. McGuire, an Ashe County merchant, and began traveling throughout the region buying up roots and herbs, helping make West Jefferson a collection center for the new industry. In 1904, he branched out into Marion, Virginia, and the following year, to Pikeville, Kentucky. In 1908, he partnered with another Watauga County native to form the R.T. Greer Herb Company, which conducted a thriving business in these three

[109] Quotes from Freeze, "Roots, Barks, Berries, and Jews: The Herb Trade in Gilded-Age North Carolina," 121.
[110] "A Great Misfortune," *The Hickory Press* (Hickory, NC), 10 October 1895.
[111] Freeze, "Roots, Barks, Berries, and Jews: The Herb Trade in Gilded-Age North Carolina," 121–23.

locations until the 1950s.[112] Grant Wilcox also started a small root-and-herb business in Ashe County, where in 1905, he dealt in some 115,000 pounds of roots and herbs.[113]

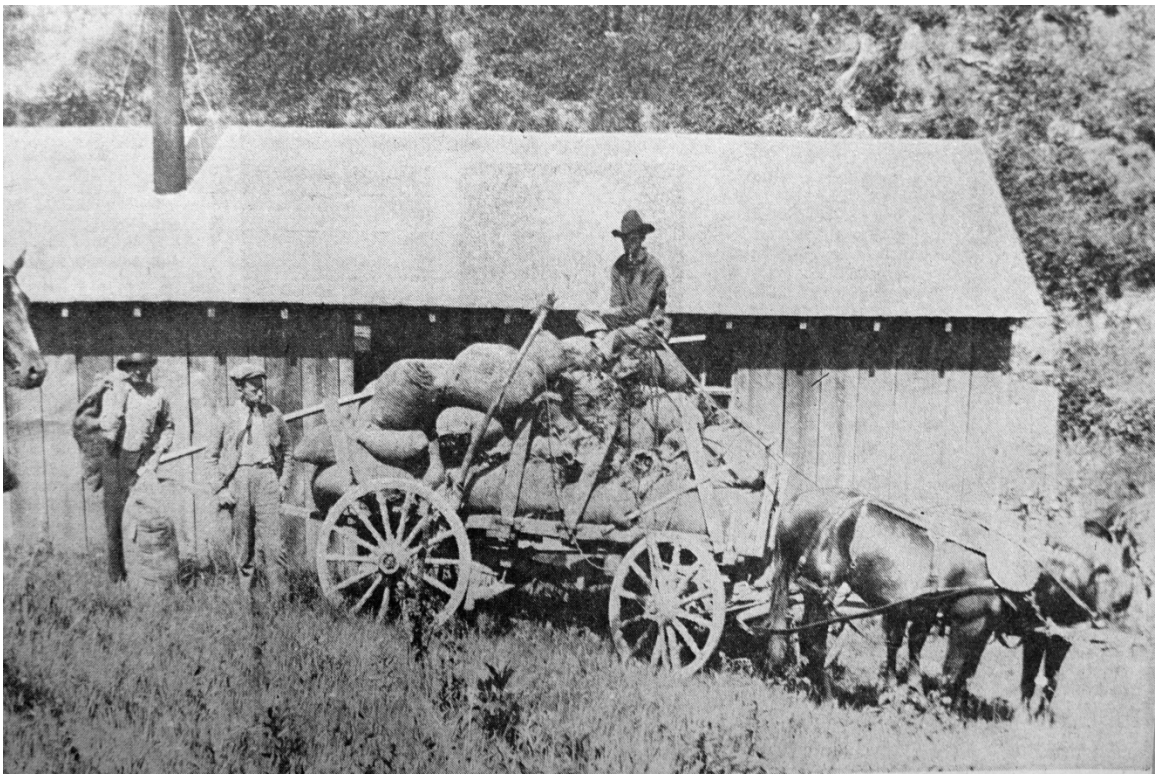

Figure 10. Hauling roots and herbs in western North Carolina, ca. 1890. Courtesy of the Pack Memorial Library.

Thus, the 1890s represented a changing of the guard in the botanical drug business. Not only did a new wave of Blue Ridge entrepreneurs take over the business from those in the piedmont, the nature of the trade changed as well. As the automobile became a more common fixture in the mountains and cash replaced barter in trade, country stores were no longer the

[112] William Connelley and E. M. Coulter, *History of Kentucky*, vol. 5 (Chicago and New York: American Historical Society, 1922), 41; A good history of the R.T. Greer Herb company can be found at Sherry Joines Wyatt, R.T. Greer and Company Root and Herb Warehouse National Register of Historic Places Nomination, 2003, North Carolina Historic Preservation Office, Raleigh; see also "J.Q. McGuire & Co., Dealers in Crude Botanical Drugs, etc," *Asheville Gazette-News,* 16 August 1909.
[113] *The Watauga Democrat,* 23 November 1905.

only collection points for roots and herbs. Greer and Wilcox purchased their products directly from the harvesters for cash, often sending trucks through the countryside to procure them. Interestingly, the records of the Valle Crucis Company, which operated a store near the Mast General Store in Valle Crucis, Watauga County, from around 1909 through the 1940s, do not contain the slightest hint that they were engaged in the trade, despite the fact that the valley was a major supplier of roots and herbs beginning with Calvin Cowles in the 1850s.[114] This is likely because the valley's herb gatherers sold them directly to dealers for cash. Although the size and volume of the trade had shrunk considerably since the 1880s, the crude drug business continued to provide an economic boost to northwestern North Carolina.

World War I and the Revival of Botanical Medicine

World War I helped revive the botanical drug business in western North Carolina, which had languished somewhat following the collapse of the Wallace Brothers in the 1890s. When the outbreak of war disrupted drug markets, Americans immediately felt the pinch. Over the previous half century, London, Hamburg, and Trieste had emerged as centers of the trade, as drug houses there purchased many crude drugs from around eastern and western Europe and western Asia and sold them around the world, including the U.S. With these supply lines in question, demand for indigenous American plants that could be used as substitutes skyrocketed, and prices rose along with it. "The European war and the scarcity of botanicals heretofore imported from abroad exerted a powerful effect upon the market for such drugs, and as a result all eyes were turned toward our native production," declared *The Pharmaceutical Era* in 1919.[115]

[114] See Valle Crucis Company Records, 1907-1952, W.L. Eury Appalachian Collection, Appalachian State University, Boone, NC.

[115] "Geography of U.S. Botanical Drugs," *The Pharmaceutical Era* (March 1919), 63-66; For a discussion about the impacts of WWI on the drug trade, see Martin Wilbert, "The Source and Supply of Medicines

As had happened in the Confederacy during the Civil War, nationalists called on country people to supply the nation's drug needs, and it was clear to all involved that southern Appalachia would be an important supplier.

Sydnor Barksdale Penick watched these events unfold with assiduity. In May of 1914, just three months before Gavrilo Princip assassinated Austrian Archduke Francis Ferdinand and precipitated World War I, he had borrowed $8,000 from family to add to his own $5,000 in order to establish a crude drug business in the small mountain town of Marion, North Carolina. His life story could have come straight from a Horatio Alger book. One of those involved in the trade in the 1890s, Penick was a twelve year-old orphan in 1895 when he moved from his home town of Culpepper, Virginia, and began working for Strother Drug Company in Lynchburg as an errand boy. He proved a quick study and an ambitious businessman, for eight years later, the company chose him to open a wholesale branch in Bristol, Tennessee, where he sold patent medicines to nearby retail druggists. After two years in Bristol, however, stiff competition caused the branch to close, delivering a severe blow to Penick who had recently married and had a child. But the young Virginian was resilient and resourceful, and around 1906, he decided to make a career change that would have big implications for the botanical drug trade. While in Bristol, he had witnessed the throngs of country people bringing in loads of roots and herbs to local stores and learned that these stores were, in turn, selling them to crude drug firms across the mountains in North Carolina, probably Wilcox and Greer. Believing he would have more success in the crude drug business, he left for New York to seek a job with the emerging firm of J. L. Hopkins & Company, and by 1912, he had risen through the ranks to become a trusted

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with Special Reference to the Interference Caused by the Existing European War," *Public Health Reports,* 29, 41 (Oct. 9, 1914), 2715.

financial officer. But Penick wanted his own business, and instead of opening another drug house in New York, he moved to Marion and established S.B. Penick & Company.[116]

Rushing to take advantage of the rising prices of botanicals during World War I, Penick distributed price lists widely across the region, from West Virginia to north Georgia, offering anywhere from 10 cents to 40 cents per pound for crude drugs such as dandelion root, pleurisy root, peppermint leaves, wild cherry bark, may apple, Balm of Gilead buds, and burdock root. He implored "farmers and their helpers" to "put forth their utmost efforts as a patriotic duty and as a means of helping to win the war."[117] His supplies came from wherever he could procure them, from Watauga County, North Carolina, to India and South America. Some of the more sought-after plants he purchased, including digitalis, belladonna, and poppies, came from extensive gardens located around the United States, but those he purchased from the mountain South continued to come from the "wild." His fleet of trucks and agents regularly toured the mountain roads, purchasing roots, herbs, barks, flowers, and other crude drugs directly from the harvesters who procured them from the forest commons. By the time the United States entered the war in 1917, Penick had constructed a large warehouse in Asheville and moved the headquarters of his business to New York.

World War I would ultimately launch Penick to worldwide success. By the 1930s, his company had grown to tremendous proportions, having branched out to deal in various chemical drugs, but the heart of his indigenous plant collection remained southern Appalachia. Claiming to be "world's largest dealer in botanical drugs," the company owned an estimated $10 million in assets by 1947 and did roughly $20 million worth of business annually, selling crude

[116] "The Story of S.B. Penick: The House of Botanicals," *Medical Times*, 1960; J.D. Ratcliff, "From Sandalwood to Ant Eggs," *Saturday Evening Post*, October 11, 1947.
[117] Joseph Jacobs, "Southern Herbs in War Hospitals," *The Atlanta Constitution,* 1 Sept. 1918.

drugs to some 25,000 wholesale drug manufacturers around the world.[118] In 1929, he was elected president of the American Drug Manufacturers' Association.[119]

Penick's was not the only business to receive a boost from World War I. In 1919, Grant Wilcox moved his business from Ashe County to the growing and more well-connected town of Boone in Watauga County, where he would continue to operate until the 1980s.[120] R.T. Greer Herb Company also expanded during the war. Wartime prices brought great profits to his two main branches in Pikeville, Kentucky, and Marion, Virginia. In 1918, the company also constructed an herb warehouse in southern Ashe County, North Carolina, a propitious location following the arrival of the Virginia-Carolina Railroad and a timber boom around the town of Todd. The new warehouse was part of a thriving new village called Brownwood, which was built by a local landowner in the 1910s to take advantage of the timber boom.[121] R. T. Greer and Company met with great success throughout the 1920s. Unlike Penick, Greer never branched out into other regions or other drugs, remaining exclusively focused on botanicals in southern Appalachia. Between 1918 and 1922, one historian has estimated that R.T. Greer purchased some $600,000 worth of roots and herbs annually through all three of its branches.[122] Greer's business records indicate that the company grew throughout the 1920s, and by 1928 at the height of its influence, it was purchasing close to $1 million annually from harvesters across the southern and central Appalachians.[123] The company baled these roots and herbs and sold them to some of the largest pharmaceutical companies in the U.S., including: Ely Lilly; Parke, Davis, &

[118] Ratcliff, "From Sandalwood to Ant Eggs."
[119] "Penick Elected Drug President," *Asheville Citizen,* 8 May 1929.
[120] *Watauga Democrat,* 1 May 1919.
[121] Sherry Joines Wyatt, R.T. Greer and Company Root and Herb Warehouse National Register of Historic Places Nomination, 2003, North Carolina Historic Preservation Office, Raleigh.
[122] Connelley and Coulter, *History of Kentucky*, 5:41.
[123] This is based on an extrapolation of one month's worth of business. From March 16 to April 16, 1928, the company paid harvesters $8,675. See R.T. Greer and Co. Check Register, 1928-1929, R. T. Greer Herb Company Records, 1918-1946, State Library of Virginia, Richmond, Va.

Co.; and McKesson, Robbins, and Rexall. It also sold to companies in Canada, China, Australia, and across Europe.[124]

In addition to invigorating the botanical drug trade in the United States, World War I also stimulated an interest in what some called "pharmaceutical geography," or the study of where drugs came from. In his popular 1922 book, *The Story of Drugs,* pharmaceutical chemist Henry C. Fuller noted that interest in the drug supply became "almost universal" during the war. "It possessed a certain element of romance, made excellent dinner conversation, and was discussed at almost any gathering where two or more people were assembled," he wrote, "much the same as prohibition later became the popular topic."[125] Fuller also attributed this growing interest in the sources of drugs to the publication of Gene Stratton-Porter's 1911 book, *The Harvester,* discussed in chapter 7.

The greater interest in pharmaceutical geography brought greater awareness of the medical importance of Appalachia. Fuller noted that while Stratton-Porter's Indiana contributed large amounts of mayapple, slippery elm bark, and goldenseal, the vast majority of indigenous botanical medicines, some 75 percent, came from the Appalachians. "The natural supplies of drugs yielded by this producing area in our Southern mountains will be adequate for the demands of the medicine-maker for many years to come," he wrote.[126] In 1919, Clare Ewing and Ernest Stanford, chemists working for the Pharmacognosy Laboratory within the U.S. Department of Agriculture, undertook the first survey of the botanical drug resources in the region, declaring that the Blue Ridge "has been the chief source of American botanical drug

[124] Wyatt, R. T. Greer and Company Root and Herb Company Warehouse National Register of Historic Places Nomination, 10.
[125] Henry C. Fuller, *The Story of Drugs: A Popular Exposition of Their Origin, Preparation, and Commercial Importance.*, The Century Books of Useful Science (New York: The Century Co., 1922), 4.
[126] Ibid., 150–51.

supplies" for several decades.[127] In another article published later that year, *The Pharmaceutical Era* reinforced this perception. On an accompanying map of drug sources in the U.S., the Appalachian region was the only region circled, within which labels of the important medicinal plants were crowded.[128]

The strength of these companies ensured that root digging and herb gathering continued to be an important component of the economic and social life of mountain communities through the 1920s and 30s. Some harvesters continued to barter their roots at country stores, while others sold directly to agents traveling through the countryside. In the 1940s, according to the *Saturday Evening Post,* Penick purchased these products from around 3,500 families scattered around southern Appalachia.[129] R.T. Greer and Company's check register suggests that it purchased roots and herbs from at least 600 different people in March 1928.[130] Greer frequently received roots and herbs via the U.S. Postal Service from people across the South, but the bulk of his roots and herbs were procured at the warehouses, where individual harvesters, as well as country storekeepers, would bring their produce. The warehouse in Brownsville was the largest commercial concern in the community, aside from the timber business. Buck Cooper, a long-time resident, later remembered the lines of wagons that would line up in the summer to unload their roots and herbs stretching a half mile down the road.[131]

As was the case with so many other facets of American life, the Civil War was a watershed moment for the crude drug industry in the southern Appalachians. By stimulating

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[127] Clare Olin Ewing and Ernest Elwood Stanford, "Botanicals of the Blue Ridge," *American Druggist and Pharmaceutical Record*, June 1919, 30.
[128] "Geography of U.S. Botanical Drugs," *The Pharmaceutical Era* (March 1919), 63-66.
[129] J.D. Ratcliff, "From Sandalwood to Ant Eggs," *Saturday Evening Post*, October 11, 1947
[130] R.T. Greer and Co. Check Register, 1928-1929, R. T. Greer Herb Company Records, 1918-1946, State Library of Virginia, Richmond, Va.
[131] Wyatt, R. T. Greer and Company Root and Herb Company Warehouse National Register of Historic Places Nomination, 10.

the growth of large-scale pharmaceutical manufacturers in the North and introducing many southerners to the business, the war helped expand the market for a wide variety of medicinal plants. The trade reached the height of its influence in western North Carolina from around 1870 through the 1890s. Available sources do not indicate that other subregions of Appalachia engaged in the trade in anywhere near the volume of western North Carolina at this time. In 1894, for example, observing the great success of North Carolina merchants, the Tennessee Commission of Agriculture, T.F.P. Allison lamented that the collection of crude botanicals in his state had been "entirely overlooked." He commissioned the botanist August Gattinger, a resident of east Tennessee, to write a book on the medicinal plants of Tennessee, hoping that it would "prove of great commercial value to the State."[132] After the 1890s, due to the influence of western North Carolina merchants, the trade picked accelerated throughout the rest of southern Appalachia as collection centers opened in places like Bristol, Tennessee, Pikeville, Kentucky, and Marion, Virginia. Indeed, the business of collecting crude botanical drugs, with its modest origins in 1850s Elkville, reached unprecedented heights in the decades after the Civil War, leading to the rise of some of the largest botanical drug firms in the nation. With the collapse of the Wallace Brothers in the 1890s, a wave of new entrepreneurs—veterans of the trade on the Blue Ridge—started several herb companies, some of which grew to rival the influence of the Wallaces due to the boost they received from World War I. The effects it had on mountain communities were tremendous, as it brought market values to a vast array of plants in the fields and forests of Appalachia.

However, in order to understand these impacts, we must zoom in a little closer to the communities that helped extract them.

[132] August Gattinger, *The Medicinal Plants of Tennessee* (Nashville: Franc M. Paul, State Printer, 1894), xi.

CHAPTER 5

Nature's Emporium: Root Diggers and Herb Gatherers in Postwar Appalachia

It's a long way from the Delta
To the North Georgia hills
With a tote sack full of ginseng
I won't pay no traveling bills
Now, I'm too old to ride the rails
Or thumb the road alone
So I guess I'll never make it back to home
My muddy water Mississippi Delta home

- Norman Blake, "Ginseng Sullivan," *Back Home in Sulfur Springs* (1972)

The expansion of the botanical drug industry in the late nineteenth century created unprecedented opportunities for Blue Ridge entrepreneurs to enter the crude drug trade, but the trade itself would not have expanded without the participation of the people who harvested them. Thus, in order to understand why the trade grew to such large proportions, we must explore the post-Civil War atmosphere in the rural mountain South to learn why so many people took to the woods. During hard economic times, rural people often fall back on the commons, relying on fish and game and whatever they can market from the forest to make up for losses on the farm or the loss of wages. And in no other period were mountain communities hit harder than in the two decades following the Civil War.[1] In western North Carolina and north Georgia,

[1] By contrast, the states of Ohio, Indiana, Illinois, Michigan, and Wisconsin—other ginseng producing areas—suffered less damage from the war. By 1870, the average farmer in these states had livestock worth twice as much as the mountain farmer and was producing one-third more corn and nearly twice as much total grain as the mountain farmer. See chart based on Agricultural Census in Paul Salstrom,

the average farmer lost 25 percent of the value of his livestock, including 45 percent of his hogs, between 1860 and 1870. Production of his other staple crop, corn, was also cut by 40 percent.[2] As this dissertation has shown, root digging and herb gathering had long been an important part of rural mountain life, but it was the economic impact of the Civil War that induced many more mountaineers to supply these growing markets.

Tellingly, from the 1860s through the 1880s, the same time frame that saw the expansion of the botanical drug industry, the southern Appalachian region experienced the largest ginseng boom in its history. In the three years that followed the war, the United States exported 1.4 million pounds of ginseng, a sum that nearly equaled the total exports of the 1850s. Exports, all of which continued to go to China, continued to climb after the war, reaching its peak in the 1880s. From the beginnings of the trade up through 1861, ginseng exports averaged 250,000 pounds per year, but from 1862 to 1890, the annual average jumped to nearly 400,000.[3] Although state-by-state ginseng production was not consistently documented until well into the twentieth century, it appears safe to say that the southern mountains, from West Virginia down to northern Georgia, formed the heart of the postwar ginseng boom. By the late 1860s, the great Minnesota ginseng boom that began in 1859 appeared to diminish, and other ginseng producing areas in the North and Midwest, though they still contributed to the trade, suffered more from overharvesting and deforestation.[4] Ginseng, ii must be pointed out,

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Appalachia's Path to Dependency: Rethinking a Region's Economic HIstory, 1730-1940 (Lexington, Ky: University Press of Kentucky, 1994), 14–15..

[2] Ibid.

[3] Export statistics were culled from annual communications on exports from the Treasury Secretary to the U.S. Congress. Prior to 1817, these can be found in the American State Papers, Commerce and Navigation. After 1817, they can be found in the U.S. Congressional Serial Set. These statistics are also corroborated by Alvar Carlson, who also used statistics from the U.S. Treasury Department's reports on *Foreign Commerce and Navigation*. See Carlson,"Ginseng: America's Drug Connection to the Orient," *Economic Botany*, Vol. 40, No. 2 (Apr.-Jun., 1986).

[4] According to Lass, the amount of ginseng exported from Minnesota fell from its peak of 245,434 pounds in 1860 to less than 90,000 pounds in 1866. In 1860 and 1861, Minnesota ginseng comprised the great bulk of total U.S. exports, but by 1866, that proportion had dropped to less than one-fifth of the nation's

flowed in different channels of trade than may apple, bloodroot, and other botanical drugs that went into pharmaceutical products. Thus, the increase in ginseng harvests further suggests that conditions in the mountains—and not just the opportunities afforded by new markets—brought more people into the forests to dig roots and herbs.

This chapter delves into southern Appalachian forests in order to understand the conditions that led to the post-war root-and-herb boom and also how that boom changed the relationship between mountain communities and the forest commons. Commons systems cannot be painted with a broad brush. As a product of the interactions between human and natural communities, they are highly contingent and vary widely across time and space. Tacit negotiations between landowners and commons users, the availability of markets, and the ecology of surrounding forests and countryside all play a role in determining how people interact with the forests. In areas like Cherokee County, for example, ginseng was virtually the only marketable forest herb, whereas in Watauga County, harvesters could market hundreds of different species. Thus, in order to understand the commons, we must begin with the local

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totals. See William E. Lass, "Ginseng Rush in Minnesota," *Minnesota History* 41, no. 6 (Summer 1969): 249–66. One group of scientists has conducted historical surveys of herbarium collections for ginseng and three related plants to determine the extent of ginseng harvesting over the past 150 years across 19 states. They concluded that there were "significant decreases" in the frequency of specimens found in the herbariums of six of the northern states in ginseng's range, while its southern range, along with Ohio and Illinois, "showed no significant changes." See Martha A. Case, Kathryn M. Flinn, Jean Jancaitis, Ashley Alley, Amy Paxton, "Declining abundance of American ginseng (*Panax quinquefolius L.)* documented by herbarium specimens," *Biological Conservation,* Vol. 134 (2007), 22-30. Writers consistently refer to the ginseng of northern states becoming scarce and in danger of extinction. See, for example, "Big Profits in Ginseng," *New York Sun*, 17 September 1899; *Third Annual Report of the Pennsylvania Department of Agriculture, Part I* (Harrisburg: William Stanley Ray, State Printer, 1898). One root buyer from Charleston, West Virginia, told Arthur Harding that he consistently traveled through much of the South and Midwest and obtained more of the root from West Virginia, Kentucky, and Tennessee, than he did from Ohio or Indiana. See Arthur Robert Harding, *Ginseng and Other Medicinal Plants: a Book of Valuable Information for Growers as Well as Collectors of Medicinal Roots, Barks, Leaves, Etc.* (Columbus, OH: AR Harding Publishing Co., 1908), 155; Nicholas Pike, who published a widely read article in *Scientific American* in 1891, was "quite surprised" to find a neighborhood of poor farmers in "back of the Catskills" who found ginseng in a strip of forest twenty miles long, but he feared that the plants "will soon be exterminated." This anecdote reveals that nature of ginseng digging in the north. It was conducted on a much smaller scale, geographically and demographically, than in the South. Pike, "The Ginseng," *Scientific American*, 10 January 1891.

context. This chapter focuses primarily on three areas within southern Appalachia: southwestern North Carolina, of which Cherokee County is a part; northwestern North Carolina, including Watauga, Ashe, Yancey, and Caldwell Counties; and southeastern West Virginia, including the counties of Pocahontas, Webster, Randolph, and Greenbrier. The collective portrait of these communities in the post-war years brings to life an important narrative that has been overlooked by virtually all scholars who have examined the period.[5] Thanks to the diligent work of Appalachian scholars, we know a great deal about politics, economics, violence, stereotypes, and moonshining habits in the late nineteenth century, but we still do not know much about how the dynamic interactions between nature and culture changed during these pivotal years.[6] An environmental approach to this period in history is sorely needed. As a step in this direction, this chapter argues that the gathering commons took on greater significance in these mountain communities, and the changing relationship between communities and the forests affected social relations and culture, most notably on gender roles and class relations. A study of each of these communities brings into focus different dynamics of the changing commons and how the system worked.

[5] In 2002, John Inscoe, one of the deans of Appalachian history, commented that the Reconstruction era "remains one of the least examined eras" in the region's history. See John C. Inscoe, "The Discovery of Appalachia: Regional Revisionism as Scholarly Renaissance," in *A Companion to the American South*, ed. John Boles (Malden, MA: Blackwell Publishers, 2002), 377–78.

[6] Some recent notable examples include Andrew L. Slap, ed., *Reconstructing Appalachia: The Civil War's Aftermath*, New Directions in Southern History (Lexington, Ky: University Press of Kentucky, 2010); Nash, *Reconstruction's Ragged Edge*; T. R. C. Hutton, *Bloody Breathitt: Politics and Violence in the Appalachian South*, New Directions in Southern History (Lexington, Kentucky: University Press of Kentucky, 2013); Bruce E. Stewart, *Moonshiners and Prohibitionists: The Battle over Alcohol in Southern Appalachia* (Lexington: University Press of Kentucky, 2011).

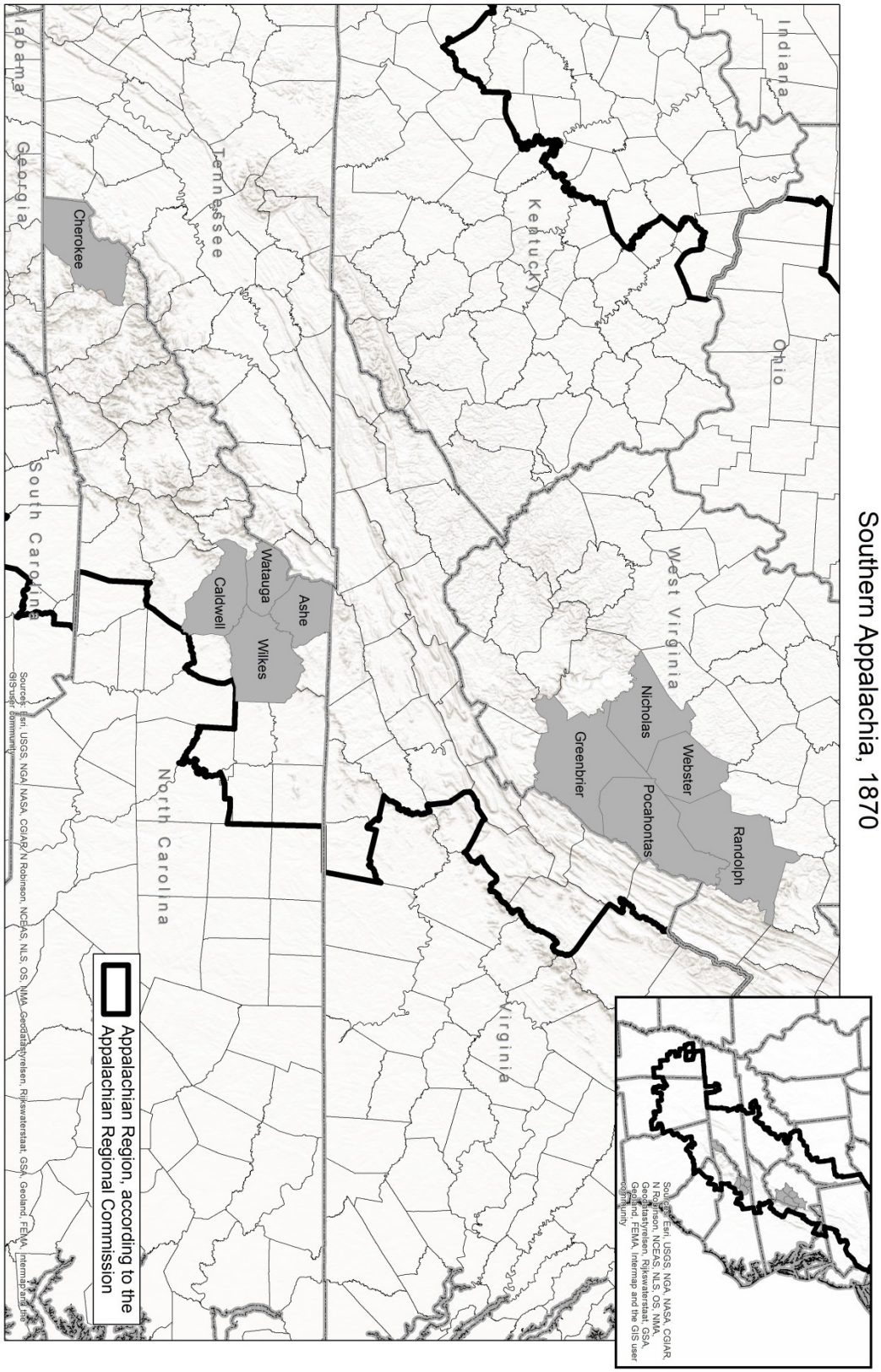

Figure 11. Map of areas under study in Southern Appalachia, 1870.

The Ginseng Trade in Southwestern North Carolina

In September of 1870, E. B. Olmsted said good-bye to his wife and four sons in Washington D. C. and set off by rail, heading west into the Appalachian Mountains.[7] Like many of his fellow countrymen, the former disbursing agent for the U.S. Post Office was chasing rumors of the vast riches that could be made dealing in ginseng, but he had more pressing reasons for venturing into the fastnesses of the southern mountains. He was in serious legal trouble. Three years earlier, Olmsted apparently spent some time in Cherokee County, where he obtained the deed to 22,000 acres of land in a shady deal with the state of North Carolina.[8] After witnessing throngs of diggers selling roots to country merchants for relatively little money, he returned to Washington, D. C., to attend to some unfinished business, which, it turns out, was also illegitimate. The following year, he absconded with $75,000 in postal employee earnings and disappeared into the West Virginia woods, leaving his family in Washington while federal officials searched for him. For over a month he wandered along the Chesapeake and Ohio Railroad, then under construction in West Virginia, where he undoubtedly came into further contact with people involved in the ginseng trade. After his arrest in Richmond in October 1868 for embezzlement, he turned over his Cherokee County property to the federal government in exchange for his release from prison. His abysmal financial outlook and memories of ginseng being mined from the earth like gold prompted him to approach the New

[7] E. B. Olmsted to Lanman and Kemp, 14 September 1870, Folder: 12 Letters, WLEAC from a Ginseng Expedition in WNC plus two Pamphlets 1870, W. L. Eury Appalachian Collection, Special Collections, Appalachian State University, Boone, N.C. (hereafter cited as 12 Letters, WLEAC).

[8] A Cherokee man named James Taylor claimed that the lands the state sold Olmsted were actually his, and he spent the next several decades trying to get them back. Although his claim was dismissed by the Treasury Department in 1915, Olmsted's financial reputation casts suspicion over the deal, and Taylor's claims may well have been accurate. See *Cong. Rec.*, 64th Cong., 1st Sess., 1915, 146; 187.

York wholesale drug firm Lanman & Kemp with a business proposal: front him $1,000, and he would be the firm's ginseng agent in Murphy, the Cherokee County seat.[9]

Despite objections from his wife and a thorough lack of experience in the southern ginseng trade, he was hopeful that he could purchase enough roots from diggers and country merchants to turn his ill fortunes around. And so he made his way on the Orange and Alexandria Railroad, past Manassas Junction and Appomattox Courthouse and across a landscape still scarred by four years of war. From Lynchburg, he traveled west across the Blue Ridge to Bristol, Tennessee, and down the western slope of the Great Smoky Mountains. In Cleveland, Tennessee, just north of the Georgia line, he bought a horse and continued his trek east over the Unaka mountains, arriving in Murphy, the county seat of Cherokee County, North Carolina, 11 days after leaving Washington. There, Olmsted would have found even more of the destructive aftermath of the Civil War. Abandoned farms littered the countryside. Currency was almost non-existent. Small communities survived by bartering what little they could produce. Indeed, the one market that offered hope for economic security was ginseng, and Olmsted knew it. "My neighbors would hail me a public benefactor," he wrote to his business partners, "for they hardly see any money at all since the war."[10] Olmsted's ginseng journey,

[9] His concern for his family is revealed in the following statement he made to Lanman and Kemp on Sept. 14, 1870: "My embarrassed…condition gives me great anxiety for my dear family of wife and four boys—and were it not that my eldest son is receiving $1200 as a clerk in the Census Bureau we should be in actual want." Information on Olmstead's arrest and prosecution is patchy, leaving an incomplete picture of the deal he struck with the federal government. James Taylor's (see above note) petition to the Treasury Department indicates that Olmsted had turned over his lands to the federal government as part of his settlement sometime after his arrest, but questions still remain as to why he was not imprisoned for embezzlement. In his letters to Lanman and Kemp, he referred to "my land" in Cherokee County, suggesting that in 1870, when he made his trip to Cherokee County, he had not yet turned over his land to the government. It is possible, therefore, that he was on the lam again. For more information on Olmsted's arrest and his deal with the government, see "The Case of Mr E.B. Olmsted," *The Daily National Intelligencer* (Washington, D.C.), 21 October 1868; *Alexandria Gazette*, 20 October 1868; "Washington Items," *Alexandria Gazette*, 23 September 1868; *Cong. Rec*., 64th Cong., 1st Sess., 1915, 146.

[10] Olmsted to Lanman and Kemp," 10 September 1870, 12 Letters, WLEAC.

preserved in correspondence to his partners, opens a rare window into the post-Civil War economy of southwestern North Carolina.

At first glance, it appears odd that Lanman & Kemp were interested in ginseng. With roots stretching back to 1808, the partnership emerged in 1858 when David T. Lanman, the inheritor of a large firm, joined up with an Irish immigrant named George Kemp. By the 1860s, it had become one of New York's leading wholesale drug suppliers, taking advantage of the mid-nineteenth-century shift in drug production and distribution. They supplied drugstores, primarily in the Northeast and Midwest, with stocks of medicines that they purchased from all over the world. They also distributed a few patent medicines, including a fragrant toilet water called "Florida water" around the western hemisphere. However, they did not specialize in botanic preparations and hardly dealt in any indigenous plants. They were interested in the ginseng trade solely for the purpose of obtaining highly valued opium from China.[11]

The community into which Olmsted landed in the fall of 1870 was still reeling from the effects of the Civil War. Prior to the war, the economy of Cherokee County showed signs of tremendous development. Throughout the 1850s, its population increased 34 percent, the number of farms doubled, and its average farm value jumped 61 percent from $844 to $1400.[12] Moreover, the number of livestock, the region's other marketable commodity, skyrocketed. By 1859, the county produced 21,075 hogs, 5,702 cattle, and 9,270 sheep, making it the second-leading livestock producer in western North Carolina.[13] However, the depredations of guerrillas from both sides of the conflict, depressed markets, and the general lack of law and order that

[11] The records of Lanman & Kemp are housed at the Hagley Museum in Wilmington, Delaware. The fact that they did not deal in botanic drugs is evident from their many orders and price lists in the correspondence with various buyers and suppliers. See Lanman & Kemp records, Hagley Museum & Library, Wilmington, DE.

[12] *U.S. Census Reports,* Historical Census Browser. Retrieved [November 26, 2010], Geospatial and Statistical Data Center, University of Virginia. http://fisher.lib.virginia.edu/collections/stats/histcensus/index.html.

[13] U.S. Bureau of the Census, *Agriculture of the United States in 1860,* 104; these statistics are noted in Davis, *Where There are Mountains,* 131.

existed delivered a major setback to the economy. One of the hardest hit in western North Carolina, the county lost some 40 percent of its improved farmland, over half of its livestock, and more than ten percent of its population in the war-torn 1860s. Furthermore, the county lost an astonishing 65 percent of its total farm values.[14] Observing the effects of the war in Murphy during his famous thousand-mile walk to the gulf in 1867, the venerable wanderer John Muir remarked that it was "the most primitive country I have seen." "The remotest hidden parts of Wisconsin are far in advance of the mountain regions of Tennessee and North Carolina."[15] Their agricultural economy devastated, many Cherokee Countians turned to ginseng.

Indeed, Olmsted had stepped into a community whose economic life was very much defined by ginseng. Muir noticed its attraction to one of his hosts in the area, whose pantry contained only corn bread and bacon. "Coffee is the greatest luxury which these people knew," he wrote in his journal. "The only way of obtaining it was by selling skins, or, in particular, 'sang,' that is ginseng, which found a market in far-off China."[16] In his examination of nearby Cades Cove, Tennessee, Durwood Dunn noted that ginseng was one of the very few products whose value continued to rise in the postwar years when other mountain farm prices, particularly for corn and bacon, remained depressed.[17] In an 1872 report, U. S. Commissioner of Agriculture Frederick Watts reported that Cherokee County produced 75,000 to 85,000 pounds of ginseng that year, and it was purchased from diggers for 25 to 27 cents per pound of green, unwashed

[14] *U.S. Census Report,* Historical Census Browser. Retrieved [November 26, 2010], Geospatial and Statistical Data Center, University of Virginia. http://fisher.lib.virginia.edu/collections/stats/histcensus/index.html
[15] John Muir, *A Thousand-Mile Walk to the Gulf* (Boston and New York: Houghton Mifflin Co., 1916), 37.
[16] Ibid., 40–41.
[17] Durwood Dunn, *Cades Cove: The Life and Death of a Southern Appalachian Community, 1818-1937*, 1st ed (Knoxville: University of Tennessee Press, 1988), 31.

roots.[18] Export data suggests that such a harvest would have comprised some eight percent of the nation's total exports from that year.[19] And census data reveal that such a harvest would have likely involved the participation of a substantial proportion of the farming households in the county.[20] In addition, locals made more money from ginseng, $18,750 to $22,950, than they earned from farming and manufacturing wages, orchard products, garden products, and other forest products combined.[21] Indeed, ginseng was one of the few commodities that offered hope to the people of the region.

Observers noted this growing dependence on roots in the years following the war. On a visit to western North Carolina in 1867, a correspondent for the *New York Herald* reported on the "wretched class known as the 'poor whites' that abound in the mountains, and are met at the wayside at every turn."[22] He noted that many of them survive by digging ginseng. That same year, another correspondent for the *Raleigh Sentinel* reported that "the trade in Ginseng, and other medicinal roots… continues to be the life of Western North Carolina…This carries

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[18] Franklin Hough, *A Report Upon Forestry, Prepared Under the Direction of the Commissioner of Agriculture In Pursuance of an Act of Congress Approved August 15, 1876, Vol. 2* (Washington: Government Printing Office, 1880), 374; Frederick Watts, *Report of the Secretary of Agriculture, United States Department of Agriculture, for the Year 1872* (Washington: Government Printing Office, 1872), 452.

[19] U.S. House of Representatives, *The Annual Report of the Chief of the Bureau of Statistics, on the Commerce and Navigation of the United States for the Fiscal Year ended June 30, 1872*, Ex Doc. No. 242, 42nd Congress, 3rd session, 172.

[20] According to Olmsted (Letter to Lanman and Kemp, 8 October 1870), the average digger dug two pounds per day. In 1867, North Carolina mandated a ginseng season that began the first of September, giving diggers less than two months to dig ginseng before the leaves fell off. To sustain that level of trade, if everyone adhered to the season (which typically did not happen), would require 700 diggers. If two pounds was the average day's production, even if the roots were dug in the summer, it is safe to say that there were hundreds of people around Murphy engaged in digging ginseng. *U.S. Census Report, 1870*, Historical Census Browser. Retrieved [November 19, 2010] from the University of Virginia, Geospatial and Statistical Data Center, http://fisher.lib.virginia.edu/collections/stats/histcensus/index.html

[21] Depending on how much dealers paid diggers (somewhere between 25 and 27 cents per pound, according to Watts), the ginseng trade generated anywhere from $18,750 to $23,000 in 1871. According to the 1870 Census, Cherokee County residents earned $6,202 in farming wages, $5,429 in manufacturing wages, and they collected $4,853 in orchard products, $90 in forest products, $80 in garden products. They also produced $14,629 worth of home manufactures, suggesting that ginseng production was second only to the value of total farm production ($203,743), Ibid.

[22] "North Carolina," *New York Herald,* 29 April 1867.

comfort to many a mountain home of the poor and destitute, and is nearly their only means of raising money, these roots being nearly the only marketable thing they have."[23]

Olmsted's intuition was correct—there was money to be made dealing ginseng in the southern mountains—but he found his plans thwarted at virtually every angle. On his way South, stopping in Lynchburg, Virginia, and Bristol, Knoxville, and Cleveland, Tennessee, he consistently received the same daunting message, "there was no 'Sang' in the place."[24] When he finally arrived in the heart of ginseng country, he found Cherokee County crawling with agents representing firms from Atlanta, Philadelphia, Baltimore, and New York, and he was "greatly disappointed at finding so much competition."[25] He had hoped to purchase the dried root for twenty cents per pound at country stores, but he quickly found that this was impossible. While some stores continued to deal in the root, an increasing amount bypassed the stores altogether. He learned that agents who purchased ginseng for the large firms lived among the diggers the entire year, cultivating relationships that translated into unwritten contractual obligations on the part of the digger to sell to that agent for an agreed-upon price. Some of the larger dealers, specifically three brothers named Smith, offered 60 cents per pound of green root, and Olmsted quickly realized that it would be "useless to think of getting it cheaper for cash."[26] "The whole country has changed within three years," he lamented. "The diggers have ascertained the value of roots and do not dig at old prices."[27]

[23] [Itinerant] "Letters of Itinerant," *The Raleigh Sentinel*, 7 November 1867.
[24] Olmsted to Lanman and Kemp, 22 September 1870, 12 Letters, WLEAC.
[25] Olmsted to Lanman and Kemp, 29 September 1870, 12 Letters, WLEAC.
[26] Olmsted to Lanman and Kemp, 3 October 1870, 12 Letters, WLEAC.
[27] Olmsted to Lanman and Kemp, 29 September 1870. 12 Letters, WLEAC.

Table 1. Poudns of ginseng exports from the United States, 1791-1915

Moreover, with so much competition, the diggers refused to dry the root themselves—"they refuse to go through the trouble"—because they could easily unload it green.[28] Olmsted found that other dealers had constructed clarifying establishments, or "factories," as an earlier generation called them, to process the roots (see chapter two for more on clarifying). The Smiths had some twenty of them scattered from Quallatown to Franklin, Ft. Hembree, and Valley Town. These establishments, located on watercourses where they could more easily be washed and steamed, were primitively constructed of waddle and daub with stone furnaces to dry the root. One of the Smith brothers told Olmsted that he had shipped some 50,000 pounds of clarified roots the previous year. Realizing he would need to emulate this success, he asked Lanman & Kemp for $100 to construct one of these establishments, but it is unclear whether or not he did.[29]

Finding himself an outsider looking in, Olmsted formed a partnership with a local man named John Williams, who knew "almost every old digger and the country people whom he can get to dig it."[30] A successful merchant and trader in Murphy before the war, Williams was "robbed by rebel scouts" and lost everything during the war. After fleeing to Cincinnati, he returned after the surrender and used ginseng to recoup some of his losses. Within five years, he had "3 houses, stables, slaughter houses, and a vacant lot; stock and goods to the value of $2,500 and is free from debt."[31] Williams and Olmsted took turns riding a circuit from Hiawasse to Blairsville, Georgia, up through Murphy, and over into western Cherokee County, to purchase roots directly from the diggers. However this too proved difficult. "The diggers live so far apart and in such rough mountains, and besides get so little each that it is slow work," he told his

[28] Olmsted to Lanman and Kemp, 8 October 1870, 12 Letters, WLEAC.
[29] Ibid.
[30] Olmsted to Lanman and Kemp, 3 October 1870, 12 Letters, WLEAC.
[31] Ibid.

partners.[32] An average day's work was only two pounds per day.[33] Unlike other forest commons in Appalachia, the only wild plant that could be marketed in southwestern North Carolina was ginseng, and, to a far lesser extent, Seneca snakeroot. The commercial reach of Cowles and later, the Wallace Brothers, did not extend to the far southwestern portion of the state, and few other merchants purchased roots other than ginseng. Olmsted noted that "Pink Root, Lady Slippers, May Apple, Spikenard, and Sarsparilla are abundant here, also bloodroot and snakeroots" and inquired into the possibility of purchasing them but, receiving no instructions from Lanman & Kemp, did not buy them.[34]

It is clear that because they were "the only people who come in contact with the living plant," astute diggers were able to use their skill at finding ginseng to manipulate the trade for their own benefit.[35] Most importantly, they could obtain high prices for the roots at the expense of merchants and overeager dealers like Olmsted who were reliant upon the diggers, not only for the actual supply of ginseng, but also for any and all knowledge of that supply. Because he had no idea of the precise state of the ginseng supply, Olmsted was forced to accept whatever the diggers told him. In one letter, he relays how "My diggers are well at work but say the root is so hard to find they can't make wages at 20c for green 'sang.'"[36] Such claims are recurrent throughout his letters, but county ginseng production in 1871 suggests that this was a reflection less of the reality and more of the diggers' attempts to manipulate prices. It evidently worked. Another successful ginseng dealer told Olmsted that he had given up paying attention

[32] Olmsted to Lanman and Kemp, 8 October 1870, 12 Letters, WLEAC.
[33] Ibid.
[34] Olmsted to Lanman and Kemp, 29 September 1870, 12 Letters, WLEAC.
[35] Carlos B. Paseador, *Ginseng: The Crop That's Worth its Weight in Silver* (Joplin, MO: The Chinese-American Ginseng Co., 1901), 5.
[36] Olmsted to Lanman and Kemp, 14 October 1870, 12 Letters, WLEAC.

to market prices and, instead, paid "enough to induce the diggers to work."[37] Thus, ginseng diggers, in some cases, could manipulate the trade for their own advantage.

By the end of the season in November, Olmsted had cobbled together enough dried and clarified ginseng, purchased from diggers and from other dealers, to send a wagonload over the mountains back to New York. But the season's business did not meet expectations. "You will be sadly disappointed in the quantity I get this year," a dejected Olmsted wrote to Lanman & Kemp. He confided that "in many respects my entire ignorance [concerning the traffic in ginseng] was such that no sane man, were he aware of that ignorance, would understand to engage in it on his own account, nor employ one so little informed to engage in it."[38] In the fall of 1870, Olmsted had stepped into a market dominated by diggers and a community increasingly oriented around harvesting ginseng. He was wholly unprepared for such an immersion. He had traveled south to take advantage of the depressed southern economy, only to discover that it was he who was on the raw end of the deal.

The fate of E.B. Olmsted, who does not appear in any censuses of Cherokee County, is unknown, but his expedition into the mountains reveals some important insights into the post-Civil-War ginseng commons. In some communities devastated by the Civil War, the ginseng trade took on a whole new level of importance both to the diggers themselves and the merchants who sought to trade in it. For merchants, it offered a readily available avenue to stability, as Chinese demand for the root did not wane in the postwar years. Even with the increased supply from the southern mountains, the price paid by exporters continued to climb, from $0.56 per pound in 1860 to $1.20 in 1865 and reaching $2.03 in 1883. For diggers, ginseng offered a degree of economic empowerment in an otherwise powerless time. Largely dictating the terms of the trade, diggers could make significant amounts of money. One astonished

[37] Olmsted to Lanman and Kemp, 8 October 1870, 12 Letters, WLEAC.
[38] Olmsted to Lanman and Kemp, 8 October 1870, 12 Letters, WLEAC.

writer from the *New York Herald* noted in 1867 that successful diggers could make as much as three dollars a day: "They only make two [dollars] at the gold mines near Morganton; so it is better than gold digging, in North Carolina at least."[39] It was the commons custom that enabled this trade to reach such large proportions. In areas like Cherokee County with a sizeable amount of undeveloped land and a pattern of absentee ownership, those who lived far from settlements were able to access large tracts of forests to find their roots without worrying about the property lines they were crossing. In 1860, although all of it was privately owned, less than ten percent of the land in Cherokee County was improved, leaving roughly 900 square miles of unimproved forests ripe for ginseng exploration.[40]

When he arrived to inspect the 22,000 acres to which he still claimed title, Olmsted was surprised to find "Indians and white men" digging all over it.[41] The fact that Indians and whites were both digging on Olmsted's lands illustrates a few points regarding the issue of race and commons use. Some areas of the country proved that the ginseng commons could become racially exclusive. In 1859, a massive ginseng boom brought hordes of whites and Indians, including Winnegaoes and Sioux, into the Big Woods of Minnesota.[42] However, the outbreak of the Dakota War in 1862 soured Indian-white relationships throughout the region. By 1865, the boom had largely run its course, but many Indians who were not relocated to other reservations continued to rely on ginseng for subsistence. In 1865, a Bureau of Indian Affairs special commissioner reported to the Secretary of the Interior that one small band of Sioux living temporarily on private lands had grown utterly destitute, in part because whites forbade them

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[39] "North Carolina," *New York Herald*, 29 April 1867, Vol. 32, issue 119, p. 4.
[40] *U.S. Census Report, 1860*, Historical Census Browser. Retrieved [November 19] from the University of Virginia, Geospatial and Statistical Data Center, http://fisher.lib.virginia.edu/collections/stats/histcensus/index.html
[41] See Olmsted to Lanman and Kemp, 8 October 1870, 12 Letters, WLEAC.
[42] For a good account of the Minnesota boom, see Lass, "Ginseng Rush in Minnesota."

from digging ginseng on lands owned by white people.[43] Whites insisted on enforcing property boundaries only to Indians, effectively enclosing the de facto commons. This type of racial renegotiation of commons access did not appear to happen in western North Carolina. Perhaps it was because the Cherokee were not perceived as a threat. Indeed, their relationship with neighboring whites was on much better footing than that which existed in Minnesota. They were, as one observer noted in the 1890s, "so nearly like the whites in their manner of living that a stranger could rarely distinguish an Indian's cabin or little cove farm from that of a white man."[44] According to the 1870 census, there were less than 500 Cherokee living in Cherokee County, while most were living on lands purchased by William H. Thomas in nearby Jackson County.[45] According to James Mooney, who lived among them in the 1890s, the North Carolina Cherokees depended on "ginseng and other medicinal plants gathered in the mountains" to procure what supplies they needed from nearby traders.[46] Thus, the ginseng commons in Cherokee County remained relatively open and accessible to both Indians and whites.

The fact that so many Cherokee County whites engaged in ginseng digging in the postwar years suggests that the racial dynamics of the commons were changing. Thirty years earlier, as the county's lands were transferred from the Cherokee to whites, William Holland Thomas purchased ginseng in Murphy exclusively from the Cherokee (see chapter two). In subsequent years, many local whites undoubtedly learned about ginseng, either directly or indirectly, from their Cherokee neighbors and joined them by the throngs in digging it after the war. In 1890, a resident of Graham County (carved out of Cherokee County in 1872), which included several Cherokee communities, reported to the North Carolina Department of Labor

[43] Shubael P. Adams to James Harlan, 21 June 1865, *1866 Annual Report of the Commissioner of Indian Affairs,* American Indian Law Collection, HeinOnline [accessed Feb. 2016].
[44] Mooney and Mooney, *James Mooney's History, Myths, and Sacred Formulas of the Cherokees*, 176.
[45] However, the actual number may have been higher. Olmsted estimated that 3,000 Cherokee lived in the county, although this was probably too high.
[46] Mooney. *History, Myths, and Sacred Formulas*, 180–81.

that "this part of the country is very badly behind in farming. Not one-fifth of our county is settled, and not many men in this county understand farming. Their delight is fishing, hunting bear, deer, and other game for meat and furs, etc., and digging ginseng root."[47]

While it is difficult to determine from available sources the extent to which African Americans participated in the ginseng trade, there is no reason to think that they did not. In 1870, there were some 300 living in Cherokee County, and they would have been as eager as anyone to profit from the root. According to interviews with former slaves conducted by the Federal Writers' Project in the 1930s, freed slaves elsewhere were well aware of the profits the root promised. Some had dug ginseng during slavery. For example, George Thompson, owned by a planter in Metcalf County, Kentucky, would gather ginseng on Sundays and sell it to doctors for 10 to 15 cents per pound. Against the laws of Kentucky and without the knowledge of his owner, Thompson purchased a "Blue Back Speller" (he did not say from whom) with his proceeds of the root and taught himself to read.[48] Rhody Holsell, who grew up on a plantation in the Ozark Mountain foothills of Missouri, was seventeen when the war ended. "When dey turned me loose I was naked, barefoot, and didn't have nothin' to start on," she told the interviewer. On Sundays, she dug ginseng and sold it to the nearest store, earning about a dollar a week with which they would purchase "our goods."[49] Thus, although commons practices varied considerably across ginseng's range, it seems reasonable to conclude that many African Americans dug roots and herbs wherever and whenever they got the chance.

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[47] *Fourth Annual Report of the Bureau of Labor Statistics of the State of North Carolina for the Year 1890* (Raleigh: State Printers, 1890), 254.

[48] George Thompson, Slavery Days of George Thompson, Transcription, August 2, 1937, Indiana Slave Narratives, Vol. V, Born in Slavery: Slave Narratices from the Federal Writers' Project, 1936-1938, Library of Congress; See also Eliza Madison, Ex-Slave Story, Transcription, n.d., Missouri Slave Narratives, Vol. X, Born in Slavery: Slave Narratives from the Federal Writers Project, 1936-1938, [accessed August 20, 2015].

[49] 'Aunt' Rhody Holsell, Slaves Happy to be Free, Transcription, Missouri Slave Narratives, Vol. X, Born in Slavery: Slave Narratives from the Federal Writers Project, 1936-1938, Library of Congress, accessed August 20, 2015, http://memory.loc.gov/cgi-bin/query/P?mesn:3:./temp/~ammem_zdqQ::

Gender and Herb Gathering in Northwestern North Carolina

In much of Appalachia in the 1860s and 1870s, ginseng and Seneca snakeroot were the only two plants marketable from the forest commons. In northwestern North Carolina, however, due to the concentration there of botanical entrepreneurs, commons users could also find hundreds of other plants that could readily command a price at the nearest country store. This translated into an expanded gathering commons for residents of the region. Iron weed, Jewell weed, carrion flower, Carolina allspice, morning glory, skullcap, and even privet leaves could now be made to pay.[50] The forests of Appalachia became a great emporium, where hundreds of different varieties of plants could be found and readily exchanged for store-bought goods made in the large factories of industrializing America. The marketability of so many new plants, combined with depressed markets, a lack of currency, and the lingering effects of the Civil War on the livestock industry, brought increased reliance on the Blue Ridge commons for market exchange. This shift disrupted accepted gender roles, creating new opportunities for women to participate in the market economy while also turning more men into gatherers.

During the Civil War, gathering roots and herbs was championed as a task for women and children to contribute to the war effort. The *Carolina Watchman*, for example, called on women and children to "make money for themselves and render a great public benefit by collecting these plants."[51] Surgeon General Moore even issued a circular instructing the medical purveyors to assist the "ladies throughout the South" in the cultivation of garden poppies and the collection of other herbs.[52] Indeed, as Michael Flannery has found, gathering herbs for use in the army was one of the ways Confederate women, whose public role was severely

[50] A complete price list for the Wallace Brothers for 1884 is found in "A Descriptive list of roots, herbs, barks, seeds, flowers, mosses, etc.: collected by Wallace Brothers, wholesale dealers in southern botanic crude drugs," Rubenstein Rare Book and Manuscript Collection, Perkins Library, Duke University, Durham, North Carolina.
[51] Idid.
[52] Quoted in Franke, "Official and Industrial Aspects of Pharmacy in the Confederacy," 182.

circumscribed by southern custom, could actively participate in the war effort.[53] After the war, the image of the herb gathering soldier's wife became part of Lost Cause mythology, as people like Joseph Jacobs sought to record the "heroism and magnanimity of the Southern people in maintaining that brave struggle in arms against the proud and wealthier section of our common country."[54] Jacobs, a successful Atlanta pharmacist who is best known for his early role in promoting Coca Cola, told the American Pharmaceutical Association in 1898 that "The grandmothers of those days revived the traditions of Colonial times." These remarkable women:

> learned from experience that barks were best gathered while the sap was running, and when gathered the outer and rougher portion should be shaved off and the bark cut thinly and put in a good position in the shade to dry; that the roots ought to be gathered after the leaves are dead in the fall, or better, before the sap rises; that seeds and flowers must be gathered only when fully ripe, and put in a nice dry place, and that medicinal plants to be secured in the greatest perfection should be obtained when in bloom and carefully dried in the shade.[55]

The Confederate government's appeal to women to gather herbs for the war effort reflected and reinforced gendered expectations of commons use. It was well within the acceptable realm of the feminine commons. Furthermore, the memory of the Southern women who became apothecaries to serve the needs of soldiers in the field and maintain the home front powerfully reinforced these expectations.

However, many women, particularly in Appalachia where loyalty was highly contingent and contested, sold roots and herbs not necessarily out of loyalty to "the Cause" but as a means of survival. In her 1892 memoir, *How It Was: Four Years Among the Rebels,* Nashville resident Julia Morgan recalled a journey she made in the late spring of 1862 into the mountains of East Tennessee, an area notable for its large population of Unionists and complicated loyalties.

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[53] Flannery, *Civil War Pharmacy*, 64–70.
[54] Jacobs, "Drug Conditions During the War Between the States."
[55] Ibid.

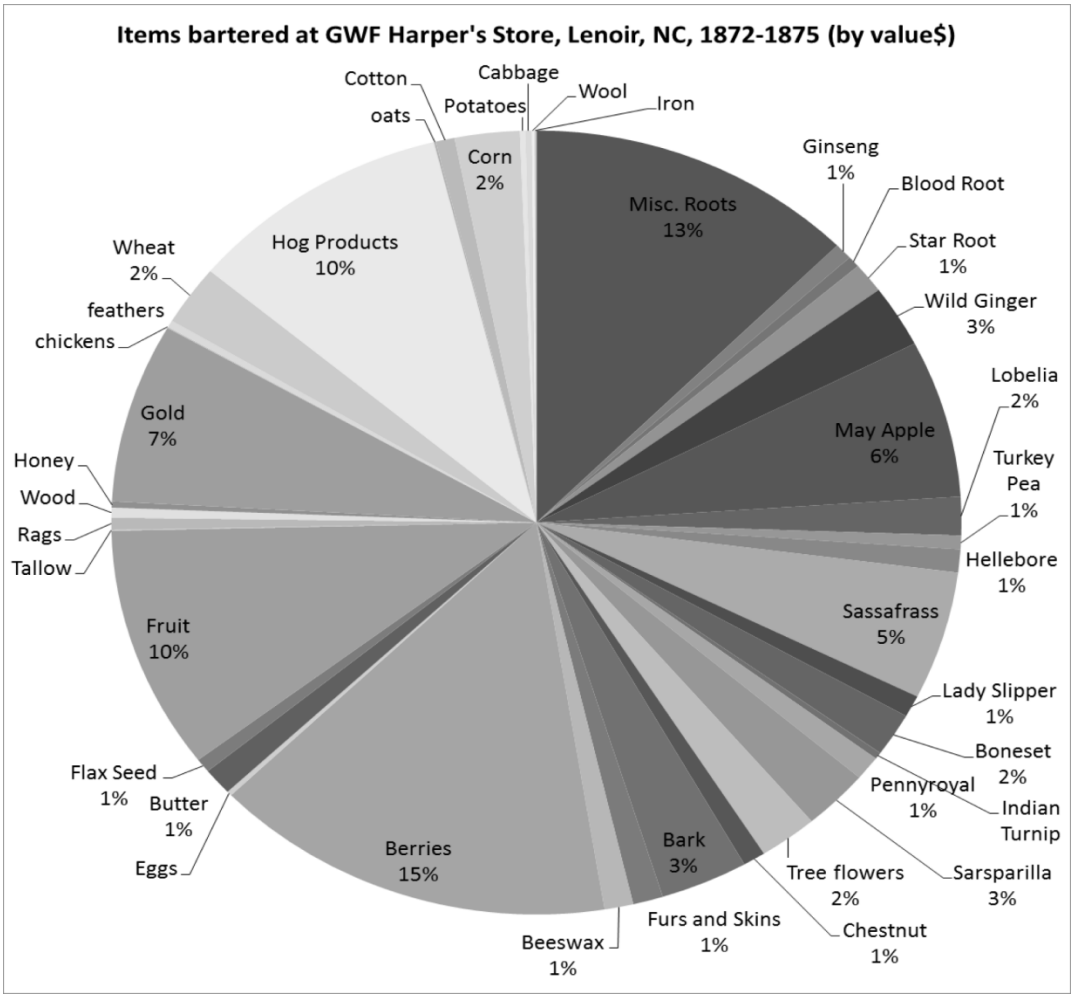
Convincing some local women to accompany her on jaunts collecting wildflowers through the mountains, she learned that many of them made up for the loss of men to the war by digging calamus, ginseng, angelica, and other roots and herbs, in addition to gathering huckleberries, blackberries, and dewberries.[56] Cowles, a Unionist himself, knew first-hand the conditions of mountain people during the war. Serving as postmaster general in Charlotte in the summer of 1862, Cowles learned that a few wives of Confederate soldiers had broken into his corn crib in Elkville and taken forty-two bushels of corn to feed six families.[57] Thus, economic conditions, rather than patriotism, induced many mountain women to harvest roots and herbs.

After the guns fell silent, the women in northwestern North Carolina drew on their experiences during the war to engage the depressed postwar economy. The best available sources with which to assess the role of the commons in northwestern North Carolina are the business records of Lenoir merchant George W.F. Harper. Harper maintained itemized lists of daily barter transactions from the mid-1860s through the 1880s in his "produce books," which are scattered among two different collections at the University of North Carolina's Southern Historical Collection. A statistical analysis of the years 1866 to 1875 reveals that roots and herbs were indeed "the life of Western North Carolina."[58] They comprised 45 percent of the total value of the barter business conducted by Harper. Customers made more money selling medicinal roots, leaves, seeds, barks, and flowers than they made by trading fruit, butter, wheat, corn, bacon, or berries *combined*. Harper purchased some three dozen different species of medicinal plants, and ginseng barely cracked the top five in terms of overall value. The most important were, in order of total revenue generated: American sarsaparilla, wild ginger, lobelia,

[56] Irby Morgan, *How It Was; Four Years Among the Rebels* (Nashville: Methodist Episcopal Church, 1892), 25.
[57] C.C. Jones to Calvin J. Cowles, 25 July 1862, Calvin J. Cowles Papers, North Carolina Department of Archives and History, Raleigh, NC.
[58] Ibid.

may apple, ginseng, sassafrass, turkey pea, and star root.[59] Indeed, the commons users in the region had many more opportunities to find valuable plants than the sang diggers of Pocahontas County, or even Cherokee County.

Table 2. Items bartered at G.W.F. Harper's Store, Lenoir, NC, 1872-1875 (by value$).



[59] These statistics were gleaned from: Produce book, G.W. and S.F. Harper, 1866-1867, Vol. 26, Harper Family Account Books, Southern Historical Collection, Wilson Library, University of North Carolina, Chapel Hill [hereinafter cited as Harper Family Account Books, SHC]; Produce book, G.W. and S.F. Harper, 1869-1869, Vol. 29, Harper Family Account Books, SHC; Produce book, G.W.F. Harper, 1873-1875, Vol. 38, Harper Family Account Books, SHC; Produce book, G.W.F. Harper, 1875-1877, Vol. 40, Harper Family Account Books, SHC; Barter Produce Book, 1869-1870, Fold. 7, Bernardht-Seagle Co. Records, Southern Historical Collection, Wilson Library, University of North Carolina, Chapel Hill [hereinafter cited as Bernardht-Seagle Co. Records, SHC]; Produce Book, 1871, Fol. 8, Bernardht-Seagle Co. Records, SHC; Produce Book, 1871-1872, Fol. 9, Bernardht-Seagle Co. Records, SHC; Produce Book, 1872-1873, Fol. 25, Bernardht-Seagle Co. Records, SHC.

Women took full advantage of the opportunities offered by Harper and other root buyers to increase their interactions with the market.[60] Store records suggest that during the postwar root-and-herb boom, women drew on their ethnobotanical knowledge to generate income for their families. A full one third of Harper's transactions were conducted by clearly identifiable women, meaning they either had a female identifier ("Mrs," "Ms," etc.) or had a clear female name in the ledger. Yet female customers comprised well over half of those transactions conducted solely with roots and herbs. Women were statistically more likely to trade these commons commodities, and men were more likely to trade private commodities.[61] The store ledger from the Taylor and Moore Store in Valle Crucis, Watauga County tells a similar story. In the early 1870s, just over half of the customers who traded in roots and herbs were women. Those women sold roughly 45 percent of the roots and herbs purchased by Henry Taylor, the store's co-owner, although the actual number harvested by women was likely much higher, as male customers often traded roots dug by their wives or daughters.[62]

Many widows, including war widows, depended on the gathering commons to maintain a level of subsistence in the absence of their husbands. From 1872 to 1874, Wiley P. Thomas, who owned a store in Jefferson in Ashe County, sold at least 8,000 pounds of roots and herbs, worth somewhere between $1500 and $3000, to Arthur Cowles and, occasionally, directly to northern buyers. His ledger reveals that less than 15 percent of his customers traded in commons commodities. Most of those customers used roots and herbs to supplement their

[60] Some scholars have suggested that women in preindustrial Appalachia had little experience in the world of commerce, as gender norms dictated that commercial interaction was a male domain. But this does not hold true for areas where significant roots and herbs were traded. See Eller, *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*; Dunaway, *Women, Work, and Family in the Antebellum Mountain South*.

[61] This is based on the fact that there were more men who traded private commodities than commons commodities, and there were more women that traded commons commodities than private commodities. Harper Account Books, SHC.

[62] Taylor and Moore Ledger, W.L. Eury Appalachian Collection, Belk Library, Appalachian State University, Boone, NC.

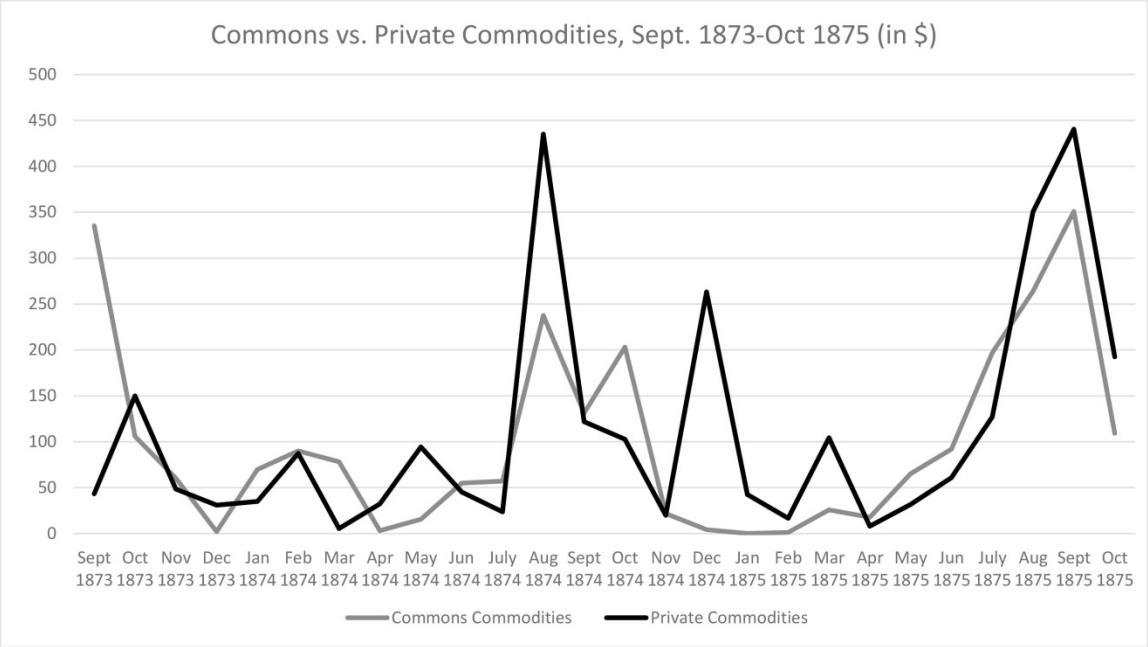
farm production, trading a few dollars' worth alongside their bacon and buckwheat. However, there were nearly two dozen customers who used roots and herbs to cover their entire purchase, and several of them were women.[63] Three of Wiley Thomas's customers were identified as widows, and they all relied exclusively on roots and herbs for their purchases. Mary Gardinett, for example, sold a bag full of roots every two or three weeks for a period of eight months, with which she purchased coffee, domestic cotton fabric, spectacles, and shoes, among other goods.[64] Further South in Haywood County, Mary C. Cathey, who lost her husband during the Peninsula Campaign in 1862, sold a load of ginseng, averaging around two dollars, every month in 1870 and 1871.[65] As a source of income, roots and herbs were much more easily obtained than raising a farm surplus, and it helped widows—a larger segment of the population in the post-Civil-War years—acquire purchasing power.

Rural men did not take pride in herb gathering, and many wanted nothing to do with it. The *Southern Cultivator* insisted in 1888 that gathering herbs was "the kind of work for women and children."[66] Men prided themselves on their hunting abilities, on the number of bears or panthers they had killed, on the quality of their hunting dogs. They saw themselves as hunters and woodsmen, and herb gathering had little to do with their notions of masculinity.[67] Referring to root digging and herb gathering in the early twentieth century, one dealer commented that "The men, in general, consider such occupations beneath them, and, ostensibly, trade only heavy and bulky products, such as barks of the larger trees, and bring in the other products with

[63] See W.P. Thomas Store Ledger, 1872-1875, Ashe County Historical Museum, Jefferson, North Carolina.
[64] Thomas Store, Ashe County Historical Museum.
[65] Store Ledger, 1869-1871, Cathey Family Papers, Special Collections, Hunter Library, Western Carolina University, Cullowhee, NC.
[66] "Woman's Work," *Southern Cultivator,* February 1888, 90.
[67] A good source for examining the role of hunting in Appalachian masculine identity is a memoir, Fred M. Burnett, *This Was My Valley* (Ridgecrest, NC: Heritage Printers, copyright held by Fred Burnett, 1960).

an apologetic 'Here's some yarbs the women got.'"[68] As this dissertation has shown, men had long engaged in digging ginseng, and as medicinal plants gained a market value, evidence suggests that more men began to gather other roots and herbs on a regular basis. The sociologist James Lane Allen relayed the story of one eastern Kentucky community during a season in the 1880s when the corn crop failed. The local store-keeper told the people to gather May apple. "At first only the women and children went to work, the men holding back with ridicule. By-and-by they also took part, and that year some fifteen tons were gathered."[69]

Table 3. Graph showing the seasonal nature of G.W.F. Harper's barter business.



Class and Ginseng in Southeastern West Virginia

One sunny December day during the otherwise harsh winter of 1861-1862, a mysterious old man appeared out of the woods near Fayetteville, West Virginia, and rode an ox into a camp

[68] Ewing and Stanford, "Botanicals of the Blue Ridge."
[69] James Lane Allen, *The Blue-Grass Region of Kentucky: And Other Kentucky Articles* (New York: MacMillan Company, 1907), 232.

of Union troops under General William Rosecrans. The man appeared to be a "veritable Rip Van Winkle" with long hair, a long beard, and homespun clothing that had been reduced to rags. He had somehow evaded the pickets and was now guiding his ox down the muddy road, plying his forest products with an English-African dialect that no one could quite understand. Captain H. R. Brinkerhoff immediately identified him as a ginseng digger but suspected he was a Confederate spy disguised by "elaborate makeup." Because no one stopped him or questioned him, he "leisurely" disappeared out of sight and into historical obscurity.[70]

During the Civil War, there were numerous encounters like this between sang diggers and Union and Confederate soldiers in the forests of West Virginia. As the economic devastation of the war rolled across the southern highlands, ginseng proved a critical source of income for people of various loyalties to obtain store-bought necessities. Some were able to use ginseng to remain aloof from wartime hostilities, at least for a time. In the fall of 1862, 51-year-old Isaac Scarborough was arrested by Confederate partisans calling themselves the Caskie Rangers and imprisoned for suspected disloyalty. Scarborough was on his way to Kanawha, a Union stronghold, to sell a load of ginseng when the Caskie Rangers stole his horse and his ginseng and apprehended him.[71] As a boy, Penn Kirk remembered escaping the cannon blasts from his home in the Shenandoah Valley to dig ginseng in the mountains with his brother. "We had this interest in woods life, and loved it enough to follow it so ardently there was no mortal could tell," he later recalled. "But hither we would hie, spend long days out of sight of the rest of the world as it were, and listen only to the sounds that echoed in the tree tops from time to time."[72]

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[70] H.R. Brinkerhoff, "A Reminiscence," *United Service,* 14, 2 (Aug. 1895).
[71] "Memoranda of Various Political Arrests—From Reports of Confederate Commissioners," *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies,* Series II, Vol. II (Washington: G.P.O., 1897), 1448.
[72] Quoted in Johannsen, *Ginseng Dreams*, 24.

Webster County—due to its abundant fish, game, and ginseng—specifically became something of a haven for people seeking to escape wartime hostilities and economic devastation. Formed in 1859, Webster had the lowest population density in the state, a mere three persons per square mile, and ginseng fueled the county's economy for years. Upon the county's formation, the county court set the price of ginseng at one pound of coffee and one deer or wolf pelt and ordered that taxes and judgments could be paid in ginseng, cash, pelts, or coffee.[73] For the first five years of its existence, owing to the outbreak of war, it lacked organized government, earning it the appellation, "The Independent State." While the county voted overwhelmingly to remain in the Union during the secession votes of April 1861, they were more interested in maintaining their autonomy and, thus, engaged in guerrilla warfare against the Union army when it invaded the area in late 1861. Although sources are extremely scarce, it appears that some people went to the area because it offered the freedom of life in the woods disconnected from wartime hostilities and economic devastation. In the fall of 1861, John O'Brien and his son Miles were arrested by Confederate partisans for suspected disloyalty. Upon questioning, Confederate interrogators found that O'Brien had been born in Harrison County, moved with his family to Kanawha County and then up the Elk River to Webster, where he "lives remote from settlements in the woods, and makes his living by hunting and digging ginseng."[74] They concluded that he was "ignorant of all things going on in the settlements," but he evinced a "great respect for the old Commonwealth" and discharged him and his son after

[73] While the Webster County courthouse was burned in 1888, a newspaper article printed in 1902 included excerpts from the original county court records. That article was reprinted by the Webster County Historical Society under H. Coleman Thurmond, "Webster County and the Foreign Press," *The Webster Independent,* Vol. 3, No. 2 (Fall/Winter 1985-86), 60.

[74] "Memoranda of Various Political Arrests—From Reports of Confederate Commissioners," *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies,* 1448.

they swore loyalty oaths.[75] Indeed, Webster county, according to one observer, was a "hunter's paradise, as deer, bear, and all kinds of game were abundant, and every family could, if they desired, have venison for breakfast by simply going out in their yard or 'patch' and shooting such game as they wished."[76]

Webster, Pocahontas, and surrounding counties were hit hard by the war. The area experienced fighting by both guerrillas and regular armies, including in the battles of Cheat Mountain, Greenbrier River, and Camp Allegheny in the late summer and fall of 1861. It remained under Confederate control until the fall of 1863, when the Union Army, under the command of John Echols, defeated a Confederate force under William W. Averell, at the Battle of Droop Mountain in the Greenbrier Valley.[77] The agricultural economy was devastated. During the war-torn 1860s, the average farm value in Pocahontas County was cut in half.[78] One traveler through neighboring Webster County recalled travelling fourteen miles through the mountains "without coming to a house; although prior to the war many excellent farms were cultivated along the route."[79]

After the war, with its economic effects still lingering, the forests would become filled with many more people like the O'Briens who relied heavily on the forests, and ginseng specifically. As Paul Salstrom, Durwood Dunn, and others have argued, the Civil War severely, perhaps fatally, disrupted the farm and forest economy that had existed prior to the war. With the agricultural economy in tatters, crop prices declining, and the livestock industry destroyed,

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[75] "Memoranda of Various Political Arrests—From Reports of Confederate Commissioners," *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies,* 1448.
[76] Thurmond, "Webster County and the Foreign Press," *The Webster Independent,* 60.
[77] Roy Bird Cook, "Battle of Droop Mountain," *West Virginia Review* (October 1928), published online by the West Virginia Archives and History, http://www.wvculture.org/history/civilwar/droopmountain01.html [accessed June 2016].
[78] U. S. Bureau of the Census, *Population Schedules of the 8th Census of the United States, 1860, West Virginia, Pocahontas County* (Washington: National Archives and Records Service, 1861); U. S. Bureau of the Census, *Population Schedules of the 9th Census of the United States, 1870, West Virginia, Pocahontas County* (Washington: National Archives and Records Service, 1871).
[79] "Webster: A Few Words Concerning the 'Independent State,'" *The Weston Democrat,* 14 July 1873.

harvesting the forest became an attractive alternative for the have-nots who found few prospects amidst the post-war depression. While many families continued to rely on root digging and herb gathering as a way to supplement their farm production, in parts of Appalachia, the class of landless people who were entirely dependent on roots and herbs for survival expanded. Nowhere was this class as conspicuous as in southeastern West Virginia.

An examination of the store records of Pocahontas County merchant Isaac McNeel provides a fascinating glimpse into this shifting class dynamics of root digging. McNeel dealt in virtually no ginseng before the war, but between 1871 and 1874, he took in $900 worth of the root. It was the most commonly bartered item, and it was surpassed only by wool ($1500) and beef products ($953) in the revenue it generated for local customers. Yet, ginseng still comprised less than ten percent of the total economy at McNeel's store. McNeel took in roughly $13,000 in various forms of payments at his store, of which some $11,500 can be identified from his store ledgers. Customers purchased $2800 worth of goods in cash and $1800 worth of goods by trading their labor, mostly hauling and mill work. The rest, or $6,800 (60 percent), was paid in barter. Some three-fourths of the barter business, or $4600, came from sources raised on a private farm. These included, in order of importance, wool, beef products, butter, hog products, corn, wheat, tobacco, eggs, and chickens. Nearly one quarter, or $1,500, of the barter business was conducted with commons commodities, of which ginseng comprised sixty percent. Other commons commodities included maple sugar, fish, vension, furs and skins, and chestnuts.[80]

[80] It must be noted, however, that the seven percent total should be taken as the lowest estimate for ginseng's overall economic contribution. As in the case of Cherokee County (chapter five), it was not uncommon for diggers to contract directly with agents for cash and bypass the store altogether, so some of the cash used by customers likely came from selling ginseng to outside dealers. McNeel himself seems to have sold most of his ginseng to the Boston wholesalers Wilson, Burns, & Co. See Ledger, 1871-1874, Isaac McNeel Papers, West Virginia History Center, West Virginia University, Morgantown, West Virginia

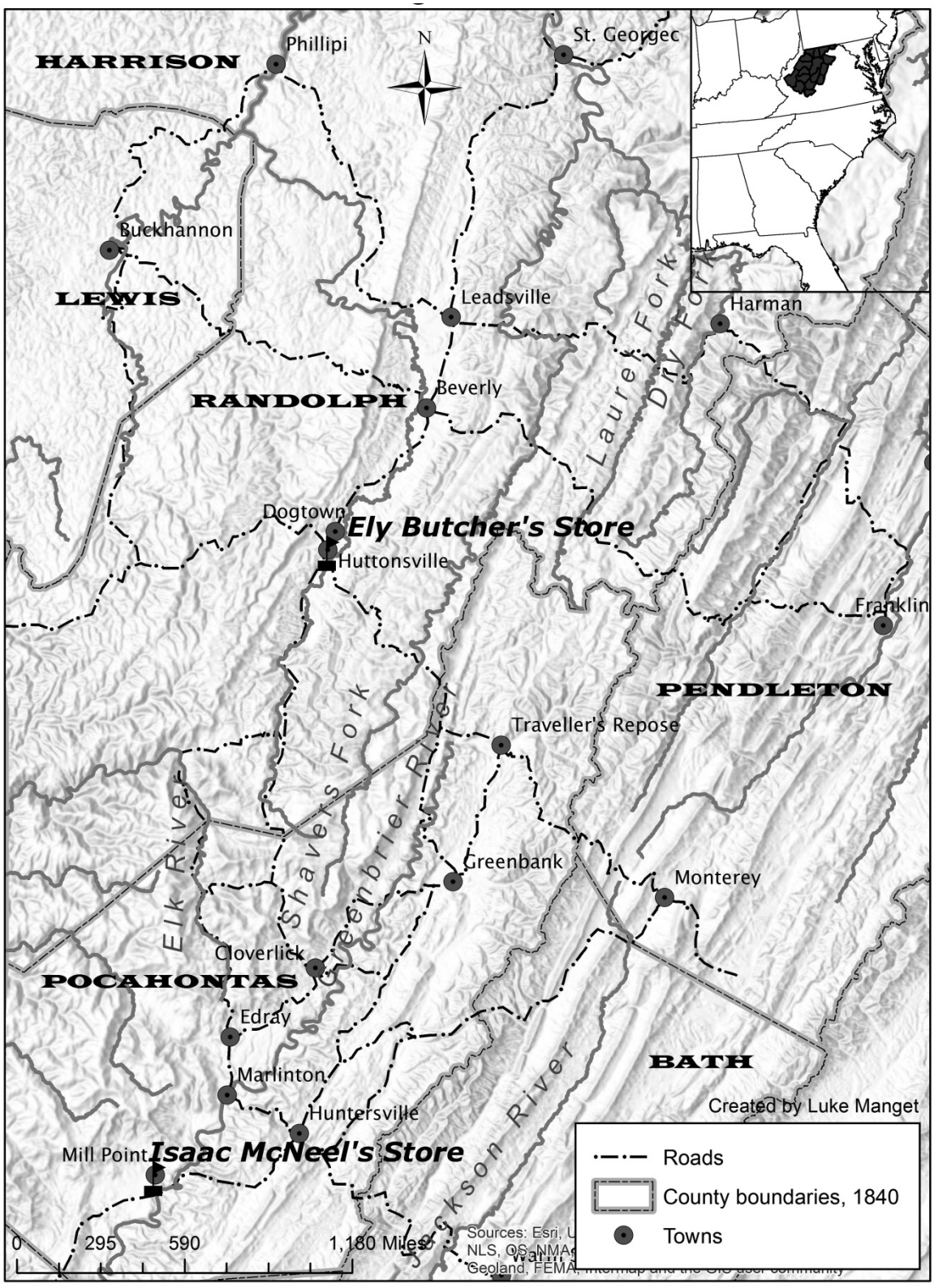

Figure 12. Southeastern West Virginia, 1840-1870.

While ginseng may have comprised less than ten percent of the overall economy of Mill Point, it was vitally important for a handful of customers. Just two dozen of McNeel's 430 customers provided two-thirds of all the ginseng traded at the store, and those two dozen customers used ginseng to pay for more than ninety percent of their store purchases. Instead of being merely one widely used component of a landscape of subsistence that incorporated both forest and farm, as was evident at Ely Butcher's Randolph County store, ginseng became the sole source of revenue for a smaller subsection of the population. For the purposes of analysis, I will call these full-time gatherers sang diggers. Of the thirteen sang diggers who can be identified by the 1870 census, six owned no land, five owned less than $500 in real estate, and two owned more than $1000 in real estate. All were middle-aged farmers, from 30 to 56 years old, and had sizeable families, from four to eight children. Moreover, virtually all of McNeel's sang diggers were affected by the war in some way. Allen Grimes had started a promising career as a shoemaker before the war, but by 1870, he was a small farmer who relied solely on ginseng for his store purchases, trading some $65 worth in two years. Some, like Robert D. Silva, were war veterans who returned to find few prospects in the war-torn economy. Silva was a 22-year-old farm hand in neighboring Webster County when the war broke out. After a two-year stint in the 40th Virginia infantry, he returned to his native Pocahontas County, rented a farm, and, along with his wife and 6-year-old son, began digging ginseng to cover virtually all of their store purchases. Almost every month starting in July, he brought a load of ginseng, ranging in value from $2 to $15, to McNeel's store and traded it for coffee, powder, tools, eggs, calico, and a variety of other goods.

Like Silva, when Samuel J. Brown mustered out of service in the Union Army in August 1865, his future was highly uncertain. Before the war, he had worked on his father's farm in Greenbrier County, West Virginia. At age nineteen in 1862, he traveled over the mountain to

Sutton to enlist in the Union Army, an act of courage that would have earned him the scorn of many of his secessionist neighbors. After spending six months in a military prison in Alexandria in 1864 for being absent without leave, he returned to his regiment for the war's duration. Despite having no land or employment prospects, he married within months of discharge and tried to settle into a life as a farm hand on a Pocahontas County, West Virginia, farm. By 1870, the couple had an infant son but owned no land and only $150 in personal property. The small farm he rented produced barely enough food for the family, so he turned to the forests. Brown and his wife, probably with their son strapped to her back, spent much of their time in the summers and falls tromping through the hardwood forests in search of ginseng. From 1872 to 1874, he traded some 180 pounds of fresh, green ginseng, or $54 worth, for corn, tobacco, coffee, sugar, fish hooks, and other necessities at a McNeel's store.[81]

While all of McNeel's ginseng customers described themselves as farmers to the census-takers, the title only legitimately belonged to some. It is clear from store purchases that some had working farms that provided enough food to live on but no marketable surplus. Grimes, for example, used ginseng to buy plow points, a cow bell, and a milk pail. However, some sellers used the root to buy large amounts of farm produce, indicating that they made little effort to maintain their own farm. Of these, Josiah Cline was the most prominent. From 1869 to 1874, the years for which there are complete records, Cline brought in a load of ginseng to McNeel's almost every two weeks beginning in June, totaling nearly $300. In exchange, he purchased thirty-nine bushels of corn, 264 pounds of wheat flour, 612 pounds of bacon, and various amounts of butter, powder, shot, nails, and many other goods. The 1870 census found Cline

[81] Biographical details were established by United States Bureau of the Census, *Population Schedules of the 9th Census of the United States, 1870, West Virginia, Pocahontas County* (Washington: National Archives and Records Service, 1871); Compiled Military Service Record, Samuel J. Brown, Pvt. Co. F, 10th West Virginia Infantry, National Archives, Washington, D.C.; Ledger, 1871-1874, Isaac McNeel Papers, West Virginia History Center, West Virginia University, Morgantown, West Virginia.

listed as a farmer, but he owned no land and just twenty dollars in personal property. Thus, McNeel's records indicate that after the war, there emerged a group of people who did not maintain a farm and, instead, relied on ginseng and, to a lesser extent, other commons commodities, to purchase food. In short, harvesting the commons became less a practice conducted by farmers and their families and more of an occupation in and of itself.

Thus, in the decade that followed the Civil War, the forests of southeastern West Virginia crawled with people searching for the increasingly elusive ginseng root. Some had been born and raised in the area, but evidence suggests that the forests attracted many outsiders as well. In the early 1870s, Bernard Mollohan, a successful builder and surveyor in Webster County, reported with disdain to the *Weston Democrat* (Lewis County) about "a crowd of strange men from other counties with sang hoes and knapsacks on their backs, in search of ginseng on the mountains of Webster and Pocahontas counties."[82] Before the Civil War, Preston Grant was an overseer on a tobacco plantation in Rockbridge County, Virginia, and lived in a modest house with his 10 children in the Shenandoah Valley. His job came to an end with the abolition of slavery, so he moved his family into the mountains of Pocahontas County and rented a farm on the north side of Droop Mountain. There, according to family lore, the Grants raised a garden and kept sheep, hogs, and, occasionally, a cow, but they also depended on hunting, fishing, and digging ginseng. His daughter, Sally, became an expert sang digger and, according to her granddaughter, "went sangin' many and many a day." Sally started her own family in 1875 in neighboring Greenbrier County and soon instilled in her children a love for "sangin'."[83] While traveling the road from Morganton to Asheville, North Carolina, in 1866, a correspondent for the *Raleigh Sentinel* passed a man with a one-horse wagon heading for the mountains. Asked if he was going over the Blue Ridge, he replied, "oh, no…I'm only hunting

[82] B. Mollohan, "From Webster," *Weston* (WV) *Democrat,* 21 September 1874.
[83] Anna Shue Atkins, "'She Didn't Go Sangin' Alone!'" *Goldenseal,* 25, 3 (September 1999), 28.

'sang.'"[84] It seems that following the war, rumors of free money to be found in the mountains was attractive to many people, not just locals.

Indeed, in the late 1860s and 1870s, Pocahontas and surrounding counties became something of a haven for itinerant sang diggers. There were a few reasons for this. Unlike many areas of the state closer to the Ohio River and the Big Sandy, where the initial frontier ginseng boom took place, southeastern West Virginia forests generally had not faced the kind of pressure other areas had faced, and ginseng was still abundant when the war ended. The area had the lowest population density in the state with some of the highest and inaccessible mountain ranges. Furthermore, up through the 1880s, the area had largely escaped the large-scale deforestation that was sweeping across the state. Between the 1850s and 1870s, two trunk railroad lines penetrated West Virginia's mountains. The Baltimore and Ohio ran across the northern edge of the state, and the Chesapeake and Ohio bisected the state's south-central mountains. Once completed, independent railroad companies, allied with timber and coal companies, created an elaborate web of feeder lines that extended deep into the West Virginia interior, where large-scale timber extraction proceeded apace. In the 1880s, track mileage doubled. It doubled again in the 1890s. Much of the early industrial expansion, however, occurred in the more accessible and settled portions of the state in the north and west.[85]

As ginseng disappeared from the more accessible and settled portions of the state, diggers were increasingly compelled to travel for miles with their sang hoes and camping gear into the most remote stretches of forest. University of Kentucky botanist Harrison Garman remarked in 1898 that "only he can expect to find the largest and finest roots who has strength and inclination to tramp and climb in all sorts of out-of-the-way nooks, where commonplace

[84] [Letter to the editor] *The Raleigh Sentinel,* 13 September 1866.
[85] Lewis, *Transforming the Appalachian Countryside*, 67–77.

men and the ubiquitous hog and cow rarely penetrate."[86] One West Virginia resident remarked in the late 1870s that many families "will unite and go into the unsettled regions where they can find ginseng, erect temporary dwellings of logs, and stay until they have dug all the ginseng in the vicinity, or until the season is over, and then go back to their homes."[87] Cecilia McKnight Brown, who grew up in rural Letcher County, Kentucky, in the 1860s, later recalled going 'senging' in groups of fifteen or twenty into the remote Black Mountain area along Kentucky's border with Virginia. They would typically camp out under rocky cliffs and lean-tos for a week or two at a time, spending day time scouring the hills for the increasingly rare plant. They ate jenny cakes by stirring together corn meal, salt, and water and cooking it on a buckeye board over an open fire. They also feasted on wild game and trout.[88] In the antebellum era, rural residents like James B. Hamilton were likely to find the plant growing on nearby hillsides, and they could spend only a few hours in their spare time searching for the root. In the decades following the war, those easy-to-reach plants were no longer available, and harvesters had to go to greater lengths to access them. By the 1890s, the high mountains of southeastern West Virginia remained the last bastion of old-growth forests in the state, and they became the favorite hunting ground of many a digger from the surrounding counties.

Many mountain residents preferred harvesting roots and herbs to the wage work offered by newly arrived timber and coal industries, and some relied on it to resist the pull into wage work. From the 1870s through the 1910s, railroads penetrated the most remote stretches of mountains, followed by large-scale coal and timber companies intent on extracting the rich resources of the mountains, thus beginning a drama that has been documented by many able

[86] Harrison Garman, *Ginseng, its Nature and Culture: Bulletin No. 78,* Kentucky Agricultural Experiment State of the State College of Kentucky (Lexington, November, 1898), 128.
[87] Ibid..
[88] Maude Chandler, George and Cecilia Brown Life History [Interview 4 December 1939], W.P.A. Life Histories, Library of Virginia, Richmond, VA.

Appalachian scholars. Ronald Lewis has shown that in West Virginia these industries disrupted mountaineers' relationship to the forests and undermined the farm-and-forest economy.[89] Mountaineers may have been initially attracted to the money offered by wage work, while others, proud of their independence, found such work disagreeable.[90] During this transitional period, many mountain residents tried to maintain their independence from wage work by digging roots and herbs. John U. Greer, born and raised in the mountains of Pike County, Kentucky, grew up digging ginseng in the 1870s and 1880s and continued digging his entire life. Even after the Consolidation Coal Company and other coal companies opened up the Elkhorn coalfield around the turn of the twentieth century and after his five sons entered the mines in the 1920s, Greer refused to work for wages. He moved onto one of his son's property and spent much of his time digging ginseng. His granddaughter remembered "sanging" as "one of his favorite things to do."[91]

In the 1880 census, as industrial extraction began to accelerate, a small handful of families in mountain districts listed their occupations as "sang diggers" to the census takers. Although the reasons why remain unclear, an examination of this small group can shed some light on the meaning of ginseng digging to those who depended on it. Johnson Gipson, for example, grew up the son of a tenant farmer in East Tennessee. Too young to serve in the Civil War, in 1880, he was living with his 26-year-old wife and 2-year-old daughter, evidently relying on ginseng for a living. Similarly, in the area around Cabin Creek in the Kanawha coal fields of south-central West Virginia—an area that would gain infamy during the coal wars a few decades later—six individuals identified themselves as sang diggers, including members of the same

[89] Lewis, *Transforming the Appalachian Countryside*; Eller, *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*.
[90] Eller, *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*, 226–30.
[91] Joann Greer Brassell, Private Correspondence with the Author, August 2015.

Conley family. Brothers James and William Conley were also too young to fight in the Civil War. Their parents, James and Nancy Conley, lived somewhat of a vagrant life as tenant farmers, moving from Tazewell in southwest Virginia to near Roanoke sometime in the 1850s. James, the father, and an older brother joined the Confederate cause, and James died in Richmond in 1865, leaving Nancy a widow with six children still under her care. Following the war, Nancy moved her family west and into her eldest son's house in Putnam County, West Virginia, where they undoubtedly supported themselves by digging ginseng. The 1880 census found them in yet another location, Cabin Creek, identified as sang diggers. By this time, William had gotten married, had three young children, and moved into a nearby house. He and his wife also identified as sang diggers.[92]

For someone to identify as a sang digger was to acknowledge that the general catch-all label "farmer" no longer applied to them. Interestingly, these self-identified sang diggers all lived in neighborhoods dominated by wage workers. Gipson's neighbors were largely railroad workers, whereas the Conleys' neighbors were virtually all coal miners. This simple fact illustrates the erosion of the rural subsistence lifestyle that once dominated these areas. Forests were turned into industrial operations, crop prices dropped, and ginseng disappeared. The farm and forest economy became untenable, and residents turned to more specialized work. Some turned to wage work, while others, perhaps those who desired more independence, came to rely on ginseng and other roots and herbs. By telling the census taker they were "sang diggers," perhaps it was part of an act of defiance against the dependence of wage work. But it was to be a short-lived identity, as they could not avoid wage work forever.

[92] These biographical details were compiled using: U.S. Census Bureau, *Seventh Census of the United States, 1850*; U.S. Census Bureau, *Eighth Census of the United States, 1860*; U.S. Census Bureau, *Ninth Census of the United States, 1870*; U.S. Census Bureau, *Tenth Census of the United States, 1880*; U.S. Census Bureau, *Eleventh Census of the United States, 1890;* U.S. Census Bureau, *Twelfth Census of the United States, 1890.*

By 1900, William Conley had become a coal miner. James turned to doing odd jobs and working periodically as a laborer, and their younger brother Harvey became a junk dealer. Gipson had three more children and became a railroad hand in Grundy County, Tennessee.

The End of an Era

By the turn of the twentieth century, the eminent extinction of ginseng was one of the common topics around the country stores. It was "as scarce as hen's teeth," one observer noted.[93] Arthur Harding, a ginseng dealer who had traveled extensively around West Virginia and Kentucky in the 1890s, estimated that by 1908, the collection of wild ginseng was only ten percent of what it had been in the early 1890s.[94] Export totals reflected the growing scarcity. After averaging nearly 400,000 pounds per year from 1865 to 1889, exports fell to just 216,000 per year in the 1890s. Simultaneously, prices paid by exporters skyrocketed, jumping from $1.30/lb in 1880 to $2.00/lb in 1887 to $4.00/lb in 1899. Writers began to refer to the ginseng trade in the past tense, and mountaineers reflected nostalgically on the days when ginseng was plentiful. "It was a sad day for the people when the 'sang' grew scarce," wrote James Lane Allen in 1892. "A few years ago one of the counties [in Kentucky] was nearly depopulated in consequence of a great exodus into Arkansas, whence had come news that 'sang' was plentiful."[95] Some turned to farming, but many entered wage work in the railroads and the timber and coal industries. In 1897, the *Clinch Valley News* lamented the "passing of the sang digger," writing that "The click of the 'sang' diggers hoe is almost a thing of the past, except in a

[93] "In Highland County," *The Richmond Dispatch,* 16 October 1901.
[94] Arthur Robert Harding, *Ginseng and Other Medicinal Plants: A Book of Valuable Information for Growers as Well as Collectors of Medicinal Roots, Barks, Leaves, Etc* (A. R. Harding Publishing Company, 1908), 155.
[95] James Lane Allen, "Through the Cumberland Gap on Horseback," *The Blue-Grass Region of Kentucky and Other Kentucky Articles* (New York: Harper Brothers, 1892), 250.

few communities."[96] Even as early as 1888, West Virginia native Major J. C. Alderson, reporting on the "wheels of progress turning in the forests and mountains" for the *Wheeling Register,* noted with pleasure that the southeastern part of the state "used to be a great ginseng country, and a very large proportion of the population in years passed supported themselves off that root. Now, however, the ginseng is about exhausted, and the 'sang diggers have gone to logging."[97]

The loss of individual species of medicinal plants was felt in natural and human communities throughout the mountains. In addition to ginseng, other plants that were ecologically susceptible to overharvesting disappeared first from areas of heavy harvests. The delicate ladies slipper, for example, struggles to attract pollinators because it does not reward them with nectar. Consequently, only five percent of plants develop fruit, and those that do rely on wind to disperse thousands of tiny seeds that must find the right combination of microclimate, soil, and symbiotic fungus to germinate.[98] Ladies slipper was plentiful during Cowles's first two seasons, but after the war, ladies slipper nearly vanished from the books, although demand was still high for it. Harper regularly responded to inquiries into the plant with statements like: "we have not seen as much as 100 lbs of it this season. It is unusually scarce."[99] In 1903, Henry Kraemer, a botanist with the U.S. Department of Agriculture, could not find a specimen of the long-time medicinal called pinkroot (*spigelia Marylandica),* which led him to conclude that it was now "exceedingly rare" in its historic range.[100] Goldenseal (*Hydrastis Canadensis)* and Virginia snakeroot (*Aristolochia serpentaria)* had also retreated further into the

[96] "Passing of the Sang Digger," *Clinch Valley News,* 25 June 1897.
[97] "Wealth Galore: How the Process of Development is Going on in Remote Parts of the State," *Wheeling Register,* 13 May 1888.
[98] Spira, *Wildflowers & Plant Communities of the Southern Appalachian Mountains & Piedmont*, 357–58.
[99] Calvin J. Cowles, Letter to Tilden & Co., 25 January 1851, SHC; G.W.F. Harper, Letter to Benjamin Gates, 21 September 1870, Fold. 54, Bernhardt-Seagle Company Records, SHC.
[100] Henry Kraemer, "The Conservation and Cultivation of Medicinal Plants," *American Journal of Pharmacy* (December 1903).

woods. Kraemer blamed the industry and the harvesters, but he also pointed a finger at the "destruction of forests, by cutting and fires."[101] The editors of the *American Journal of Pharmacy* shared Kraemer's concern and issued a call for the widespread cultivation of medicinal plants and the preservation of American forests. "The time is not far distant," the editorial prophesied, "when we will be as dependent upon the agriculturist for timber and medicinal plants as we are today for many of the food products yielded by plants."[102]

The removal of certain herb species from the forest understory had limited and localized ecological effects, not all of which can be detailed in this chapter. For example, in early summer, Eastern box turtles favor the fruits of May apples as a food source, and May apples depend to a large extent on box turtles for their seed dispersal. Because the plant was one of the most popular commodities—harvesters regularly pulled out thousands of pounds of the root—box turtles may have suffered if other sources of food could not be obtained.[103] Likewise, the Pipevine Swallowtail Caterpillar feeds on the leaves of two other highly prized botanical commodities, wild ginger and Virginia snakeroot, because these plants contain toxins that help protect the caterpillar from predation.[104] Furthermore, heavy harvests may have influenced the nutrient cycling in the forests. According to the so-called "vernal dam hypothesis," first articulated by Robert Muller in 1978, the roots of woodland herbs play an important role in absorbing nutrients that would otherwise be lost to rain runoff and cycling them back into the ecosystem.[105] Thus, harvests that removed thousands of pounds of roots from the forest floor

[101] Ibid.
[102] "Editorial. The Cultivation of Medicinal Plants.," *American Journal of Pharmacy* (April 1900).
[103] Joanne Braun and Garnett R. Brooks, Jr., "Box Turtles (*Terrapene Carolina)* as Potential Agents for Seed Dispersal," *The American Midlands Naturalist,* 117, 2 (Apr., 1987), 312-318.
[104] Spira, *Wildflowers & Plant Communities of the Southern Appalachian Mountains & Piedmont*, 337.
[105] Dennis F. Whigham, "Ecology of Woodland Herbs in Temperate Deciduous Forests," *Annual Review of Ecology, Evolution, and Systematics* 35 (2004): 602–3.

had an impact, however subtle, on overall forest health. When compared to other extractive industries in the mountains, however, it was rather ecologically benign.

The Persistence of Root Digging and Herb Gathering

Despite the ecological and economic changes that took place across Appalachia around the turn of the twentieth century, root digging and herb gathering continued to form an important component of rural life. Ginseng was not entirely exterminated, and the strength of the botanical drug trade in the wake of World War I maintained markets for other roots and herbs through the 1930s. After reaching its peak from the 1870s through the early 1900s, however, the trade in medicinal plants began a gradual decline until the mid-twentieth century.

Even after companies like William M. Ritter Lumber Co. and Champion Fiber had deforested vast tracts of mountain land in the Watauga River valley, some residents still found it profitable and pleasurable to gather roots and herbs. The once-common root-digging expeditions occasionally still engaged families in parts of the region. In 1920, for example, one herb dealer in West Jefferson reported on a few of them. "Some of these families live in tents and move from place to place as the supplies of valuable herbs are exhausted. Choosing a good camping spot, where some herb or root is present in abundance, the tent is pitched and here it remains until the stuff, which will later be compounded in various medicines, is gathered and prepared for the dealer. Then a new location is sought."[106] This dealer, who conducted roughly $75,000 worth of business in roots and herbs per year, asserted that these gatherers "get back to nature, and they learn to love it… The gathering of crude drugs…is much more profitable than laboring for wages in these parts."[107]

[106] "Crude Drug Business Flourishes in this Section," *Lenoir News-Topic* (Lenoir, NC), 8 October 1920.
[107] Ibid.

Roots and herbs helped some mountain families get through the Great Depression. Oral histories from northwestern North Carolina reveal that participation in the trade was integral to the family budget. Council Main, who grew up in the Pottertown community in Watauga County in the 1930s, remembered that "there was always somebody who would buy roots and herbs."[108] Children used medicinal herbs, as well as galax, chestnuts, and other commons commodities, to purchase clothes, shoes, school supplies, candy, and, according to Bessie Greer, "whatever we wanted" at the nearest store.[109] Anne Mains Potter, another Watauga County native, depended heavily on the sale of roots and herbs in the 1930s and 40s for survival. "You had to dig yourself a sack of roots like ginseng to buy bread and stuff," she told an interviewer in 2000.

> We'd dig just anything that they bought. Any kind of black cohosh, burdock root. We traded with the roots. It's what I got my eating with. See, my husband worked, and it took more to keep food, so I had to get out and dig roots in the wintertime. There was a store down there in the fork of the road. If I had roots to sell them, we bought things. I'd walk down to the store to get something to eat.[110]

Thus, throughout the first half of the twentieth century, roots and herbs continued to provide a safety net for some mountain people, just as they had done in the nineteenth. It was one of their many strategies for maintaining a livelihood in the mountains, and many of them enjoyed it. Main remembers his root-digging days fondly. "I could make more money and easier digging roots and herbs than I could make in the cornfield," he declared, "and you could work in

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[108] Interview with Council Main, 2002, 2005, Patricia Beaver, Sandra Ballard, and Brittany Hicks, eds., *Voices from the Headwaters: Stories from Meat Camp, Tamarack (Pottertown) & Sutherland, North Carolina* (Boone, NC: The Center for Appalachian Studies, 2013), 198.

[109] Leland R. Cooper, *The Pond Mountain Chronicle: Self-Portrait of a Southern Appalachian Community*, Contributions to Southern Appalachian Studies 2 (Jefferson, N.C: McFarland & Company, 1998), 22; Leland R Cooper and Mary Lee Cooper, *The People of the New River: Oral Histories from the Ashe, Alleghany, and Watauga Counties of North Carolina* (Jefferson, N.C.: McFarland & Co., 2001); Zetta Barker Hamby, *Memoirs of Grassy Creek: Growing up in the Mountains on the Virginia-North Carolina Line* (Jefferson, NC: McFarland, 1998); Beaver, Ballard, and Hicks, *Voices from the Headwaters: Stories from Meat Camp, Tamarack (Pottertown) & Sutherland, North Carolina*.

[110] Interview with Anne Mains Potter, 11 September 2000, in Ibid, 284.

the woods. It was a lot cooler in hot weather. I learned all the roots and herbs." Main also relied on the commons for other resources, such as maple syrup, rabbits, galax, and chestnuts.[111] Root digging and herb gathering continued to blur the line between work and leisure, and many people chose to spend their spare time doing it. Growing up in Dog Flat Hollow in Yancey County, North Carolina, in the 1920s and 30s, Donald McCourry claimed that "Hunting sang is one of the only ways of making money in the mountains that is more fun than hard work. [A] sang digging excursion was something I enjoyed every minute of. I could have a good time roaming the woods because I was doing something that would bring in money."[112] Thus, just as they had done in the wake of the Civil War, mountain people fell back on the commons to make ends meet during the depths of the Great Depression.

In summary, the post-Civil-War decades in the southern Appalachians witnessed significant changes to the forest commons. The war delivered a significant blow to the agricultural economy, leading many with limited resources to fall back on the forest for subsistence. In parts of Appalachia, ginseng became something of a savior for rural people. In areas of low population density like Pocahontas County, some became wholly dependent on the root for years, relying on it to furnish them food, as well as other store-bought goods. Because it had grown so scarce, however, it took days and even weeks to obtain enough roots to make it financially worthwhile. Thus, ginseng digging became the domain of a small group of specialists in certain areas. In places like northwestern North Carolina, however, mountain people could find a much wider variety of marketable plants in the forest commons. As a result, harvesting roots and herbs was a much more widespread activity, comprising almost half of the barter business for some country stores. Some white mountain residents used them to resist the pull

[111] Ibid.
[112] Donald L. McCourry, *Us Poor Folks and the Things of Dog Flat Hollow* (Winston-Salem, N.C: J. F. Blair, 1975), 113.

into wage work. Women found unprecedented opportunity to engage with the market independent of men. The Cherokee used roots and herbs to maintain their forest-based lifestyle, and African Americans also utilized them to secure freedom and independence. Thus, the forest commons served as both a safety net and culturally preferred mode of production. Yet, the post-war root-and-herb boom did not come without social and ecological costs. As we shall see in the next chapter, these changing dynamics of root digging generated tensions within mountain communities and led to a shift in the political ecology.

CHAPTER 6

"Beasts in the Garden": Class, Conservation, and Ginseng in Appalachia

In the summer of 1908, a 21-year-old son of a tenant farmer named Millard Collins set out to dig ginseng in the forests of Wise County, Virginia. Married just three months earlier, he had recently found himself in some legal trouble, and he needed a quick source of cash to pay a fine. He found a patch of the plant growing on a forested hillside. Undeterred by the makeshift fence surrounding the plants, Collins waded stealthily into the patch. Tragically for him, his foot kicked a tripwire that was rigged to the trigger of a shotgun, which delivered a fatal discharge into his chest. The owner of the patch, Jones Wilson, discovered Collins's decomposing body eight days later and buried him in a nearby grave. A coroner's jury exonerated Wilson, ruling that "Collins came to his death as a result of his own acts."[1] Times had changed since the 1860s.

Collins was one of many casualties of the changing political ecology of ginseng in the late nineteenth and early twentieth centuries. In 1865, ginseng was a commons resource, available to anyone who could find it growing wild among the mountainside forests. By 1908, however, due to ecological, social, political, and economic changes, it had largely become a privatized commodity, protected as property of the landowner by a patchwork of state conservation laws. These laws were part of a widespread renegotiation of common rights that took place across much of the East in the late nineteenth and early twentieth century, and as

[1] "Ginseng Thief Killed," *The Tazewell Republican,* 6 August 1908; "Dead Man was Robber," *The Democratic Banner (Mt. Vernon, OH),* 29 June 1915.

was the case with other conservation initiatives, the motivations behind this renegotiation were complex. Some opponents of common rights were speculators concerned that the growing class of vagrant sang diggers threatened the timber on their property. Others were farmers, urban professionals, and other smallholders who had watched ginseng disappear from the surrounding forests and wanted to restrict access to the plant on their property, effectively removing it from the commons. This renegotiation created winners and losers. Privatization led to the establishment of a ginseng growing industry in southern Appalachia, which raised the incomes of those willing to engage it. Commons users, however, found it increasingly difficult to access the wild plants in the forests. Their landscapes of subsistence shrinking, many refused to acknowledge property rights to growing ginseng, which aggravated tensions within communities. As ginseng gardens proliferated across Appalachia, they became focal points in the decades-long struggle over common rights. The process of privatization was messy and uneven. Chinese tastes, agroecological challenges, and conflict over the commons ensured that the struggles over ginseng would continue throughout the twentieth century. However, by the second decade of the century, the dominant culture had changed in much of Appalachia. People like Millard Collins were now considered thieves.[2] Occasionally, as in Collins' case, the question of whether ginseng would be a private or commons commodity turned violent.

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[2] Examining the social history of conservation, historians such as Louis Warren, Karl Jacoby, Benjamin Johnson, and others have argued that the movement was a force of modernization that effectively worked to supersede layers of common rights. In their view, outsiders used the power of the state to impose a new resource-use regime on top of the local one. This movement effectively turned fish, game, and private lands into property of the state, which served to benefit the urban middle-class sportsmen and hunting clubs at the expense of local users.[2] The movement to conserve ginseng fits into this narrative but not neatly. Common rights to medicinal plants, as well as fish, game, livestock forage and other resources, were replaced with a patchwork of laws designed to rationalize the rural landscape and impose "order" on the countryside.[2] Some laws aimed at managing the commons, in part by establishing seasons and bag limits, while others sought to privatize resources. This renegotiation of common rights, however, played out differently in different local contexts. In the case of ginseng in southern Appalachia, the new regime was not imposed by outside middle-class antagonists. It was largely generated by the demands of rural landowners who, for various reasons, no longer wanted to acquiesce to common rights. See Karl Jacoby, *Crimes against Nature: Squatters, Poachers, Thieves, and the Hidden History of American*

Ginseng and the Tragedy of the Commons

On its surface, the rapid depletion of ginseng in the late nineteenth century might seem like a classic case of a tragedy of the commons. Conservation-minded observers often accused ginseng diggers of being "the principal agents in the extermination of the native supply" of the root.[3] In 1903, Maurice Kains, a horticulturist and writer, attacked them for abusing the resource. "They exercise no judgment whatever in collecting. They take even the tiniest roots whenever they see them…and the plants are thus given no chance to reproduce themselves. It is of little consequence to these shiftless people to be arrested and jailed according to the laws of the two Virginias and of Ontario. They take the matter coolly and live at the expense of the state until the end of their sentence, and go back to dig as before."[4] Another writer fumed in 1899 that sang diggers had succeeded in "maiming the goose that laid the golden egg through ignorance."[5] Thus, conservationists painted a picture of rural commons users as wholly unable to arrest the decline of ginseng because of their short-sightedness.

Yet, the actual story of the rapid decline of ginseng was much more complicated and requires a look at how the human-ginseng relationship unfolded across the latter half of the nineteenth century. Such a perspective reveals that ginseng did not disappear because of some inherent flaw in the workings of commons systems. Rather, it disappeared because of specific historical circumstances in the late nineteenth century. One of the great casualties of the Civil War in mountain communities was trust. According to the late Appalachian scholar Cratis D. Williams, "A great collective family had been split asunder," leaving mountaineers "socially and

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Conservation (Berkeley: University of California Press, 2001); Warren, *The Hunter's Game*; Benjamin H. Johnson, "Conservation, Subsistence, and Class at the Birth of Superior National Forest," *Environmental History* 4, no. 1 (January 1999): 80–99; Scott E. Giltner, *Hunting and Fishing in the New South: Black Labor and White Leisure after the Civil War*, The Johns Hopkins University Studies in Historical and Political Science, 126th ser., 2 (Baltimore, Md: Johns Hopkins University Press, 2008).

[3] Maurice G. Kains, *Ginseng: Its Cultivation, Harvesting, Marketing and Market Value, with a Short Account of Its History and Botany* (New York: Orange Judd Co, 1903), 13.

[4] Ibid.

[5] "Big Profits in Ginseng," *The Baltimore Sun*, 17 September 1899.

economically disorganized."[6] In his recent book, Bob Hutton paints a portrait of "Bloody Breathitt" County, Kentucky, as a community utterly ripped apart at the seams of internal sectionalism by the war, generating rounds of political violence that plagued the county for decades.[7] Mistrust of neighbors, of politicians, of businessmen was widespread in mountain communities. So, too, was mistrust of other forest users. As human populations were dislocated by the war and ginseng digging became the domain of full-time specialists, many of whom came from outside the region, any cultural proclivities that communities may have used to internally regulate the ginseng commons were overwhelmed by circumstances.

A well circulated story from the mountainous interior of (West) Virginia can help shine more light on how this loss of trust influenced the human-ginseng relationship. According to this story, in 1840, a Randolph County native named William H. Wilson was surveying the line between Randolph and Pocahontas Counties when he came across an expansive ginseng patch. When he returned to his home near Huttonsville, he told some people about the patch, but apparently no one could find it. For some two decades the patch sat unmolested until the outbreak of the Civil War. A Union scout named Thomas Woods, while ranging through the region in 1862, rediscovered it and told some men in Webster County about it. They raised a company of men and spent several days digging up the patch. According to this local legend, they harvested roughly 1200 pounds, from six to ten thousand plants, and sold them for $600, or some $16,000 in today's economy when adjusted for inflation. Locals remembered this as

[6] Cratis D. Williams, *The Southern Mountaineer in Fact and Fiction* (Ann Arbor: University Microfilms, Inc., 1966, PhD Dissertation), 77.
[7] Hutton, *Bloody Breathitt*. Another good discussion of the impacts of the war on a community level is Dunn, *Cades Cove*.

the "largest patch of ginseng ever discovered in the world," and it made its way into multiple county histories of the region around the turn of the twentieth century.[8]

The potential of exaggeration of storytellers notwithstanding, the story contains insights into the ginseng commons during the tumultuous atmosphere of the Civil War beyond the fact that a giant patch of ginseng was harvested. First, we must reckon with one significant puzzle. If the men who dug the patch, who were not from the area, could find it after a Union scout, another non-resident, reported it, then why could Wilson, a native Randolph Countian and a surveyor who was undoubtedly familiar with the terrain, not relocate it for twenty years? Furthermore, why could other residents in the area, many of whom traded ginseng with Butcher and hunted throughout the area, not find it?

Although it is impossible to know the truth about what happened to the patch, if we allow that Wilson and other residents were as capable of locating what was ostensibly the largest patch in the world, then there are at least two possible answers. First, he or other diggers may not have such a pressing financial need to necessitate spending days in the woods looking for it. As mentioned before, virtually no one in Butcher's records relied entirely on ginseng for their subsistence in the 1840s. They used it in combination with other forest and farm products. Wilson, moreover, owned a sizeable farm ($1,200 worth in real estate in 1850) and may not have felt the need to search for it. Second, and perhaps more likely, there is the possibility that he knew exactly where it was but did not dig it all at once. He may have dug only what he needed to help him pay his debts at the local store, stewarding the patch so that he could derive longer-term profit from it. Butcher's records do show that Wilson traded small amounts of ginseng throughout the 1840s, which may have come from this patch. There is also a third potential explanation. Perhaps the patch was known to the locals. Butcher's customers

[8] Hu Maxwell, *The History of Randolph County, West Virginia* (Morgantown, WV: Acme Publishing Co., 1898), 302; Sutton, *History of Braxton County and Central West Virginia*, 213.

lived throughout the area surveyed by Wilson, so it is possible that the patch was large enough to serve the long-term needs of several individuals, so long as they did not dig it all out at once.

Scholars such as Mary Hufford, Brent Bailey, and Eric Edwards have documented instances of cultural adaptations to declining ginseng in modern Appalachia, including something of a conservation ethic among ginseng harvesters, who see themselves as stewards of the forest.[9] Using ecological knowledge passed down through generations, they actively replant seeds and limit their harvests in order to ensure the proliferation of the species for future generations.[10] Ecological studies suggest that such practices could significantly improve the chances of continued population viability.[11] While it is difficult to ascertain how widespread such practices were in the mid-nineteenth century, as sources are all but nonexistent, it is fair to assume that they began during this time. One physician in Appalachian Ohio claimed that in the 1880s, he would "plant the seeds of ginseng in the woods as I would dig the roots, thinking that they would not grow outside their own environment or natural habitation…I just planted them and left them to 'work out their own salvation'…[A]fter a few years, I began to see the result of my work; I found little bunches of ginseng throughout the woods which convinced me that my labor had not been in vain."[12] This kind of stewardship may help explain why Wilson's ginseng patch lasted for two decades before it was dug out.

Indeed, there were reasons why the patch was finally dug out during the Civil War. The putative "largest ginseng patch in the world" fell victim to the breakdown in trust. The

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[9] Mary Hufford, "Reclaiming the Commons: Narratives of Progress, Preservation, and Ginseng," Howell, *Culture, Environment, and Conservation in the Appalachian South*, 100–120; Brent Bailey, "Social and Economic Impacts of Wild Harvested Products" (PhD Dissertation, West Virginia University, 1999).
[10] Eric Edwards, "Stewards of the Forest: An Analysis of Ginseng Harvesters and the Communal Boundaries That Define Their Identity in an Area of Environmental Degradation," (M.A. Thesis: Marshall University, 2011).
[11] McGraw et al., "Ecology and Conservation of Ginseng (Panax Quinquefolius) in a Changing World," 71–72.
[12] J.Q.A. Clowes, MD, "Ginseng Planting, Medial Properties and Experiences, Etc.," *Special Crops,* 5, 43 (March 1906), 44-45.

"company of men" who dug the record patch were likely Unionists like Woods who were under no compulsion to limit their harvests. Civil War loyalties in the area were extremely complicated and contentious, and partisan fighting was common throughout the first two years of the war. Pocahontas and Randolph Counties contained large segments of Confederate supporters. That a company of Union men, rather than Woods or any other individual for that matter, harvested the patch in an area that was notably pro-Confederate suggests that digging ginseng had become something of a partisan activity, carried out under a cloud of violence and mistrust. They had to form a company to dig it, and they had to dig it all at once, probably in order to avoid controversy with the locals. Such a harvest would have destroyed the patch forever and prevented it from becoming viable for at least a few decades. This locals knew well.

After the war, mistrust of other sang diggers continued with the arrival of outside hunters in forests once exclusively used by local communities. Most full-time diggers like Joseph Cline did not wait until fall to harvest the root. Indeed, they needed the money as soon as possible, and storekeepers obliged them. Ledgers from the postwar era reveal that storekeepers purchased roots, both green and dried, regularly throughout the growing season, from May through November.[13] In 1886, Morris Horkheimer, a ginseng dealer in Wheeling, West Virginia, who purchased ginseng from across the state, told one newspaper interviewer in 1886 that the poorest quality root came from the interior counties, including Braxton, Pocahontas, Webster, and Randolph counties, because "the diggers have not allowed it to mature." He continued: "Out in the far interior, you see, there are people who make a business of it every season, hunting for and digging 'seng, and they so work this soil that it becomes exhausted. That gotten here in this Panhandle is better because it is not sought after so eagerly,

[13] Of course, it is possible that some may have harvested in the fall, dried it, and waited until spring and summer to trade it, but the fact that virtually no one traded ginseng in the winter when they desperately needed income suggests that this was not the case. See Isaac McNeel Papers, West Virginia History Center, West Virginia University, Morgantown, West Virginia.

and therefore has an opportunity to grow to some size."[14] Thus, due to greater competition and the loss of trust, hunters no longer waited until fall to harvest. As one observer put it, "when a patch of the root is found the hunter loses no time in digging it. To leave it until fall would be to lose it, for undoubtedly some other hunter would find the patch and dig it."[15] Locals no longer had the capacity to manage their own commons.

Furthermore, overharvesting can only partially explain the disappearance of ginseng in the late nineteenth century. Habitat alteration due to livestock expansion and timber and coal extraction had far more devastating impact on medicinal herbs. The timber industry wrought the biggest changes. Historian Ronald Lewis estimates that in the 1880s, as much as two-thirds of West Virginia remained covered by old-growth hardwood forests, but over the subsequent four decades, virtually the entire state was deforested as railroads rendered timber extraction more efficient and cost-effective.[16] Large operations financed by northern capital and facilitated by railroads began clearing forests in eastern Kentucky and West Virginia in the late 1880s, reaching western North Carolina by the turn of the century. Throughout Appalachia, timber companies acquired vast tracts of forestland and employed mostly clearcutting practices to extract timber. By 1909, southern Appalachian forests were supplying upwards of 40 percent of the total hardwood cut in the U.S., a sum that contained an enormous ecological cost. [17] Clearcutting led to more devastating fires, increased erosion, deteriorating topsoil quality, and flooding, as the removal of trees hampered the ability of the forest to absorb excessive

[14] "'First of Plants': A Rich West Virginia Product About which Little is Known, The Strange Mystery which Surrounds the Uses to Which Ginseng is Put by its Almond-Eyed Consumers—'man root'," *The Wheeling Daily Intelligencer,* 8 February 1886.
[15] "Hunters after Ginseng," *Bourbon News* (Paris, Ky)*,* 19 November 1897.
[16] Lewis, *Transforming the Appalachian Countryside*, 3–5, 45–48.
[17] John Alexander Williams, *Appalachia: A History* (Chapel Hill: University of North Carolina Press, 2002), 250; Newfont, *Blue Ridge Commons*, 42–48.

rainwater.[18] In 1909, a U.S. Geological Survey employee sent to investigate the effects of industrial logging in the Watauga River valley, the area that had supplied Cowles with most of his roots, observed that the watershed was "torn to pieces."[19] The increase in edge habitats that resulted from timber operations and agricultural expansion led to larger deer populations, which had further deleterious effects on woodland herbs, as deer are known to browse heavily on numerous medicinal plants, including ginseng.[20] Although not all medicinals suffer from the effects of logging, many shade-dependent species such as ginseng, did. As one aging eastern Kentucky farmer put it in 1898, ginseng "disappeared with the forests."[21] Thus, habitat destruction, perhaps more so than overharvesting, should be blamed for the rapid decline of ginseng in the late nineteenth and early twentieth centuries.

Class and Conservation in Pocahontas County

One of the earliest attempts to use the state to reform the ginseng commons came from the residents of Pocahontas County, West Virginia. In 1870, a group of 257 "citizens of Pocahontas County" submitted a petition to the legislature calling for a law to prohibit people from other counties from harvesting ginseng in their county. Although the petition has not survived, the journal of the House of Delegates indicates that the petition was presented by James A. Price and Joseph Beard, two of the wealthiest farmers in Pocahontas, and the number of names on the petition was nearly equivalent to half of all farm households. Indeed, there seemed to be widespread support among the county's farmers for such a bill. These petitioners

[18] Davis, *Where There Are Mountains*, 169–72.
[19] Quoted in ibid., 168.
[20] Whigham, "Ecology of Woodland Herbs in Temperate Deciduous Forests"; Mary Ann Furedi and James B. McGraw, "White-Tailed Deer: Dispersers or Predators of American Ginseng Seeds?," *American Midland Naturalist* 152, no. 2 (October 2004): 268–76. Studies have shown that these ecological changes had long-term effects on herb populations. See Jennifer Fratterrigo, Monica Turner, and Scott Pearson, "Previous Land Use Alters Plant Allocation and Growth in Forest Herbs," *Journal of Ecology* 94 (2006): 548–57.
[21] Box 13, Fol. 9, Harrison Garman Papers, Special Collections, University of Kentucky Library, Lexington, KY.

were not necessarily in favor of ending common rights altogether. Rather, they hoped to limit access to the commons to members of their own communities. The legislature, however, was not supportive. The petition was referred to the Judiciary Committee, which reported that it would be "inexpedient to legislate for that purpose," and the issue was dropped.[22]

Unable to restrict open access, however, they pushed to curtail the right to dig ginseng altogether. Within months of taking office following the 1872 West Virginia legislative elections, a Pocahontas County merchant and landowner named William J. Woodell introduced a bill that aimed at ending the common right to gather medicinal herbs. Entitled "a bill prohibiting digging ginseng or other medical roots, or prospecting for the same on the land of another, without the consent of the owner," the bill required diggers to obtain permission from the landowner before digging. Woodell, a Democrat and one of the top ten landowning residents of Pocahontas County, laid out the reason why he introduced the bill in the preamble: "in some sections of the state, the citizens are greatly annoyed and their property damaged by evil disposed and idle persons congregating in certain localities, under the pretense of digging and prospecting for ginseng, and snake root, &c."[23] Categorizing a violation as a misdemeanor, it imposed a fine of between ten and fifty dollars for violators and held open the option of two months in the county jail. Under this law, no one could assume the right to harvest herbs wherever they found them growing.

"Woodell's Sang Bill," as House Bill 93 became known, elicited widespread discussion in Charleston. According to the *Wheeling Intelligencer,* it was one of the most debated bills of the

[22] *Journal of the House of Delegates of the State of West Virginia for the Session Commencing January 18, 1870* (Wheeling: John Frew, 1870), 70, 109.
[23] H.B. 93: "A Bill prohibiting persons digging ginseng or other medical roots, or prospecting for the same on the land of another, without the consent of the owner, and prescribing punishment thereof," *Acts of the Legislature of West Virginia at the Eleventh Session, 1872-73* (Charleston: Henry S. Walker, 1873).

session.[24] Derailing several attempts to indefinitely postpone the bill, Woodell kept it before the House of Delegates. According to one observer, his "whole soul and existence seems to hang on the fate of this bill," and he resorted to all manner of persuasion to secure its passage, including giving delegates liquor.[25] Woodell called sang diggers lawless and promoted the bill as a way of protecting communities and their property.[26] But the bill still faced stiff opposition from both Democrats and Republicans. Some felt the penalty of jail time was too harsh, while others felt it was not punitive enough. Apparently feeling that the preamble mischaracterized ginseng diggers, Republican Anthony Smith successfully moved to strike the words "evil disposed and idle" from the preamble, and he unsuccessfully attempted to amend to bill to apply only to enclosed lands. M.W. Davis sought an amendment that would have placed such cases of ginseng digging within the purview of trespass law, thus moving it from criminal into civil legal jurisdiction, but some legislators disagreed, arguing that ginseng required a firmer, more blanket criminal statute.[27] Democrat George S. Walker, of Jackson County, likened the bill to the efforts of the Republicans to disenfranchise ex-Confederate Democrats and keep the party from positions of power, calling it "a species of proscription not equaled in the darkest days of the Radical party." To placate critics, the bill was ultimately amended to apply to only three counties clustered in the state's southeastern corner—Pocahontas, Greenbrier, and Webster—and it contained a provision that enabled other county courts to enact the law on the receipt of a petition with just one hundred names on it.[28]

Outside of the legislature, the bill met with harsh criticism. The *Wheeling Intelligencer* took a strong stand against it. "Alpha" believed that the bill removed a critical social safety net

[24] [Henry], "Charleston," *Wheeling Intelligencer,* 28 November 1873.
[25] [Henry], "Charleston," *The Wheeling Daily Intelligencer,* 13 November 1873.
[26] [Icebound], "Charleston," *The Wheeling Daily Intelligencer,* 8 March 1878.
[27] *Journal of the House of Delegates of the State of West Virginia for the Tenth Session, Commencing January 16, 1872* (Charleston: Henry S. Walker, 1872), 128-130.
[28] [Henry], "Charleston," *The Wheeling Daily Intelligencer,* 28 November 1873.

from below the state's poorest inhabitants. "What [does it matter] if by digging up a few roots that would otherwise rot in the ground, he can make a few dollars for the support of himself and family!" he wrote. "Oh charity! Veil your face in very shame…I suppose the Legislature will next waste its valuable time in getting up a bill to prohibit persons from picking blackberries, &c."[29] Because most of the ginseng dug in the mountainous eastern and southern sections of the state came from land owned by speculators and absentees, many West Virginians saw the bill as class-based oppression, believing it would be a "step towards enslaving the industrious poor people and placing them in the power of the wealthier class of landowners."[30] One observer stated incredulously, "John Smith lives in New York and owns 10,000 acres of land in Wyoming County. Under the ginseng bill Davy Jones cannot go upon his lands and dig the roots of 'sang,' without his permission…God created all men free, and He intended the uncultivated hills and hollows for their heritage."[31] Tellingly, despite the provision that any county court could order the law in force, no other county ever did so. "You may be sure that it will never be ordered by any county court," one observer accurately predicted. "There are people in [Mercer, McDowell, Wyoming, Boone, Cabell, Wayne, and Kanawha counties] who make their living by digging ginseng, and they are of such a class and character as have but few moral restrictions upon them, and hence would feel no compunction of conscience in suspending a man to a leaning tree until he was three times dead, if he in any way aided or abetted the abridgement of their rights and liberties."[32]

One of the most outspoken proponents of the Woodell Sang Bill in the state senate was Gideon D. Camden. Never afraid to mix his business goals with his political interests, Camden was one of a group of influential antebellum public officials from northern West Virginia,

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[29] [Alpha], "Charleston Letter," *Wheeling Daily Intelligencer,* 19 February 1873.
[30] [Tomahawk], "Charleston," *Wheeling Daily Intelligencer,* 11 November 1873.
[31] Ibid.
[32] *The Wheeling Daily Intelligencer,* 9 December 1873.

including Judge John J. Jackson, Peter Van Winkle, Judge William J. Jackson, and Jonathan Bennett, who speculated in land and invested in railroads and natural resource extraction. Following the war, as part of a bi-partisan state elite that also included his nephew and future U.S. Senator Johnson Newland Camden, he courted northern capital to open up the West Virginia interior to development. In November of 1873, Camden gave a spirited speech in favor of the Woodell Sang Bill in which he, according to one newspaper account, "laid himself out on it and covered himself all over with glory."[33] Although the text of Camden's speech was not recorded, it had the desired effect, convincing a divided senate to pass it. In less than a week, the senate narrowly passed the bill, 10-8, along mostly party lines. Four Democrats joined all four Republicans to vote against it. In December of 1873, it passed both houses by a vote of 46 to 20 and was signed into law by Governor John Jacob, becoming the nation's first law to end the common right to harvest medicinal plants. Among those who voted for the bill were the delegates representing the three counties to which the law applied: Pocahontas, Greenbrier, and Webster counties.[34]

The sang diggers of southeastern West Virginia reacted to the new law with indignation, viewing it as an assault on their rights. The following August, a group of representatives from Pocahontas, Webster, and Braxton counties met in Webster for a "convention" and drafted a resolution, written by a schoolteacher, condemning what they saw as an enclosure movement. In one of the most remarkable defenses of common rights from the era, it said, in whole:

> Whereas, the cows can roam the forests and eat grass on the common; the sheep can feed on the mountain sides by a natural and indefensible right, and
> Whereas, We, human beings, created in the image of our Creator, have been placed below the level of the cow and the sheep, the only brute put on a level with us being the hog, by the Democratic Legislature of West Virginia, depriving us of our natural right to dig ginseng; therefore
> Resolved, That the said Legislature was made up mostly of asses; and further

[33] "Charleston," *Wheeling Daily Intelligencer,* 28 November 1873.
[34] *Journal of the House of Delegates of the State of West Virginia,* 192.

> Resolved, That although we are Democrats, we will never vote another Democratic ticket until the Sang Law is repealed.[35]

The fate of these resolutions is unclear from the historical record, but they suggest that the communities of Pocahontas and surrounding counties were deeply divided over the fate of the commons. Clearly, some landowners wanted to end the practice of digging medicinal herbs on private property, while others just as vehemently defended their rights to do so.

The sources consulted for this dissertation, which include court records, correspondence, journals and scores of digitized newspapers, suggest that violent protests against ginseng enclosure was rare, if not altogether unheard of. People protested these laws primarily by disregarding them. Sources are somewhat unclear about just how effective enforcement efforts were, but it is unlikely that the laws were enforced with any vigor. Local governments lacked the personnel to enforce it. Game wardens were not yet a fixture in the countryside, so it was up to individual landowners to catch lawbreakers. Court records from Greenbrier County do not indicate that anyone was brought up on charges associated with the law over the subsequent decade. At least one observer expressed skepticism that it could be effective in protecting medicinal plants, as "it is so easy for roamers in the woods to gather ginseng and other roots without detection."[36] Nevertheless, the passage of the law indicated that landowners wanted to renegotiate this common right.

Conservation-minded men would later claim that West Virginia's law "provided for the future" by protecting the species from destruction, but nothing in the bill or discussions surrounding it suggest that concerns about resource scarcity was even a peripheral issue, not to

[35] *The Wheeling Daily Intelligencer,* 19 September 1874.
[36] Harrison Garman, *Ginseng, Its Nature and Culture*, Kentucky Agricultural Experiment Station Bulletin 78 (Lexington, Ky: Agricultural Experiment Station of the State College of Kentucky, 1898), 128.

mention the primary reason for it.[37] The peak of the post-Civil-War ginseng boom had yet to occur, and virtually no one in the area publicly expressed concerns about the resource before then. Woodell and his allies were concerned, first and foremost, with class interests. To them, sang diggers posed a threat to "property," and by property they meant primarily timber. The timber boom would not occur in the mountainous southern and eastern sections of the state, including Pocahontas, Webster, and Greenbrier counties, until the 1890s, but in the late 1860s and 1870s, local and extralocal elites were busy speculating in land in anticipation of the arrival of railroad and timber companies.[38] The oaks, hickories, spruce, pines, and other trees deep in the inaccessible reaches of the mountains were transformed into commodities by the promise of rail linkages to the mass markets of eastern cities. Ginseng, and the commons culture it perpetuated, posed a threat to the value of these commodities.

Many landowners and speculators perceived, perhaps accurately, that those who dug ginseng were also more likely to use their trees for firewood, building purposes, medicinal barks, tanbark, honey, maple syrup, or any other number of uses, and that they were more likely to set the woods on fire to create a better habitat in which to range stock and hunt game, a practice that extended deep into the pre-Columbian past.[39] Early in the 1872 West Virginia legislative session, ginseng-law proponent Gideon Camden introduced an unsuccessful fence bill that would have required owners of livestock to fence in their animals rather than letting them roam at large in the forests, a common practice across the upland South that many land speculators wanted to end. In 1870, Camden owned $100,000 in real estate, including timber lands across the state, and by the time of his death in 1891, one newspaper could claim that he was "the

[37] Ibid., 127.
[38] Rasmussen, *Absentee Landowning and Exploitation in West Virginia, 1760-1920*, 70–89.
[39] Reporting on three devastating wildfires tearing through the timber in western North Carolina, one newspaper, for example, blamed the "root diggers who want the leaves out of their way so the medicinal herbs may have a chance to grow." *The Lenoir Topic,* 17 April 1889.

largest landholder in West Virginia."[40] Speculators realized that ginseng was the financial base for this commons-dependent lifestyle, and they wanted to undercut it for the sake of their timber.

Ginseng, however, was far from the only resource targeted by state laws during this era. From the late 1860s through the 1880s, West Virginia passed a slew of game and fish laws that further undermined subsistence practices. The legislature, for example, created open seasons for many fish and game species (1867, 1868, 1870, 1882, 1887, 1891, 1897), prohibited the use of drag nets and fish traps (1867), prohibited the use of ferrets to catch and kill rabbits (1875), and forbade hunters from running deer with dogs in Webster County (1868). In 1875, the legislature required all hunters to purchase state-issued hunting licenses and created the position of game warden to enforce game laws.[41] Perhaps the most consequential piece of legislation aimed at common rights was an 1882 law that empowered local governments to prohibit hunting on their unenclosed lands provided that they could obtain the signatures of the ridiculously low number of ten freeholders.[42] Thus, within two decades of the end of the Civil War, West Virginia instituted a wave of conservation laws that sought to change the way people had traditionally used resources. Not solely about timber, the motivations behind these laws were a complex mixture of concerns regarding class, game species, and commodity production.

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[40] Glenn Massay, "The Lost Years: Gideon Draper Camden and the Confederacy," *West Virginia History,* 25, 3 (April 1964), 194; For more on Camden, see John Edmund Stealey III, "Gideon Draper Camden: A Whig of Western Virginia," *West Virginia History,* 26, 1 (October 1964), 13-30; Jacob C. Baas, Jr., "John Jay Jackson, Jr.: Business, Legal, and Political Activities, 1847-1859," *West Virginia History,* 50 (1991), 63-78.

[41] For a good discussion of this wave of fish and game laws, see Lewis, *Transforming the Appalachian Countryside*, 278–83.

[42] See Chapter 62 of *The Code of West Virginia, 1906, Containing the Declaration of Independence; the Constitution of the United States and Laws Thereof Concerning Naturalization and the Election of United States Senators; the Constitution of the State; The Code, as Amended by Legislation to and Including the Year 1906 and Notes to All Prior Laws and Applicable Decisions* (St. Paul, MN: West Publishing Co., 1906), 1122-1142.

Nevertheless, they had similar effects on local people. They all served to chip away at customary use-rights in the forest.[43]

With the passage of this patchwork of laws, some large landowners in interior West Virginia effectively became managers of commons areas, controlling who could hunt, fish, and dig ginseng on their property. L. D. Fowler, a resident of Durbin in Pocahontas County, was a purchasing agent for the Wheeling-based Pocahontas Tanning Company from around 1900 to 1920. Among his jobs was managing the rather large volume of written requests for permission to hunt, fish, and dig ginseng on company lands. His papers at Marshall University are filled with such requests, notes from local residents trying to persuade him to grant them these use rights. Fowler was generally liberal with his permissions, but locals knew what he wanted to hear. "We are not fish hogs, nor woods burners," one wrote, "but just out for a little recreation and catch a few trout at the same time."[44] Another informed Fowler that "neither of us are habitual hunters."[45] Requestors frequently sought to reassure him that they were not the kind of people who depended on the forest for survival. They often informed him that they were residents of Pocahontas County. Some were adjacent landowners who promised to grant him reciprocal rights on their property. Fowler created a form template that essentially became a license to

[43] Lewis argues that a legal revolution accompanied the arrival of outside capital that sought to insulate companies from litigation over land-use. He detects a change in court decisions beginning in the 1880s that transformed property liability and nuisance law to favor industrial uses of land,. Throughout much of the nineteenth century, Virginia and West Virginia high courts upheld a so-called "static" theory of property rights, in which property was seen as a "natural right" that should not be infringed upon by other property owners. This was used largely to defend agricultural interests against encroachments by industrial development. By the 1890s, however, the courts adopted a more dynamic theory of property that recognized industrial uses as legitimate economic uses and its side-effects (i.e. pollution, water diversions, etc.) as sometimes necessary externalities. Thus, the legal revolution involved a weakening of property rights to ease the transition toward an industrial future. The ginseng bill, however, addressed part of the legal culture that Lewis and others have overlooked. Part of this legal revolution, as the Woodell Sang Bill illustrates, was actually the strengthening of property rights to curtail common rights. See Ronald L. Lewis, *Transforming the Appalachian Countryside: Railroads, Deforestation, and Social Change in West Virginia, 1880-1920* (Chapel Hill: University of North Carolina Press, 1998), 7–9, 52–55.
[44] Anonymous [unsigned] to L. D. Fowler, 15 March 1910, L.D. Fowler Collection, Special Collections Department, James E. Morrow Library, Marshall University, Huntington, WV [hereafter LDFC].
[45] Ed Ambrose to L.D. Fowler, 8 November 1909, LDFC.

use the property of Pocahontas Tanning Company. It said, in part, "this permission is granted with the distinct understanding that no timber or bark is to be destroyed nor any fires built except for necessary cooking or camping purposes."[46]

Other landowners were not so generous. Around 1910, Howard K. Sutherland, a state legislator and large landowner from neighboring Randolph County, employed Ira Shockey to keep an eye on his standing timber. In their correspondence, the two men complained about sang diggers and "fish hogs" coming onto Sutherland's property. The two even discussed the feasibility of passing a ginseng law that would apply to the entire state, as Randolph County was not one of the counties to which the current ginseng law applied.[47] These cases demonstrate that the state laws requiring commons users to get landowners' permission gave the landowners more power to effectively monitor the types of people who used the forests. With these new powers, landowners further restricted landscapes of subsistence.

Grassroots Conservation and the Privatization of Ginseng

Large landowners and speculators, motivated by class concerns, were unmistakably behind the push for West Virginia's first ginseng law. However, as ginseng grew increasingly scarce throughout the 1880s and 1890s, many mountain farmers and small landowners began to rethink their own commitment to the ginseng commons. Thus, the effort to privatize ginseng was not solely driven by wealthy elites. Indeed, common people were genuinely concerned about the viability of the resource, and while some responded by more conscientiously tending the commons, others began to assert their private property rights to the resource.

[46] L.D. Fowler to Whom it May Concern, 27 October 1909, LDFC.
[47] Ira Shockey to Howard K. Sutherland, 13 February 1911, Box 9, Howard K. Sutherland Papers, West Virginia State Archives, Charleston, WV.

Perhaps the best sources with which to assess local attitudes toward ginseng is a set of nearly 200 questionnaires collected in 1898 by Harrison Garman, a botanist and entomologist in charge of the Kentucky Agricultural Experiment Station in Lexington. Wanting more information about the status of the plant in the state, he asked people in communities throughout Kentucky about the relative abundance of ginseng and whether or not any efforts had been made to cultivate it. Of a sample of twenty respondents who can be identified in the census, the majority were middle-age, literate, white, male farmers of middling status. The group, thus, does not adequately represent the views of non-white farmers or of women or of the poorest, illiterate laborers and farm hands, but neither do they represent the views of economic and political elites. They were somewhat typical small landowners. The responses to Garman's questionnaires are somewhat anecdotal and based on individual perceptions, but they shed important light on how smallholding white male farmers viewed the status of ginseng populations and humans' treatment of them.

Many of Garman's respondents evinced a thorough and detailed ecological knowledge of ginseng's growing habits that could have only come from years of observation and experimentation. One "old man" relayed his experience with growing that read like a botanist's notes. Find some limestone rocks on the north side of a hill with good shade and few weeds and no grass, he told Garman, "as that is the home of sang." Plant seeds near the rocks in September without plowing, and in twelve months, the plants will come up.[48] Elisha Bird developed a scale of ginseng health based on the type of trees growing on the land. He noted that ginseng grew largest and thickest in "sugartree leand," or among the Sugar Maples. The

[48] A. M. Weedman to Harrison Garman, 6 November 1898, Box 13, Harrison Garman Papers, University of Kentucky, Lexington [hereafter cited as HGP].

roots were a little smaller on beech lands, and they were the smallest on oak land.[49] Others claimed it grew best on sandstone rocks, among butternut trees, and other niches.

While several respondents included only one-word answers, many took the opportunity to elaborate on human-ginseng relationships, and collectively, the narrative they created could have easily come from the pages of a progressive conservationist manifesto. It was a narrative of tragedy. Of the more than two hundred responses, only three claimed ginseng was relatively common in their county. The rest ranged from absent to "extremely scarce" to "not very abundant." Within their lifetimes, ginseng had virtually disappeared from their counties. "Thirty years ago, our county was full of ginseng but it is all gone now," one Bracken County farmer wrote. "The little seng hoes that were used by the hunters are rusty and of no use now."[50] In Powell County, it "was very plentiful during and after Civil War," but no longer.[51] Some blamed sang diggers for overharvesting. "Dug out" was a common refrain. "It will be exterminated if people can't quit digging it before berries is ripe," one declared.[52] Another admitted that "it is dug hear from thime its as high as your finger in spring on till fall."[53] Echoing a charge familiar against West Virginians, one blamed the destruction on the "men in our county [who] does nothing else in the summer but dig roots."[54] However, several respondents blamed deforestation. "Disappeared with the forests," one aging farmer recalled.[55] All seemed to agree that the plant now grew only "in the wildest forests," and many associated it with mountains.[56]

At least a half dozen or so took the liberty to tell Garman that they believed laws should be passed protecting ginseng, as Kentucky had not yet followed West Virginia's lead by 1898.

[49] Elisha Bird to Harrison Garman, 31 October 1898, Fol. 5, Box. 13, HGP.
[50] W.H.R. Markley to Harrison Garman, 25 October 1898, HGP.
[51] H.W. Bens to Harrison Garman, 14 October 1898, HGP.
[52] H. T. Bigley to Harrison Garman, 27 October 1898, HGP.
[53] John Kring to Harrison Garman, n.d., HGP.
[54] S.F. Barrall to Harrison Garman, 22 October 1898, HGP.
[55] Charles Fagan to Harrison Garman, 24 October 1898, HGP.
[56] W.H. Cothringham to Harrison Garman, 15 October 1898, HGP; P.F. Adams to Harrison Garman, 14 October 1898, HGP.

One farmer from the mountainous Pike County on the border with West Virginia even went so far as to assert that the plant "should be protected to extent of owners' own premises and even there till the berries are ripe first of October."[57] Such testimonies demonstrate that the story of ginseng conservation was not solely one of extralocal state elites imposing land-use regimes on an unwitting local public. These men understood what was happening to ginseng. It was a tragedy that unfolded in real time in front of their eyes.

According to the respondents, some people had begun to adjust to the plant's disappearance by asserting a level of individual ownership over the plants on their property. Virtually no one admitted to knowing anyone who "cultivated" it, but occasionally someone would let on that something was going on. One person told Garman that "it is not cultivated at all," but in the next sentence admitted that "tha is a cupple of men here that has a bed of gin sang. They have woodland and it is in it."[58] Trimbling County farmer Elisha Bird said he came across a few plants while clearing a hillside, raked away some of the undergrowth around it, told his boys not to dig it, and left it alone for three years to mature.[59] Pulaski County farmer Essex Spurrier decided against clearing a forested hillside on his property, pressed a few ginseng seeds into the forest floor where he'd found other ginseng growing, and placed brush around it to keep the livestock off. [60] Interestingly, these men did not view what they were doing as cultivating. One respondent specifically objected to the use of the term, explaining that "cultivation means he hoes, plows, or something of the kind. My experience is that to cultivate it is simply to make the conditions of the soil something like it is where it grows in wild state."[61] For many, this meant simply taking ownership of a particular patch of ginseng in the woods and

[57] W.H.C. Johnson to Harrison Garman, 2 November 1898, HGP.
[58] [Letter fragment], 2 November 1898, Fol. 5, Box. 13, HGP.
[59] Elisha Bird to Harrison Garman, 31 October 1898, Fol. 5, Box. 13, HGP.
[60] Essex Spurrier to Harrison Garman, 7 November 1898, Fol. 5, Box 13, HGP.
[61] S. B. Dishman to Harrison Garman, 16 December 1898, Fol. 5, Box 13, HGP.

protecting it. It could mean transplanting roots from what they considered commons and moving them to a hillside near their own farm, manipulating the forest just enough to make it conducive to growth. Indeed, they were not exactly cultivating the plant, but they were privatizing it.

The central challenge to such a renegotiation, however, was also evident in the responses. Too many people were unwilling to abandon the idea that ginseng was common property. Elisha Bird's ginseng patch was dug up before he had a chance to harvest it. Another claimed to have had his patch raided two separate times after which he abandoned his effort. John M. Brooks, a farmer from mountainous Bell County, reported that "Some years ago an effort was made to grow it by some enterprising citizens, but some equally enterprising persons gathered it for them 'atween the days,' and so the effort was abandoned. I have been trying to get others to try it, but the difficulty of preventing the depradations of the professional or habitual 'sanger' has hindered."[62] In summary, Garman's questionnaires suggest something complicated was happening to the ginseng commons. Respondents were all aware that ginseng was disappearing, and many had started to adapt to its disappearance by asserting a level of private ownership over the plants growing on their property, but they were operating in a landscape that still privileged common rights. If they wanted to protect their sang, they would have to physically wrest it from the commons.

Across southern Appalachia, the renegotiation of the ginseng commons continued to face challenges from commoners. John Nuttall, who grew up in late-nineteenth-century Fayette County, West Virginia downstream on the Greenbrier River from Pocahontas County, remembered that farmers "conserved the sang on their own patent as money in the bank and

[62] J.M. Brooks to Harrison Garman, 1 November 1898, in Garman, *Ginseng, Its Nature and Culture*, 132–33.

did their sanging on some investors' patent."[63] Nuttall recalled an old farmer named Anderson Amick who "had some land unsuitable for farming but he had found some sang on it and thereafter whenever he found any sang in the woods, he dug it up carefully and transplanted it opposite his house to make that bit of land his savings bank that paid interest by way of the sang growing a little larger every year."[64] In the 1870s, a family of sang diggers named Roe came to Fayette County to dig ginseng. Working from bases in abandoned cabins or under cliffs, they ventured up and down the hollows and valleys along the Meadow and Gauley Rivers, digging every plant they encountered, occasionally stealing from corn cribs and killing free-ranging livestock. The Roes were social outcasts who did not interact much with the valley farmers. When Nuttall saw one, "I would wave a greeting but he would turn on his heel, knowing that he had no friend in Fayette."[65] At some point, the Roe family discovered Anderson Amick's patch and made off with $1000 worth of ginseng while Amick was away from his home.[66]

This story seems to have played out thousands of times across Appalachia during these pivotal decades, but ginseng was not the only commons resource over which mountain people squabbled. For example, in the early 1870s, a Yancey County man named James Bailey attempted to start what was considered the first game preserve in western North Carolina. He started with two fawns and by 1878, his deer herd numbered over a hundred, and he constructed a wooden fence around his 50-acre preserve, but this assertion of property rights over what had been treated as commons infuriated local hunters. As Muriel Sheppard later recounted, they "flatly refused to believe that there was such a thing as the Posting Law," and they "ignored the Park boundaries, came over the fence, ran the deer with dogs, and killed them." They poisoned the Bailey's dogs, damaged their crops, tore down the fence, and

[63] Nuttall, *Trees Above with Coal Below*, 18.
[64] Ibid.
[65] Ibid., 19.
[66] Ibid.

threatened to burn their buildings. In the face of these repeated reprisals, the Baileys refused to back down, continued to assert the sanctity of their property, and prosecuted the trespassers when they could.[67]

A similar confrontation occurred on top of Roan Mountain, Tennessee, in the 1880s. In 1885, Chattanooga entrepreneur and Union veteran John T. Wilder purchased several thousand acres on top of the mountain and opened Cloudland Hotel as a tourist destination. He immediately set about fencing off the mountain top, but his fences were repeatedly burned by mountaineers who had used the treeless expanses on the mountain as a pasture for generations. According to University of Chicago economics professor Edward Bemis, who visited the hotel in 1892, "warning was finally given him by the mountaineers, who regard pasturage as common lands, that if he tried to inclose again they would burn his fine hotel. Victory remained with the upholders of primeval communal privileges."[68] Wilder must have accepted this ultimatum, for when Margaret Morley visited the mountain around 1910, she noted the "wide reaches of pasture land where flocks and herds are grazing."[69] Thus, the controversies over ginseng were not unique to that resource. Indeed, in the late nineteenth century, common rights to many resources faced renegotiation.

The continuing influence of the commons custom forestalled any serious attempts at cultivation. W.W. Profitt, a ginseng dealer in Yancey County, told the *Asheville Citizen* in 1887 that "it will not thrive artificially cultivated; but if protected in its natural locality, it will become abundant. But sang gardens, like cattle ranges, are common property, and are greedily pounced upon by searchers without regard to rights of ownership."[70] The next challenge for ginseng

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[67] Muriel Earley Sheppard, *Cabins in the Laurel* (Chapel Hill: University of North Carolina Press, 1991), 78–80.
[68] E. W. Bemis, "In the Tennessee Mountains," *Christian Union,* September 10, 1892.
[69] Margaret W. Morley, *The Carolina Mountains* (Boston and New York: Houghton Mifflin Co., 1913), 335.
[70] "Ginseng," *Asheville Citizen,* 27 October 1887.

stewards, then, was to more forcefully remove the plant from the commons. Growing ginseng in the forest under natural shade was (and is) the easiest and cheapest method, and it was virtually the only known method until the 1890s, but because those patches tended to be raided by commons users, growers increasingly realized that in order to obtain the greatest profit, they would need to locate their gardens nearer their homes where they could be better monitored and protected. "The average 'sang' digger has very little conscience, and questions not whether the roots are cultivated and rightfully belong to another," Maurice Kains told potential growers. "Therefore, unless the grower can place his beds beyond the sight and reach of the professional hunter of this root, he had better not attempt ginseng cultivation."[71] Doing this, however, was not easy. It required a nearly total reconfiguration of the agrocecology of ginseng, negotiating fickle Chinese markets, and convincing state legislatures to pass laws strengthening property protections for their gardens.

The Rise of Artificial Cultivation

Artificial cultivation began to attract considerable attention in the 1890s due largely to the efforts of two men, George Stanton of Summit Station, New York, and John Wilson Sears of Somerset, Kentucky. According to his own account, Sears was a farmer and ginseng dealer in the foothills community of Pulaski County. He watched with concern as the "expert 'sang digger'" dug out the plants from around his community and the "hillsides and valleys were…cleared up."[72] Sensing the demand would soon far outpace supply, he spent about $200 in 1891 on rootstock and seeds and started a small garden in the woods near his home. According to one newspaper reporter who interviewed him, Sears was "ridiculed by his friends

[71] Kains, *Ginseng: Its Cultivation, Harvesting, Marketing and Market Value, with a Short Account of Its History and Botany*, 31.
[72] J.W. Sears, *The Ginseng Culturist Guide: From Seed to Market, Twenty Years' Practical Experience*, 2nd edition revised (Somerset, KY: J.W. Sears, 1912), 9.

and denominated a 'crank' by his acquaintances," but he persisted in his experiments, and within a few years, he was making nearly a thousand dollars a year selling his cultivated root.[73] For the first several years, Sears was a firm believer in replicating "nature's way of growing."[74] They key variables, he insisted, were soil and shade. His three-acre garden, enclosed by a wooden fence, was situated on a gently sloping, north-facing cove with Elm, Maple, and Sycamore growing on the banks of a small stream among outcroppings of limestone. He kept the bed free of weeds and trimmed the tree branches on all the trees up to about 10 feet.

Stanton began experiments with growing ginseng in the forest in 1887, but he quickly learned that ginseng would grow under an artificial lath screen. Within six years, after a succession of fits and starts, he had established 32 beds, each one three by sixteen feet. Each bed could produce roughly 350 roots, weighing some 40 pounds.[75] By the late 1890s, Stanton's ginseng "plantation" was reported to be the largest in the nation. In 1902, he helped create the New York State Ginseng Growers Association and within ten years, the group boasted a membership of over one hundred growers.[76]

Stanton and Sears spread the news of their successes to agricultural journals, newspapers, and any other periodical that would publish their stories. In 1894, the magazine *American Gardening* ran a story about the two men, and the article was reprinted in the *Journal of American Pharmacy*.[77] In an 1894 article for *The Pharmaceutical Era,* Stanton told readers that the key to early success is "forest culture on an extensive scale, proper location, thorough preparation of ground, liberal fertilizing, cottage to command view of plantation, guard, then

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[73] "Some Industries," *The Somerset* (Ky) *Semi-Weekly Journal,* 8 January 1904; "American Ginseng Culture," *The Somerset* (Ky) *Journal,* 19 October 1900. Both of these clippings can be found in Fold. 8, Box 13, Harrison Garman Papers, University of Kentucky, Lexington.
[74] J.W. Sears to Harrison Garman, 21 November 1906, HGP.
[75] George Stanton, "Ginseng," *Pharmaceutical Era,* 11, 6 (March 1894), 254-255.
[76] *Documents of the Assembly of the State of New York, One Hundred and Thirty-Fifth Session,* Vol. 6, No. 20, part 2 (Albany: Argus Co., 1912), 842.
[77] "The Cultivation of Ginseng," *American Journal of Pharmacy* (August 1894), 399.

push for all it is worth; there is money in it."[78] Sears published his own, *The Ginseng Culturists' Guide,* in 1902. He told potential growers that they could clear $14,000 on one acre of land.[79] "One acre in ginseng will bring in as much money as a large farm cultivated to other crops, such as corn, wheat, oats, etc," he told readers of a pamphlet he published to sell seeds and stock. "The cultivation is simple and easy when you once know the nature of the plant."[80] In 1901, a grower from Skaneateles, New York, Charles M. Goodspeed founded the magazine *Special Crops* as a clearinghouse of information by and for growers, eventually embracing other specialty crops like goldenseal. Within a decade, literally dozens of pamphlets written by growers were circulating throughout the country, offering sure-fire ways of getting rich with only an acre or two of land.[81] Optimism ran high. "The ginseng craze has spread over the country from ocean to ocean until the situation…has become serious," one newspaper reported.[82] Indeed, it had. By the first decade of the twentieth century, the most important centers of production clustered in western New York; Pulaski County, Kentucky; Marathon County, Wisconsin; and southern Missouri.[83] Most of the major growers made money by selling both dried ginseng to China and seeds and nursery stock to would-be growers. Both the publicity and the seeds and stock

[78] Ibid.
[79] Ibid.
[80] Sears, *The Ginseng Culturist Guide,* 8-9.
[81] For a sampling of these pamphlets, see Carlos B. Paseador, *The Crop that's Worth Its Weight in Sterling Silver* (Joplin, MO: The Chinese-American Ginseng Co., 1901); M.G. Harrison, *American Ginseng: Its History and Culture* (Centerville, MO: M.G. Harrison, 1897); Arthur R. Harding, *Ginseng and Other Medicinal Plants: A Book of Valuable Information for Growers as Well as Collectors of Medicinal Roots, Barks, Leaves, Etc.* (Columbus: A.R. Harding Publishing Co., 1908); C. M. Root, *What is Ginseng? An Account of the History and Cultivation of Ginseng* (Omaha: C.M. Root, 1905).
[82] "Ginseng Craze is Spreading," *Lawrence Daily World* (Lawrence, KS), 6 July 1904.
[83] In addition to Sears and Stanton, well-known growers include M.G. Harrison of Redford, Missouri; Harlan P. Kelsey of Boston; A.E. Leavitt of Houston, Missouri; Emmanuel Lewis, Hemlock Wisconsin; H.S. Seymour of Richland Center, Wisconsin; W.G. Palmer, Boydtown, Wisconsin; G.F. Millard, Houston, Missouri; W.A. Bates, Cuba, New York.

generated by these nurseries fueled the rapid growth of gardens across the northern and Midwestern United States, as well as throughout southern Appalachia.[84]

The popularity of ginseng growing around the turn of the twentieth century can be partly explained by the emergence and growth of a new wave of agrarian philosophy among certain circles of progressives. The economic cataclysms following the Panic of 1893, the rapid growth of urban areas, the growth of monopolies, and the seeming deterioration of the countryside in the late nineteenth century sowed extreme unease among many Americans who feared that the changing character of the United States portended dire social, economic, and environmental consequences. This unease manifested itself in many forms, including the back-to-the-land movement, voices in the broader conservation movement, and the country life movement.[85] Concerned citizens believed that agriculture needed fundamental change. A plethora of ideas circulated around the country offering different schemes for making farming and other rural pursuits more attractive and lucrative. Within this context, ginseng growing took on a missionary's zeal.

Perhaps no one had more influence in spreading the ginseng growing gospel than Maurice G. Kains. A native of Ontario, Canada, Kains graduated from Michigan Agricultural College, now Michigan State, in 1895 and promptly enrolled in the agricultural college at Cornell University, where he studied horticulture under the renowned Liberty Hyde Bailey. Bailey was

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[84] For a good discussion on the growth of cultivated ginseng, see Alvar W. Carlson, "Ginseng: America's Botanical Drug Connection to the Orient," *Economic Botany* 40, no. 2 (April 1, 1986): 233–49.

[85] For discussions of the agrarian dimensions of the conservation movement, see Paul Thompson, "Expanding the Conservation Tradition: The Agrarian Vision," Ben A. Minteer and Robert E. Manning, eds., *Reconstructing Conservation: Finding Common Ground* (Washington: Island Press, 2003), 77–92; Ben Minteer, "Regional Planning as Pragmatic Conservationism," ibid., 93–114; Richard Judd, "Writing Environmental History from East to West," ibid., 19–32; Sarah T. Phillips, *This Land, This Nation: Conservation, Rural America, and the New Deal* (New York, NY: Cambridge University Press, 2007); Mark D. Hersey, *My Work Is that of Conservation: An Environmental Biography of George Washington Carver*, Environmental History and the American South (Athens: University of Georgia Press, 2011); For a good, thought-provoking article on agrarianism and conservation, see Mart Stewart, "If John Muir Had Been an Agrarian: American Environmental History West and South," in Paul Sutter and Chris Manganiello, eds., *Environmental History and the American South* (Athens: University of Georgia Press, 2009).

well on his way to becoming one of the most distinguished horticulturists in U.S. history, but he was much more than that. As a writer, philosopher, founder of the nature-study movement, and later chair of Theodore Roosevelt's 1908 Commission on Country Life, he espoused a philosophy that, according to Allan Carlson, "redefined the agrarian mind in progressive, forward-looking ways."[86] He voiced his concerns that the rapidly accelerating industrial revolution threatened to unravel the rural fabric of American life, and he sought to steer the conservation movement in a more agrarian direction.[87] His 1915 manifesto, *The Holy Earth,* made the case that farming kept people in touch with nature on a spiritual level and that the loss of the family farm severed that tie with nature. Yet, Bailey, like his pupil Kains, did not advocate a return to a traditional agricultural lifestyle. He believed that cooperation among farmers, better use of business strategies, and a commitment to intensive and diversified farming under the principles of scientific agriculture could help resuscitate small farmers in the United States.

Kains certainly took Bailey's teachings to heart. Upon graduating from Cornell, he worked for the U.S. Department of Agriculture as an expert in special crop culture, where he developed a fascination with ginseng culture that he spread to countless other farmers. His 1899 book, *Ginseng: Its Cultivation, Harvesting, Marketing, and Market Value,* went through three editions in four years and was for many years the most comprehensive and scientifically oriented book on ginseng growing. For Kains, ginseng was not simply a potentially profitable crop. It was a badge of progressivity. The ginseng grower, he insisted, "should always strive to be bigger than his business…[T]he reason he is in [the business] seems to prove him to be progressive and keep himself abreast of the times. He should endeavor to maintain this state by

[86] Allan Carlson, *The New Agrarian Mind: The Movement Toward Decentralist Thought in Twentieth-Century America* (New Brunswick: Transaction Publishers, 2000), 7.
[87] Scott Peters, "'Every Farmer Should Be Awakened': Liberty Hyde Bailey's Vision of Agricultural Extension Work," *Agricultural History* 80 (2006): 190–219.

reading and discussing all matters pertaining to farm life."[88] Kains soon left government work for academia, teaching horticulture at Pennsylvania State University and Columbia University. Among his twenty-seven books on horticulture and agriculture, his most lasting legacy was the best-selling 1935 book, *Five Acres and Independence: A Handbook for Small Farm Management,* which became a how-to bible for generations of back-to-the-landers.[89]

Ginseng growers placed their faith in improved agricultural methods and relied heavily on the emerging alliance between university scientists and the state to help them unlock the secrets of ginseng culture. Sears corresponded regularly with Harrison Garman, soliciting opinions and advice from the Kentucky Agricultural Experiment Station director. Indeed, they learned much from each other. Sears helped convince Garman to undertake his study of ginseng cultivation, which was published in 1898 as agricultural experiment station bulletin no. 78, *Ginseng, Its Nature and Culture,* and Garman convinced Sears to switch from forest culture to the artificial cultivation practiced by Stanton. Garman visited Sears's garden regularly and relied on his experience for much of the information he included in his bulletin. Sears invited anyone who was interested to come tour his garden, and it thus served as an unofficial demonstration farm, proving so influential that the Pulaski County ginseng industry rapidly expanded. By 1902, there were some ninety ginseng farms in the county alone, the value of which had risen in just two years from $12,000 to $160,000.[90] The same year, George Nash wrote (and Kains later revised) a bulletin for the U.S. Department of Agriculture entitled, *American Ginseng: Its Commercial History, Protection, and Cultivation.* Requests for information on ginseng growing flowed into state and federal agricultural departments, prompting a wave of investigations into the potential new industry. The Agricultural Experiment Stations in Maine,

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[88] Kains, *Ginseng: Its Cultivation, Harvesting, Marketing and Market Value, with a Short Account of Its History and Botany*, vi.
[89] "Maurice G. Kains, Horticulturist, 77," *New York Times,* 26 February 1946.
[90] "Land, Stock, and Crop," *Mount Vernon* (Ky) *Signal,* 11 July 1902.

Pennsylvania, and New York followed with their own bulletins in the first decade of the twentieth century.[91] With the help of this agricultural infrastructure, many believed, ginseng growing could be done by "any progressive, wide-awake farmer."[92]

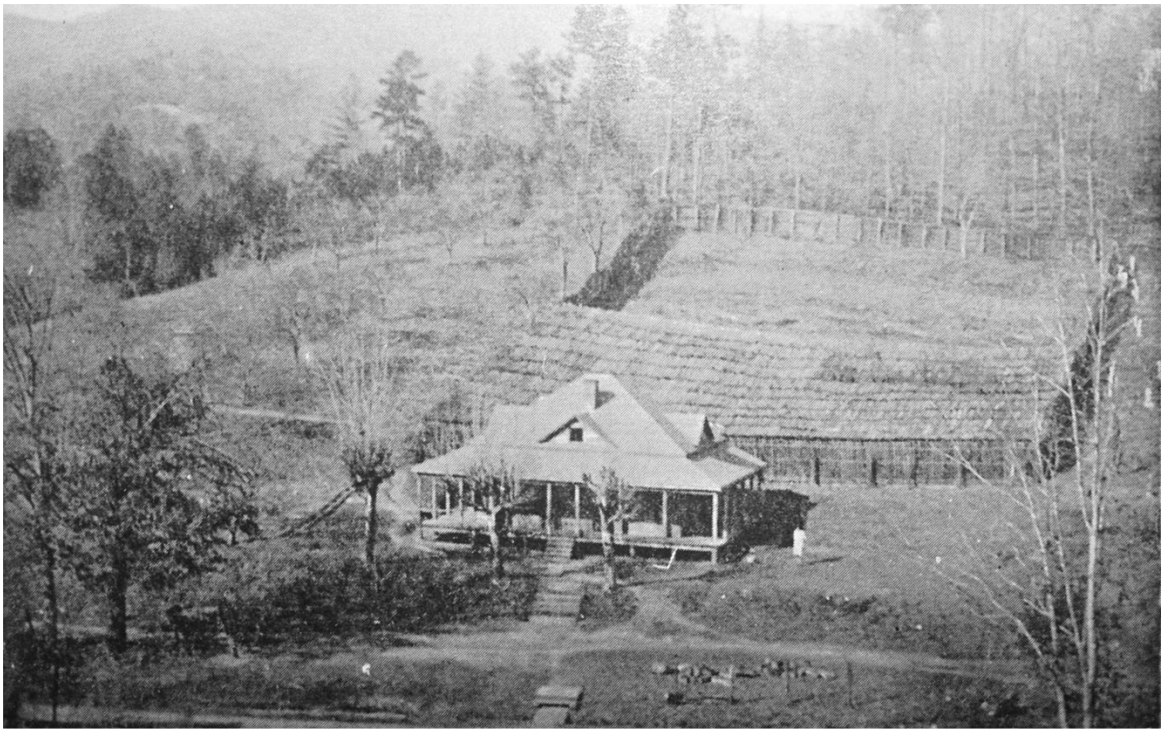

Figure 13. Elbert Bates's artificially grown ginseng garden in western Cherokee County, NC, ca. 1910. From *Mountain Heritage: The Story of Western North Carolina's Communities of Unaka, Ogreeta, Bethel, Copper Creek, and Upper Beaverdam* (Blairsville, GA: Straub Publishing Co., 2011), 218.

Some in southern Appalachia saw ginseng as a savior for struggling small farmers. The *French Broad Hustler* struck an optimistic chord when it informed mountain farmers that "The possibilities from ginseng culture in the mountains of Western North Carolina is worthy of the

[91] See George C. Butz, *An Experiment in Ginseng Culture,* The Pennsylvania State College Experiment Station Bulletin No. 62 (January 1903); W. M. Munson, "Ginseng," in *Nineteenth Annual Report of the Maine Agricultural Experiment Station,* Orono, Maine, 1903 (Augusta: Kennebec Journal, 1904), 119-120; N. O. Booth, "Ginseng Culture," *Twentieth Annual Report of the Board of Control of the New York Agricultural Experiment Station for the Year 1901* (Albany: J. B. Lyon Co., 1902), 356-358.
[92] "Ginseng," *French Broad Hustler* (Hendersonville, NC), 8 November 1906.

most serious consideration on the part of all our farmers."[93] Ginseng gardens began popping up around the region, as small farmers like Jones Wilson and Cherokee County's Elbert Bates enclosed parts of their land and, in some cases, built artificial shading.[94] Yet, the largest ginseng growers in southern Appalachia were not self-identified farmers. They were generally business-oriented men and women who lived in towns and perhaps owned a few acres of land in the country. W. L. Sandridge, for example, moved from Missouri to Bryson City, North Carolina, in the 1890s, where he worked for a time as editor of the *Bryson City Times.*[95] Caught up in ginseng fever, he quit his job in 1905 and started a ginseng garden, and within a decade, the *Asheville Citizen-Times* declared it the "largest ginseng farm in the United States," an unlikely but provocative title.[96] Marion C. Toms was a dry goods merchant in the mountain town of Hendersonville, North Carolina. In 1903, he and his son Charles, a Hendersonville attorney, started a ginseng farm on land just outside of town, which was hailed as "one of the best in the country" and was described in the *Bulletin of Pharmacy.* In 1918, upon the elder Tom's death, a man from the town of Fairview purchased the entire garden and transplanted all the roots some fifty miles to his farm.[97] Other notable ginseng farms in the region were started by J.O. Harrison, a traveling salesman from Franklin, and Harlan P. Kelsey, a Boston landscape architect and horticulturist.[98] Archibald C. Sudderth, a photographer from Monterrey, Virginia, planted his patch on a town lot that measured an eighth of an acre before branching out into the

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[93] Ibid.
[94] A photo show Elbert Bates home in rural western Cherokee County with a ginseng garden about one-eighth of an acre. See The Unaka Community Development Club Historic Preservation Committee, *Mountain Heritage: The Story of Western North Carolina's Communities of Unaka, Ogreeta, Bethel, Copper Creek and Upper Beaverdam* (Blairsville, GA: Unaka Community Development Club Historic Preservation Committee, 2011), 218.
[95] "A Rising Industry," *Charlotte Observer,* 31 May 1908.
[96] "Largest Ginseng Farm is in Swain," *Asheville Citizen-Times,* 12 October 1917.
[97] See "Four Ginseng Pictures," *Bulletin of Pharmacy,* Vol. 22, No. 8 (August 1908), 347-348; "Ginseng Plantation Moved Fifty Miles," *Asheville Citizen-Times,* 24 April 1918; "Making Money out of Ginseng Patch," *Asheville Citizen-Times,* 22 June 1909.
[98] "A Rising Industry," *Charlotte Observer,* 31 May 1908

suburbs. By 1910, he had 10,000 plants growing.[99] Indeed, the larger growers were not typically farmers. They were town elites.

Despite the chorus of reformers calling on farmers to try the new crop, many agriculturists remained highly skeptical of ginseng culture. Some were concerned that demand was inelastic, believing an increase in supply would drive prices down for everyone. Others believed that the plant had no inherent value as a medicine, a skepticism that hinged on their views of the Chinese. "None but the singular and rice-eating Celestials can feel any of the effects from the use of it," one observer commented. "The belief among the home Chinese is mostly superstitious. It is sort of fetish, its powers are supposed to be occult, of the nature of magic."[100] Thus, its popularity depended on the "backward" Chinese, and the progress of civilization would render such beliefs antiquated. In advising farmers against growing the new crop, the *Southern Planter* remarked that "As 'John' [Chinaman] becomes more civilized he will doubtless cease to buy the worthless stuff, and then there will be no market for it."[101] After enjoying at least a modicum of respect in the mid-nineteenth century, ginseng largely fell out of favor with western pharmacists. During the 1880 revisions to the U.S. Pharmacopoeia, physicians and pharmacists removed ginseng, along with many other vegetable drugs, from its place on the secondary list.[102] Amidst a cloud of anti-Chinese nativism, highlighted by the Chinese Exclusion Act of 1882 and the rise of the Workingman's Party in California, ginseng was dismissed as "humbuggery" by the medical establishment. "We would warn our readers not to

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[99] Frank S. Woodson, "Money in Ginseng; Wonderful Herb," *Times Dispatch* (Richmond, VA), 7 August 1910.
[100] "Ginseng Humbug," *The Indianapolis News,* 17 December 1887.
[101] "A New Crop—Ginseng," *Southern Planter,* 4, 58 *(*April 1897), 177. Although it provided numerous articles on ginseng cultivation, the *Progressive Farmer* cautioned its readers that "each one must decide for himself whether or not it is wrong to so impose upon the ignorance of the Chinese." "More About Ginseng," *The Progressive Farmer,* 24 January 1899.
[102] See *The Pharmacopoeia of the United States of America, Sixth Decennial Revision* (New York: William Wood & Co., 1883), 444.

be seduced into wasting their time with any such crops," the *Southern Planter* asserted.[103] After initially promoting cultivation in the 1890s, the U.S. Department of Agriculture under the new secretary James Wilson changed its tone. "Let ginseng alone," Wilson instructed farmers in 1904. "It is a delusion and a snare."[104]

To counter such criticism, growers found themselves defending both the medical virtues of ginseng and the intelligence of the Chinese. The pages of *Special Crops* contained regular testimonies from growers, doctors, herbalists, and others who assured readers that ginseng was a worthy commodity. They even undertook an effort, if a fairly minor one, to promote the use of ginseng in the United States. Editor Charles M. Goodspeed assured growers that "After so conservative a people for a thousand years and more, have used anything in their religious rights, in their daily food, and made of it their most highly prized drink, and their one universal cure-all, they will not lightly throw it aside for western ideas; but, rather, the western world [will] take up the tried and proved remedy of the older east."[105] Harrison Garman was even more laudatory of Chinese medicine, displaying an openness that was rare for his time. In his 1898 bulletin, he defended the Chinese as at least "our equals in capacity for any sort of brain work" and admonished critics for dismissing their intellectual contributions. "The Chinaman has his philosophy of right living, and who shall say that it is not a better one than our own?" he asked.[106] The fledgling ginseng growing industry helped counter anti-Chinese nativism and pave the way for ginseng's acceptance in the U.S. later in the twentieth century.

In 1904, swayed by the growing importance of the ginseng industry, the Medical College of the University of Michigan and the Hahnemann College of the Pacific, San Francisco, both homeopathic institutions, collaborated on the first scientifically based trials of ginseng.

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[103] "A New Crop—Ginseng," *Southern Planter,* 4, 58 *(*April 1897), 177.
[104] *The Progressive Farmer,* 12 July 1904.
[105] C.M. Godspeed, "Ginseng in China," in *Special Crops,* 4, 40 (December 1905), 236.
[106] Garman, *Ginseng, Its Nature and Culture*, 136.

Seventeen "drug provers," or what some called the "Poison-Drinking Society," agreed to systematically ingest ginseng for a period of a few days and record the effects it had on their bodies. The provers reported a variety of powerful effects, from eye pain, itchiness, and nausea to a lack of appetite, nocturnal emissions, and a "craving for drugs." Seven participants in the trials failed to finish the trials out of anxiety and fear. In a thinly veiled exoneration of Chinese medicine, Dr. W. A. Dewey concluded that the "employment of ginseng in the past, *where it has been most successfully applied and where it has obtained a reputation of value,* rests upon a purely scientific basis." He suggested that the plant should be used homeopathically to treat sexual disorders and other physical ailments in which "the mental sphere is involved."[107] These findings encouraged growers and other advocates, who called it the "most fascinating and greatest drug-proving experiment ever attempted in this country."[108] In a letter to *The Rural New Yorker,* one grower predicted that "a boom in the ginseng industry may be expected soon."[109] Yet, despite the optimism surrounding the trials, the medical establishment and the general republic remained incredulous. "No one has discovered any powerful drug in ginseng because there is none in it," the editor for *The Rural New Yorker* exclaimed.[110] Thus, despite the valiant promotion of Chinese medicine, the medical establishment remained hostile to ginseng for at least another half century. China would remain the sole buyer of American ginseng.

Back to the Forest: The Limits of Artificial Cultivation

When Stanton and Sears both demonstrated that ginseng could be grown in prepared beds under artificial shade, potential growers who had been wary of theft by diggers were

[107] Adolf E. Ibershoff, *Aralia Quinquefolia (Ginseng).: An Original Proving by the University of Michigan Society of Drug Provers* (University of Michigan. Homoeopathic Department., 1905), 1–8.
[108] "Find the Elixir of Life," *Richmond Climax,* 28 December 1904.
[109] "Hope Farm Notes," *The Rural New Yorker,* 17 December 1904, 895.
[110] Ibid.

encouraged. If it could be grown under artificial shade, it could be physically wrested from the commons. However, as the industry expanded, it became clear to growers that removing ginseng from the forest was more difficult than expected. The so-called "open field" method posed numerous agroecological problems that growers constantly sought to overcome. Those who chose this method faced higher risk of disease and fungal infection. In 1906, J. R. Pirtle, a dentist from Hartford, Kentucky, who established one of the largest ginseng gardens in Kentucky, lost 500,000 plant tops to blight, twenty percent of which were killed entirely. The next year, despite spraying the young plants with the fungicide Bourdeaux Mixture, blight again killed back the tops of all his plants, ruining his entire years' crop.[111] When Sears started planting more in open gardens under artificial shade, his plants started coming up earlier in the spring, which left them vulnerable to late frosts. In 1906, he lost many young plants to late frosts, but he noticed that those in firmer soil did not come up early and survived the frost, convincing him that growing in loose, rich soil was a mistake. This forced him to reassess his commitment to the artificial method.[112] Moles and mice also proved a consistent threat. Intensive cultivation in open gardens forced growers to examine and reexamine the biological relationships that comprised their gardens. They received help from agricultural experiment stations and publications like *Special Crops,* the pages of which were filled with questions of how to deal with blight, disease, and other issues that arose. Some felt that it was not worth it and continued to raise their ginseng in the forest.

Agroecology was not the only challenge to the artificial method of ginseng cultivation. As the first decade of the twentieth century constantly reminded growers, success in the industry depended on a precarious trans-Pacific commodity network that was subject to all sorts

[111] J.R. Pirtle to H. Garman, 15 November 1906, Fol. 6, Box 13, HGP; J.R. Pirtle to H. Garman, 23 July 1907, Fol. 6, Box 13, HGP.
[112] J. W. Sears to H. Garman, 21 November 1906, Fol. 6, Box 13, HGP; J.W. Sears to H. Garman, 11 June 1906, Fol. 6, Box 13, HGP.

of vagaries. After decades of relative peace and stability in Chinese ginseng markets, a series of events affecting trade relations between the U.S. and China stirred unease among those who had recently invested much of their time and savings into ginseng gardens. The Boxer Rebellion in 1900, according to one observer in Corbin, Kentucky, "interfered so seriously with the business of shipping ginseng that the 'sang diggers' of that part of the state had about lost their occupation."[113] Prices dropped some forty percent in just a few weeks.[114] Prices rebounded to unprecedented heights in 1904 when the outbreak of the Russo-Japanese War cut off the main supply of ginseng from Manchuria, thereby boosting demand for the American root, but this proved temporary.[115] In 1905, Chinese merchants initiated a boycott of American goods in response to the United States' regrettable treatment of Chinese immigrants and refusal to repeal the Chinese Exclusion Act. However, the anxiety produced by the boycott was probably greater than the actual effect on prices.[116] Indeed, the first decade of the ginseng growing boom reminded growers that they were deeply enmeshed in a trans-Pacific partnership that was not always predictable. The instability of the market dissuaded some potential growers from investing too much labor and capital.

The biggest shock to growers came in 1905 when prices for ginseng plummeted for no apparent reason. New York exporters sent out circular letters to growers and dealers telling them that "there is absolutely no sale for cultivated ginseng. Do not send us any more." They explained that "the Chinese refuse to buy cultivated ginseng and there is no use for it outside of the Chinese trade. This is the end of the great boom in ginseng."[117] Prices slid forty percent. Demand for nursery stock and seeds dropped off. Nurseries suffered, and many got out of the

[113] "Concerning Ginseng," *Biloxi Daily Herald,* 5 September 1900.
[114] "Boxers Injuring the Ginseng Trade," *Charlotte Observer,* 26 June 1900.
[115] Speyer & Sons to H. Garman, 7 December 1904, Fol. 8, Box 13, HGP.
[116] "Boycott," *Eu Claire Leader* (Eau Claire, Wisc), 29 August 1905.
[117] T. B. Lyon, "Cultivated Ginseng," *The Adair County News* (Columbia, Ky), 24 May 1905.

business altogether.[118] Growers rushed to point fingers at a variety of culprits. Some speculated that an irresponsible grower had put diseased root on the market, thus spoiling the well. C. M. Godspeed believed that some growers were drying their roots too fast, partially cooking it in the process, while J. R. Pirtle believed it was part of a new seasonal market cycle controlled by Chinese monopolies.[119]

Figure 14. An artificially grown ginseng garden in Helvetia, West Virginia, ca. 1900. Courtesy of the West Virginia and Regional History Collection, Morgantown, WV.

[118] J.W. Sears to H. Garman, 12 November 1906, Fol. 6, Box 13, HGP.
[119] Ibid; J.R. Pirtle to H. Garman, 23 July 1907, HGP.

Perhaps these nurserymen did not want to acknowledge that the real reason was that Chinese consumers did not like the cultivated root; they much preferred the wild. One New York exporter told Garman that "the whole trouble lies in the fact that cultivated root is a comparatively new product, and the Chinese as a people are notably backward in taking hold of anything new." Growers, he continued, needed to grow roots "that meet the ideas of the Chinese consumers and NOT the ideas of the growers'. The kind that the Chinamen want is the root that most resembles wild root in appearance, quality, shape, handling, etc."[120] In one dramatic episode, generations of conventional agricultural wisdom was turned on its head. Farmers and market gardeners had always believed in improvement. That is, crops always improved with cultivation, as farmers learned how to select the best varieties and specimens for reproduction, thus enhancing the characteristics that consumers wanted. But these consumers were different. Many Americans could not understand why the Chinese preferred the wild root. "There is no good common sense in the idea that cultivation will injure or destroy the flavor of ginseng, while it improves the quality of every other plant of which we have any knowledge," one incredulous grower remarked.[121] But there was a difference. As discussed in chapter one, there were physiological and metaphysical reasons the Chinese preferred the wild root, and by the late nineteenth century, they had developed two distinct grades of the root: wild and cultivated. They paid a premium, around 25 percent more, for the wild article. Following the 1905 scare, growers became more conscious about their methods, and many abandoned artificial shading altogether. Others sought better ways of cultivating ginseng intensively to look more like the wild root.

The combination of agroecological challenges and Chinese preferences increased the attractiveness of the natural method of growing, which complicated the process of privatization.

[120] J.S. Lodewick to H. Garman, 1 August 1907, HGP.
[121] T. B. Lyon, "Cultivated Ginseng," *The Adair County News* (Columbia, Ky), 24 May 1905.

The fact that many growers preferred to grow in the forest served to exacerbate existing social tensions between commoners and growers. The pages of *Special Crops* and similar publications were filled with announcements of theft and requests for assistance in locating stolen ginseng. The *Progressive Farmer* cautioned growers that "The floating county scum, both black and white, is apt to watch a good ginseng nursery almost as carefully as its owner."[122] Growers used a variety of methods to deter ginseng thieves, all of which depended on the threat of violence. Many, including Sears, employed watchmen to live on the premises and protect the patch with "the aid of certain shot guns and dogs of discourteous disposition."[123] Some, like Jones Wilson mentioned in the opening anecdote, attached shotguns and alarm bells to tripwires surrounding their gardens. In 1905, C. A. Rowley started marketing a closed circuit alarm system, which became popular among some growers.[124] Thus, the Chinese preference for wild ginseng, as well as the agroecological challenges to open-field cultivation, served to exacerbate the tensions over the Appalachian commons.

Amidst ongoing conflicts between growers and commoners, growers succeeded in convincing several states to pass punitive laws aimed specifically at protecting the fledging industry, thus initiating a wave of new legislation in the first decade of the twentieth century. Kentucky and South Carolina were the first. In 1902, Kentucky made it a felony, punishable by up to three years in the state penitentiary, to dig ginseng behind any kind of lawful fence, which could include barbed wire. The same year, South Carolina took the law a step further. While it did not go so far as West Virginia in privatizing all ginseng, it did protect any intentionally planted ginseng on private property, whether it was inside or outside an enclosure. How diggers could tell if it was "intentionally planted," however, remained unclear. The penalty, however,

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[122] "The Culture of Ginseng," *The Progressive Farmer,* 22 August 1899.
[123] "Bear Traps Set in Ginseng Patch," *Asheville Citizen-Times,* 26 May 1909; see also "A Ginseng Patch That is a Patch," *The News Record* (Marshall, NC), 1 August 1913.
[124] C. A. Rowley, "Protection for Ginseng," *Special Crops,* 4, 34 (June 1905), 106-108.

was less harsh: a fine of less than one hundred dollars and no more than thirty days in jail.[125] Three states followed Kentucky's lead in making it a felony to dig ginseng behind an enclosure: New York in 1903 and Michigan and North Carolina in 1905.[126] Charles F. Toms, the Hendersonville attorney and ginseng grower who was elected to the state senate, was the driving force behind North Carolina's law. If he would have had his way, North Carolina's law would have been much tougher. When he introduced the bill, the Hendersonville attorney set the penalty for digging ginseng from an enclosure at from five to fifteen years, which was ten years longer than the maximum punishment for other forms of larceny.[127] Many legislators objected to the severity of the punishment, and an amendment eventually reduced the sentence to two to five years.

These were the first laws aimed at protecting ginseng since West Virginia's 1873 law, but their proponents were animated by different motivations. Rather than seeking to undermine traditional landscapes of subsistence and control the forest class, these laws were passed largely to protect the fledgling ginseng industry. Nevertheless, they both contributed to a shift in the political ecology of ginseng, dictating who had access to what resources. Thus, ecological changes to the commons (overharvesting and deforestation) and enclosure attempts by landowners who wanted to better protect and profit from the ginseng on their property ultimately led to the physical reorientation of ginseng from a commons commodity to a private one. As ginseng gardens and patches proliferated and ginseng rapidly disappeared from much

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[125] Andrew B. Jackson, *Code of Laws of South Carolina, 1912, Vol. 2* (Charlottesville, 1912), 301.
[126] Clarence Birdseye, Robert Cumming, and Frank Gilbert, eds., *Annotated Consolidated Laws of the State of New York, as Amended to January 1, 1910, Vol. III* (New York: Banks Law Pub. Co., 1909), 3812-3813; Andrew Howell, *Howell's Annotated Statutes of the State of Michigan including the Acts of the Second Extra Session of 1912, Vol. 2* (Chicago, 1913), 1829; Thomas Womack, Needham Gulley, and William Rodman, eds., *Revisal of 1905 of North Carolina Prepared under Chapter Three Hundred and Fourteen of the Laws of One Thousand Nine Hundred and Three* (Raleigh: Uzzell & Co., 1905), 1038.
[127] *Journal of the Senate of the General Assembly of the State of North Carolina, 1905* (Raleigh: E.M. Uzzell & Co., 1905), 52

of the forest commons, the only plants that anyone could find were increasingly "owned" by someone.

North Carolina's law was put to the test in 1909 when some 4,000 ginseng plants were stolen from a garden owned by Dr. Chase P. Ambler of Asheville. The case that followed highlights how the changing political ecology of ginseng in Appalachia created winners and losers. A native of Ohio, Ambler moved to Asheville in the 1890s as a recent medical school graduate to practice medicine on the many pulmonary patients who were flocking to the region's cool, clean air. Spurred by George Vanderbilt's construction of Biltmore, the 1890s witnessed the growth of Asheville as a haven for northern transplants, and Ambler followed the crowd, moving into a house on Merrimon Avenue. A member of the city elite, active in high society, and the brainchild of what would become the Great Smoky Mountains National Park, Ambler had three live-in servants, two of whom were African Americans. In 1904, he finished construction on Rattlesnake Lodge, his elegant summer home in the Craggy Mountains northeast of the city. After the state's ginseng law was passed in 1905, his children, the eldest of whom was eleven, began a ginseng garden "far from the haunts of man…, perched on a mountain top."[128] Initially investing $150 in nursery stock and fence material, they tended to their garden when they visited their summer home with family. By May of 1909, their crop was worth some $400, but when they arrived at their garden that summer, they found a ginseng gardener's worst nightmare: overturned earth and 4,000 holes in the ground.[129] Ambler immediately published a reward offer of $100 in local newspapers for information leading to the arrest of the thieves.

Evidently, someone came forth with information, and within days, two white men, Ive Ingle and Tom Hodge, were charged with violating North Carolina's 1905 law: ginseng larceny.

[128] "The Garden and the Beast," *Asheville Citizen-Times,* 17 May 1909; U.S. Census Bureau, 1910 Census.
[129] "The Garden and the Beast," *Asheville Citizen-Times,* 17 May 1909.

Ingle and Hodge lived in the Reems Creek area, a rural watershed north of Asheville that drains the western side of the Craggy Mountains. The hardwood forests on the Craggy Mountains had long been a de facto commons area where the residents of Reems Creek hunted, fished, ran livestock and foraged, providing even the poorest and most dependent residents with a means of subsistence. And Hodges and Ingle were some of the poorest. Ingle was a 23-year-old native of Buncombe County, married just two years earlier.[130] He may have still worked as a farm hand on his widowed mother's tenant farm, as he was in 1900. That year, a 25-year-old Hodge was living in a rented home and working as a day laborer for half the year, probably in the nearby Reems Creek Woolen Mills, constructed in 1875 by Dr. Abraham Jobe from Cades Cove, Tennessee.[131] Hodge had recently faced tragedy when he accidentally killed one of his friends in a hunting accident in the mountains surrounding Reems Creek.[132] They knew the surrounding forests well, for when sheriff's deputies came to arrest them, they disappeared into the mountains, leading the four officers on a twelve-hour search that ultimately proved fruitless.[133] After several more searches through some of the roughest and inaccessible stretches of mountains, deputies finally captured the two men in late July. Ingle told them that for over two months since he first took the ginseng, he camped out in the mountains, changing locations every night to avoid capture.[134]

The reasons why Hodge and Ingle robbed the ginseng patch are unclear. During the trial, they did not make a political statement about common rights. Ingle pled guilty and then testified against Hodge, who maintained that he was a victim of circumstance. The jury found him guilty anyway, and he received a four-year sentence, while Ingle received only three. We

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[130] U.S. Census Bureau, 1910 Census.
[131] For more on Jobe and the Woolen Mills, see Abraham Jobe, David Hsuing, ed., *Mountaineer in Motion: The Memoir of Dr. Abraham Jobe, 1817-1906* (Knoxville: University of Tennessee Press, 2009), 125-132.
[132] "Hunter Gets Fatal Wound," *Asheville Weekly Citizen,* 28 December 1900.
[133] "Ginseng Men are Still at Large," *Asheville Citizen-Times,* 25 May 1909.
[134] "Chase Them Over Mountains and Down Ravines," *Asheville Weekly Citizen,* 23 July 1909.

can only speculate what the two were thinking. They were not hardened criminals. They had never before been convicted of a crime.[135] Ingle's statement that he had avoided sleeping at home since the burglary suggests he was aware he was breaking the law. More than likely, he simply did not see those laws as just. Like the commoners in Pocahontas County, they may have felt that their rights were under attack by landowners and city elites like Ambler, who were arrogant enough to think they could fence off part of the mountain and exclude everyone from it. To people like Hodge and Ingle, conservation was another form of class oppression. If we consider the experience of sang diggers in West Virginia, there was a certain degree of truth to this perception. In reality, however, such common rights were simply becoming untenable in most of Appalachia. Indeed, the world into which they were born was much different than the one into which their parents were born. Hodge's father, Larkin, had grown up on a prosperous Watauga County farm prior to the Civil War. After serving the Confederate cause in the 58th North Carolina regiment, he worked as a hired hand on an East Tennessee farm before taking up a job in a tanning mill in Reems Creek in the 1870s. But by then, the forests—or what there was left of them—had changed. The population on the North Carolina Blue Ridge had grown some 150 percent over the previous five decades, from 103,000 in 1870 to 235,000 in 1910. The population of Buncombe County had more than tripled. As the forests filled with people, the game, fish, and ginseng disappeared. In addition to population growth, the farm and forest economy had been severely undermined by heavy timber harvests in parts of Appalachia, and coal mining in others. Ginseng no longer filled the forests. Game was increasingly scarce. Conservation, inasmuch as it was once a part of his moral universe, was no longer a concern for Hodge, having given way to the interests of subsistence and survival. While the more affluent

[135] This fact came from a declaration of Governor Kitchin when he pardoned them. See "Ginseng Pilferers Pardoned from Pen," *Asheville Citizen,* 12 May 1910.

farmers could afford to push for conservation measures, game and fish laws, and ginseng prohibitions, Hodge could only view them with disdain.

In 1907, two years before Hodge and Ingle waded into the Amblers' ginseng patch, the North Carolina legislature passed a bill that regulated the taking of fish and game in Buncombe County. In the absence of state-wide game laws, these local laws were the first taste many citizens got of conservation. The law set seasons for and bag limits on game birds in the county, and it forbade hunting anything on anyone else's land without written permission from the landowner. The law also targeted the Reems Creek millworkers specifically, banning fishing in the creek upstream from the mills for three years, presumably to give fish populations a chance to rebound. The law ignited passions on both sides, aggravating social tensions over the commons. In a 1910 letter to the editor of the *Asheville Gazette* supporting the game law, James Baird, a farmer in the Beaverdam section, hinted at the general discord in the county over the commons.

> No posting of lands or protests of the owners thereof has any avail in keeping off the bands of marauders that daily scour our fields and forests, killing everything that comes in sight—sometimes even our domestic fowls. They will tear down your 'posters' and declare they never saw them. If you order them off your premises they will sometimes insult you and if at a safe distance often curse you—some men who claim to be GENTLEMEN set this example of trespassing and no wonder the dirty, worthless crowds follow it.
>
> Our farmers generally are fond of having their friends come out occasionally and have a day's shooting with them, but when it comes to daily raids by marauding thieves, black and white, they are going to ask for laws that will protect them…
>
> Game of every kind is becoming very scarce in Buncombe any way, and it would be well to give a rest of several years to all but that which is predatory or migratory.[136]

As Baird suggests, commoners, perhaps realizing that times had changed, did not mount any public protests against the new political ecology. They protested with their actions, tearing up

[136] "A Growing Nuisance," *Asheville Gazette,* 24 November 1910.

"posted" signs, burning fences, and digging up ginseng. Thus, when Hodge and Ingle broke into Amblers' ginseng patch, their actions were politically motivated.

It is perhaps ironic, however, that Hodge and Ingle's actions helped hasten these changes. The *Asheville Gazette News* believed that case, which did much to publicize the new law, would effectively deter future thieves. "The result of the Ingle-Hodge trial, it is believed, will have a salutary effect upon the would-be ginseng thieves in this neck o' the woods," it declared in 1909, "and the next time someone has a notion of entering a seng patch to steal therefrom he will probably think first of the undoing of Ingle and Hodge."[137] In all likelihood, the law was not nearly as much of a deterrent as was the arms race that followed. Alarmed by the brazen theft, growers across western North Carolina took their own steps to deter thieves. Several, including John W. McElroy of West Asheville, ordered bear traps for their gardens.[138] Growers in Swain County discussed burying nitroglycerin beneath theirs.[139] The trial and its coverage by the local press undoubtedly influenced the tide of public opinion. Hodge and Ingle were vilified by the *Asheville Citizen.* One of the roughly twelve articles covering the case cast the culprits as biblical beasts in the garden. They "watched the growth of that garden, as the wolf or panther watches its prey…and the Beast, like Satan of old, despoiled the garden."[140] Public opinion in Buncombe County had changed since the 1870s. Ginseng was a privatized commodity, and sang diggers were "beasts in the garden."

The controversies surrounding the privatization of ginseng exposed fault lines within rural communities that would only widen over subsequent decades. Throughout southern and central Appalachia, as competition for an increasingly scarce root reached all-time highs in the 1880s and 1890s, ongoing concerns over the depletion of ginseng populations prompted

[137] "Hodge and Ingle given Sentences," *Asheville Gazette News,* 7 August 1909.
[138] "Bear Traps Set in Ginseng Patch," *Asheville Citizen,* 26 May 1909.
[139] "Guard Ginseng with Infernal Machines," *Asheville Citizen,* 12 September 1909.
[140] "The Garden and the Beast," *Asheville Citizen,* 17 May 1909.

countless farmers and other landowners to renew attempts to privatize the plant. Only by removing the ginseng on their property from the commons, they came to realize, could they effectively conserve the plant for their own long-term interests and that of their progeny. Doing so, however, was not easy. It required a reorientation of nature and culture that involved settling many factors, including ginseng agroecology, Chinese markets, and social custom. As sang diggers continued to treat the plant as a commons resource, privatization only exacerbated already heated tensions between them and the landowners, eventually prompting a new wave of legislation that effectively and finally redefined ginseng as a private commodity. Yet, as the cases of Hodge, Ingle, Collins, and countless others reveal, this shift in the political ecology of ginseng had sometimes dramatic impacts on rural mountain people. To be clear, this renegotiation of common rights was ultimately incomplete. It was, if nothing else, an auspicious beginning. Some mountain communities continued to acknowledge such rights well into the twentieth century, but it would prove increasingly controversial.

As an interesting epilogue to the story, Hodge and Ingle worked on county roads for almost a year before they were pardoned by North Carolina governor William Kitchin. In a statement, the governor cited good prison behavior and a lack of prior convictions as reasons for his pardon. Furthermore, Dr. Ambler, the judge, the county prosecutor, and "many citizens" recommended the pardon.[141] The pardon may have been a recognition that the punishment did not fit the crime. Or it may have been a display of magnanimity by a modernizing victor over a declining way of life. Ambler and his progressive-oriented, middle class allies had won private property rights to ginseng.

[141] "Ginseng Pilferers Pardoned from Pen," *Asheville Citizen,* 12 May 1910.

CHAPTER 7

Progress and Ginseng: The Growth of the Sang Digger Stereotype

Sometime in the fall of 1877, a Lynchburg, Virginia, man traveled into the mountains of West Virginia and found a very peculiar group of people living in the forests. "I was warned to look out for a singular race of beings called 'Saugers,'" he wrote, undoubtedly misspelling the common epithet "Sangers." He continued:

> They are found among the mountains in sparsely settled tracts, and are certainly great curiosities. I had heard of them when a boy living in the Roanoke district, but supposed their existence purely problematical. They were represented as a race of Tom Thumbs, and many nursery stories were told concerning them. Plantation hands said that they had seen them lurking in the spurs of the Alleghenies and the Blue Ridge. Their achievements were said to rival those of Beanstalk Jack, and my young blood was curdled by tales of their cruelty. Darkey infants were broiled at their feasts, and the bodies shared with enormous eagles that hovered above them and awaited a division of the spoils. They were described as chunky little rascals who lived in the crevices of the rocks, fed on roots, berries, and babies, and roamed over the mountains like foxes and weasels.[1]

While he did not exactly find a race of Tom Thumbs, he did find a "genuine tribe" of sangers living "on the wooded slopes" and "mountain gorges" in Nicholas, Greenbriar, Pocahontas, and Webster counties. "There are scattering communities in other parts of the State, but in these four counties they seem to attain absolute perfection." The writer continued to weave a compelling and entirely fantastic story of this peculiar people.

According to the writer, sangers existed before the war but their ranks were largely recruited from the deserters and camp followers of the Confederate army. Now they lived "by

[1] [Anonymous], "Some Queer Human Beings," *The Martinsburg* (WV) *Statesman,* 14 February 1878.

themselves and are a law unto themselves." Marriage was unknown among them, lawyers were forbidden among them, and they "have never heard of Reform or the Constitution." When they could not trap raccoons, opossums, groundhogs, or squirrels, they ate snakes, owls, eaglets, crows, and polecats. The "specimens" that he observed "had a starved, stunted appearance, and were clad, or half clad, in grotesque rags." They lived in one-room log huts with mud chimneys "apparently happy in their squalor and poverty, without a thought of the outside world." They were not an agricultural people. Indeed, "they seem to have an antipathy to farming and gardening. A few attempt to raise a little corn, but twenty-nine out of thirty trade ginseng roots for cornmeal and never touch a hoe."[2]

This was the "discovery" of the sang diggers of Appalachia. Of course, it was not really a "discovery." Like so many other mountaineer stereotypes, it was an invention. As we have seen, there is a kernel of truth to it, but this chapter is not concerned with examining the myth's veracity. Instead, it explores the origins and life of the sang-digger myth in order to understand its meaning for modernizing America and how it informed popular perceptions of Appalachia. In his examination of east Tennessee development during the mid-nineteenth century, historian David Hsuing contends that many of the perceptions of mountaineers as quaint and backwards were created by members of nearby rural communities with differing views about the issues of railroads and economic modernization. Those with a broad perspective who sought to enhance their economic and social connections to the wider region saw the promise of railroads. These people maintained ties to the region's towns, shared the townspeople's outlook on economic questions, and clashed with their more isolated neighbors who found themselves increasingly detached from the towns and their influence. Thus, the coming of the railroads brought these two perspectives into conflict with one another, and the railroad promoters labeled their

[2] Ibid.

opponents in terms of backwardness that were later broadcast to the nation as applicable to the region as a whole.[3]

A similar phenomenon was taking place in West Virginia in the 1870s and 1880s, as railroads began to penetrate the more remote and isolated stretches of mountains. The Lynchburg man's article in the *Martinsburg Statesman,* which was among the first to cast sang diggers as a "race" and a "tribe" entirely separate from rural mountain society, was echoed by many writers over the subsequent decades, making the sang diggers of Appalachia nationally famous. Under the pen of imaginative writers, the values and traits attributed to this group of mountaineers grew to the point of pure fantasy. From the 1870s through the 1910s, as local color writers, missionaries, and academics churned out books and articles on the "strange land and peculiar people" of Appalachia, the sang digger myth was absorbed into a broader mountaineer stereotype.[4] Unlike other components of the mountaineer stereotype—the moonshiner, the feudist, the loyal unionist, for example—the sang digger more directly addressed the relationship between culture and nature, between communities and their environment. These writers drew on perceptions of sang diggers held by mountain residents themselves, typically town elites and local landowners who had grown suspicious and highly critical of their trespassing ways.

As discussed in chapter six, these social tensions originated over ideas of private property within the context of economic modernization. Perpetuators of the myth used it to promote a particular type of relationship between nature and culture. They sought a more

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[3] David Hsuing, *Two Worlds in the Tennessee Mountains: Exploring the Origins of Appalachian Stereotypes* (Lexington: University Press of Kentucky, 1997).

[4] Allen Batteau, *The Invention of Appalachia: The Anthropology of Form and Meaning* (Tuscon: University of Arizona Press, 1990); Henry D Shapiro, *Appalachia on Our Mind: The Southern Mountains and Mountaineers in the American Consciousness, 1870-1920* (Chapel Hill: University of North Carolina Press, 1978); Dwight Billings, Gurney Norman, and Kathryn Ledford, eds., *Confronting Appalachian Stereotypes: Back Talk from an American Region* (Lexington: University Press of Kentucky, 1999); Anthony Harkins, *Hillbilly: A Cultural History of an American Icon* (New York: Oxford University Press, 2004).

stringent private property regime that would more effectively protect investments in resources on the land. As the myth grew to national proportions, however, it took on different meaning, serving as a metaphorical commentary on the lessons of savagery and civilization. As it came to serve as a cautionary tale for those who turned their backs on the responsibilities necessary to advance civilization, the sang digger myth took on racial and gendered dimensions. Sang diggers defied contemporary expectations for the role white men should play in society, and the myth ascribed to them characteristics typically attributed to women and African Americans. Some went so far as to claim they were not even white. Mountain communities and national writers thus drew on the racialized and gendered discourse of civilization to declare them the ultimate "other." In doing so, they reinforced and legitimized the changing political ecology both within Appalachia and outside of it.

Sang Diggers in a Local Context

The term "sang digger" predates the Civil War, but probably not by much. There may have been nursery tales told of mysterious sanger bogey men, as the anonymous Lynchurg writer intimated, but no written evidence exists of them from the period. The earliest reference to it appears in a journal of travels through southern Appalachia by an itinerant Methodist preacher, William C. Daily, who wrote of an encounter with "sang diggers" in the mountains of Watauga County, North Carolina in 1859.[5] It was during the Civil War that the term entered into widespread usage. At least two different companies of Confederate soldiers from the mountains were nicknamed the "Sang Diggers," or as the Auburn Company of the Second

[5] See entry for August 15, 1859 on page 155 in William C. Daily Journal, 1851-1861, Rubenstein Rare Book and Manuscript Library, Duke University, Durham, NC.

Tennessee Cavalry preferred, the "Sangs."[6] In all cases, the name was a point of derision, a way to poke fun at the mountaineers that may have had little to do with whether or not they dug ginseng. Confederate regiments from the Bluegrass region of Kentucky dubbed the Fifth Kentucky, whose members were from the mountainous east, the "Sang Diggers" because "there were jokes about their hurting themselves with army rifles and bayonets" (The Fifth Kentucky performed so effectively at the Battle of Chickamauga, however, that they embraced the name and "made it an honorable title"[7]). One commentator recalled that the name was "applied by the Federals to all Southern soldiers who were a little scant in their clothing."[8] Thus, while it did not introduce it, the Civil War at least strengthened the term in the national lexicon as a byword for the poor and ignorant Southerner.

In the decades following the Civil War, the growing number of strange and seemingly nomadic sang diggers in the forests of southeastern West Virginia generated tensions within mountain communities. "These semi-nomads are not regarded with much favor by the farming people near whose corn fields they often make it convenient to camp," the *Wheeling Register* remarked in 1883."[9] John McElroy, the editor of the *National Tribune* who grew up in the ginseng country of eastern Kentucky along its border with West Virginia, divided rural mountain society into two classes: sang diggers and valley farmers. "The two classes hate each other consumedly," he wrote regarding the Civil War era. Sang diggers are as "incurably lazy, shiftless, and immoral as the other class are upright, industrious, and manly."[10] These tensions were at least partly rooted in competition over ginseng. Unable to find the plant near their farms and

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[6] R.R. Hancock, *Hancock's Diary: Or, A History of the Second Tennessee Confederate Cavalry, with Sketches of First and Seventh Battalions* (Nashville: Brandon Printing Co., 1887), 18, 26-27; The Brown militia of Georgia was apparently also awarded the name. See "Ginseng," *MicMinnville Standard,* 3 October 1885.
[7] Ed Thompson, *History of the Orphan Brigade* (Louisville, KY: Lewis Thompson, 1898), 226.
[8] "Ginseng," *McMinnville Standard,* 3 October 1885.
[9] "Ginseng Root Diggers," *Wheeling Register,* 20 September 1883.
[10] John McElroy, "Where the Laurel Blooms and Men and Women Live Near Nature's Heart," *The National Tribune*, 12 August 1897.

unwilling to dedicate weeks to finding it, some farmers undoubtedly resented the strangers who seemed to be digging it out. Whatever their reasons, it is clear that in the late nineteenth century, ginseng exacerbated class tensions in Appalachian communities.

Many northern readers were introduced to real "sang diggers" immediately after the war, as northern journalists streamed into the South to report on life during Reconstruction and tapped into the perceptions of local elites. A correspondent from northern Virginia traveled through western North Carolina in 1867 and with the help of a "local informant," explained the conditions facing the people there for the *New York Herald.* "The wretched class known as the 'poor whites' abound in the mountains, and are met by the way side at every turn," he wrote. "Collecting ginseng is the favorite occupation. Sang, as they call it, is found at certain seasons in large quantities, and the whole community of mountaineers turn sang diggers and hunt the mountain side, through every loamy nook and 'cove.'" Reflecting local divisions over the ginseng commons, his informant called it "a nice business for lazy people."[11] In 1868, a resident of Logan Court House, West Virginia, reported to a *Springfield* (Mass.) *Republican* reporter about "a people living seventy years behind the age." They made their money trading fox skins, tobacco, and ginseng. "So many of the poor people depend in part or wholly upon the business that all other interests are neglected and no improvement or progress is made," he was quoted as saying.[12] Thus, information provided by locals helped craft the reputation of sang diggers among readers of northern newspapers immediately after the war.

Sometime in the early 1870s, as surveying and engineering crews for what would become the West Virginia Central and Pittsburgh Railroad entered the Greenbrier River basin, they made a remarkable discovery. There, amidst the "high mountains, the deep ravines, the impenetrable forests and the thick undergrowth of laurel [that] have for years repulsed the

[11] "North Carolina," *New York Herald,* 29 April 1867.
[12] "From West Virginia," *Springfield Republican,* 4 April 1868.

advance of the engineer and his compass," they found "a primitive people, whose lack of the conveniences and comforts of civilization and general ignorance of the outside world increased as they pushed their way through the forest."[13] These peculiar people, according to the *Baltimore Sun* article written on the encounter, knew nothing of politics, owned no clocks or watches, and were unaware that newspapers were printed. They slept on piles of straw in one-room cabins and wore homespun and animal skins. They spent their time hunting bear and deer, and in the summer and fall they wandered the hills in search of ginseng. "Their only contact with civilization before the railroad," the anonymous writer asserted, "was an occasional visit to the general merchandise stores, sometimes 50 and 100 miles distant, where they exchanged deer and bear skins and ginseng for powder, shot, coffee, and tobacco."[14] This advanced corps of progressive capitalists had "discovered" the sang diggers of Appalachia.

It was a culture clash of epic proportions. Indeed, according to the *Sun,* these sang diggers could not have been more different than the engineers who found them. The railroad men, imbued with "intelligence, culture, refinement, and progressive spirit," were the "advanced guard of capitalists" who would bring this "undeveloped land into communication with the outside world." They were, the story went, personally led through the mountains by Henry Gassaway Davis, the railroad and coal baron who became the state's U.S. Senator in 1871. Civilization dripped from their coattails as they tromped through the mountains in search of coal and timber. The sang diggers, on the other hand, knew nothing of the use of coal and cared nothing for culture or refinement. But they were happy in their ignorance, "not much given to musing upon the whys and wherefores which disturb his more cultured brother."[15] These people could not have had legitimate reasons for opposing the railroad, according to this

[13] "Julie, the Huntress," *Baltimore Sun,* 19 November 1888.
[14] Ibid.
[15] Ibid.

perception. They had no idea of how the world works. One industry booster accused the traditional sang diggers of being "shiftless, roving people, wholly incapable of keeping up with the march of modern progress."[16] In fact, its promoters were quick to point out, the railroads would be good for them, lifting them out of the squalor in which they lived.

As the gospel of modernization was carried into the mountains by railroads and their promoters, the epithet "sang digger" was deployed as a rhetorical weapon to denigrate opponents. When construction of a section of the B&O Railroad from Wheeling to Parkersburg along the Ohio River was held up in 1882, for example, the *Ohio Valley News* blamed it on the "sang diggers" for refusing to furnish the right-of-way.[17] Railroads were not the only harbingers of progress, however, and sang diggers did not symbolize only those resistant to them. Sang digger was also used in a variety of different contexts as a rhetorical weapon with political implications. During the run up to the 1877 vote for the location of West Virginia's capital, a choice between Charleston and Clarksburg, the *Weekly Register* in Point Pleasant and the *Clarksburg Telegraph* engaged in a war of words that often deployed the term to attack their opponents. Clarksburg newspapers called voters of the Third District, in which Charleston was located, sang diggers and accused them of living on "craw-fish and birch bark, with ginseng for dessert."[18] Pro-Charleston newspapers publicized such "libel" to mobilize voters against the Clarksburg location. Some mountain residents sought to distance themselves from association with the term and its implications by beating the development drum. In a speech supporting the renomination of Johnson Newland Camden to the U.S. Senate in 1893, one West Virginia resident defended his state against characterizations like the sang digger myth. He declared that "We do not belong to that class of people who climb the forest trees…to their hiding places

[16] R.R. Freer, "Ginseng Growers Meet," *New York Times,* 14 September 1902.
[17] *Wheeling Register,* 12 May 1882, 2.
[18] "Capitol Notes," *Weekly Register* (Point Pleasant, WV), 28 June 1877.

in order to escape the sight or avoid the sound of a locomotive engine."[19] No progressive-minded citizen wanted to be labeled a sang digger.

Many mountain residents associated the term specifically with an exploitative relationship to nature and used it to demonize those who abused the land. Virtually every pamphlet and booklet on ginseng growing that circulated inside and outside the mountains leveled accusations that sang diggers were incapable of conserving the plant. Although the term "sang digger" or "sanger" was not used widely until the late 1870s and 1880s, many of the components of the myth were bandied about during the debates over the West Virginia Ginseng Bill in 1873. William J. Woodell accused the sang diggers of Pocahontas County of having "no laws" and called them "idle and evil disposed."[20] But ginseng was not the only resource they were accused of abusing. In a boosterish letter to the editor of a West Virginia newspaper, a resident of Nicholas County criticized sang diggers for destroying the soil. "What is called improved land is often worn out," he wrote, "as most of the old residents would clear a field and when that failed to produce corn, clear another, until done with corn, as they depended more on the rifle and seng [ginseng]hoe for subsistence than on the plow." In his effort to attract migrants into the county, he assured them that "happily that class of farmers are disappearing with the game, but have left their mark…Do not think we are uncivilized, come and see for yourselves."[21] Similarly, a Nashville, Tennessee, newspaper equated sang diggers with "the farmer who destroys his capital, his land."[22] The same newspaper later relayed an anecdote about a sang digger to support the recently passed law banning fishing in many streams for

[19] Quoted in Lewis, *Transforming the Appalachian Countryside*, 58.
[20] [Icebound], "Charleston," *The Wheeling Daily Intelligencer,* 8 March 1878; H.B. 93: "A Bill prohibiting persons digging ginseng or other medical roots, or prospecting for the same on the land of another, without the consent of the owner, and prescribing punishment thereof," *Acts of the Legislature of West Virginia at the Eleventh Session, 1872-73* (Charleston: Henry S. Walker, 1873).
[21] "Letter from Nicholas," *Weekly Register* (Point Pleasant, WV), 30 March 1881.
[22] "Tennessee and the Next Census," *The Tennessean* (Nashville), 24 February 1880.

three years. In April of 1881, this correspondent saw a "lantern-jawed 'sang' digger" on the roadside selling redhorse, a fish native to Appalachian streams, which he had "caught on the spawning beds with a grab."[23] These articles were not about ginseng per se. Indeed, they used the term "sang digger" to characterize a people who lacked a progressive conservation ethic. Progress, to them, meant the conservation of resources, and sang diggers were the antithesis to these values.

These were precisely the reasons why West Virginians reacted so stridently to the description of their state's "Saugers" by the Lynchburg man. Indeed, the article in the *Martinsburg* (WV) *Democrat* touched off a firestorm. The *Weston Democrat,* a Lewis County newspaper, castigated the author for "willfully and maliciously exercising his disordered imagination to cast foul aspersions upon four of the finest counties in the State and the State at large."[24] The newspaper suspected the author was "imported from a superstitious corner of Massachusetts with a carpet bag and a few wooden nutmegs and was cheated out of both by his ideal 'Sauger.'"[25] Another long-time resident of West Virginia wrote to the editor of a newspaper in which the description was printed, accusing the author of spreading the "most abominable lies." "The native Virginians themselves exaggerate shamefully when talking about their more humble neighbors in the mountains," he wrote.

> Lawful marriage is known among them, and they are not a distinct class of population… They are simply the shiftless and unthrifty few scattered over the State, in nearly but not all counties. Back from the main highways and water-courses the most of them live, and they are types of the most shiftless in any State. The difference between them and the same kind here in Massachusetts is that they are more isolated and can more easily live without suffering in the mountains of West Virginia than human beings could here. They have plenty of game: deer, bears, coons, opposums, rabbits, squirrels and ducks, quail and partridges are all plenty…
>
> Every farmer in the State will get ginseng to take to the store to sell, if there is any near him…The citizens who have acquired the name of sang-diggers or sangers live

[23] "Tullahoma," *The Tennessean,* 24 April 1881.
[24] "A Remarkable Discovery," *Weston Democrat,* 23 February 1878.
[25] Ibid.

> away from the watercourses, and cannot get a chance to cut sawlogs, or stave timber or railroad ties without going a long distance, so they hunt and haul firewood, and for about a month in the year help the children gather ginseng. They usually lived in log cabins of one room, but they have fireplaces that will take in nearly a quarter of a cord of wood at a time, and never suffer from cold weather when at home. But this kind of population is changing all the time. They go to the railroads or to the rivers and get work and move their families from the mountains to the valleys, send their children to public schools, and make rapid improvements.[26]

Local Color Writers, Missionaries, and the Sang Digger Myth

Following the publication in the *Martinsburg Statesman,* the sang digger myth spread rapidly across the country, varying slightly with each publication. Within the year, the *Wheeling Intelligencer,* the *New York Sun,* the *Springfield* (Mass.) *Republican,* the *Democratic Advocate* (Westminster, MD), and the *Indianapolis Sentinel* published articles that were either identical to the one by the Lynchburg man, or heavily paraphrased.[27] The myth grew steadily over the next three decades, spread by newspapers and magazines, local color writers and missionaries. None of them cited the Lynchburg man and described the "Saugers" extravagant traits as if it were settled fact. They repeated the same assertions about their simple dwellings, exotic fare, unusual occupation, lawlessness, and distaste for marriage. No less than 20 articles were printed in major newspapers from 1878 to 1910 that sought to explain the curious tribe of mountaineers. In addition to newspapers, such as the *Chicago Times,* the *Chicago Tribune,* the *Cincinnati Commercial Tribune,* the *Louisville Courier-Journal,* the *Baltimore Sun,* the *New York Sun,* and the *Atlanta Constitution,* stories about sang diggers also appeared in *Harper's Weekly Magazine, Frank Leslies Popular Monthly,* the *Christian Union,* the *National Tribune,* and other magazines.[28]

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[26] "West Virginia's Ginseng Diggers," *The Wheeling Daily Intelligencer,* 20 November 1873.
[27] "The Saugers," *Indianapolis Sentinel,* 17 October 1879; *The Democratic Advocate,* 17 August 1878; *Springfield Republican,* 8 November 1878.
[28] "The Shy Sang Diggers," *New York Sun,* 30 December 1894; Clifford Smyth, "With the Sang Diggers and Witches of Old Kentucky," *Atlanta Constitution,* 22 February 1903; J.C. Watkins, "Ginseng," *Frank Leslie's*

WITH THE SANG DIGGERS

THE COURIER-JOURNAL, LOUISVILLE, SUNDAY MORNING, SEPTEMBER 3, 1899. SECTION 3

HOME OF A FAMILY OF GINSENG HUNTERS.
[From a photograph by Dr. M. D. Green, of Cincinnati.]

OFF TO CHINA—

ALWAYS A SHELTER FOR THE VAGRANT GINSENG DIGGER.

TICKED FIVE CENTURIES.

Famous Old Clock In Rouen Has Kept Time For 510 Years.

THE GINSENG ROOT.

THE GINSENG PLANT

OIL ON DUSTY ROADS A SUCCESSFUL EXPERIMENT IN CALIFORNIA.

STALEST BREAD IN THE WORLD BAKED IN AUGUST, A. D. 79.

THE OLD HERMAN CAR.

Figure 15. One of the many newspaper articles reporting on the sang diggers of Appalachia, 1899.

Popular Monthly, 39, 5 (May 1890), 614; "Ginseng Root Diggers," *Wheeling Register,* 20 September 1883; "The Sang Digger," *Coleman's Rural World,* 14 March 1900; "The Sauger," *Indianapolis Sentinel,* 7 October 1879; "With the Sang Diggers," *Louisville Courier-Journal,* 3 September 1899.

Writers emphasized the sang diggers' veritable frontier existence, living off of the "spontaneous productions of nature," hunting, fishing, and digging ginseng to scrape by. The initial reports of sang diggers were always extremely derogatory. "When a man or woman goes 'a sanging'," one quipped, "it is considered a step beyond taking to drink or thieving, or going to the poor house."[29] They were idle and shiftless and loathed work. A decade earlier, the *New York Herald* reported that "they are lazy and idle just to be lazy and idle, having not enough nobleness of feeling left to make an excuse for their mode of life."[30] Perhaps their biggest sin was that they had no respect for private property. "Having no property of his own, real or personal, he has but little respect for that of others," one newspaper remarked.[31] Puzzled by their existence and unsure exactly what to make of this strange group of people, newspapers obsessed over placing sang diggers within a typology of poor types. The *Chicago Times* called them a "cross between a ku-klux and a moonshiner."[32] The *Democratic Advocate* asserted that they "are an order of people somewhat lower than gypsies or tramps," but, according to another, they were "physically and mentally far above the Digger Indian."[33] These correspondents did not know what to make of the mountain sang diggers. All they knew was that they were not like them.

These articles, all of which were ostensibly non-fiction, influenced popular perceptions of Appalachia. Several stereotyped all mountaineers as diggers of ginseng.[34] The *New York Sun,* for example, reported in 1889 that "Nearly all the mountain people in Kentucky and Tennessee

[29] *The Democratic Advocate,* 17 August 1878.
[30] "North Carolina," *New York Herald,* 29 April 1867.
[31] "The Ginseng Digger," *Cincinnati Commercial Tribune,* 8 March 1889.
[32] Ibid.
[33] *The Democratic Advocate,* 17 August 1878; "Some Queer Human Beings," *Martinsburg Statesman,* 14 February 1878.
[34] For other examples of newspaper articles labeling all mountain people as sang diggers, see "Kentucky Mountaineers," *Morning Oregonian* (Portland), 18 January 1895; "The Hill-Country," *Appleton's Journal of Literature,* 21 December 1872.

dig ginseng and rely on it to furnish the food to tide them over the winter months."[35] Characteristics attributed to sang diggers—lazy, shiftless, and ambitionless, for example—also came to apply to mountaineers in general. Indeed, the mountaineer stereotype was an amalgam of many different traits and practices of mountain residents, and digging ginseng was one.

Around the same time that mountaineers drew fascination from the public for their knowledge of Elizabethan ballads, sang diggers aroused interest for their ancient superstitions regarding ginseng. Clifford Smyth was probably the first to record it. A veteran journalist, Smyth had gained fame covering the Hatfield-McCoy feud for Joseph Pulitzer's *New York World* and, later, the Panamanian uprising against Columbia for the *Atlanta Constitution.* He would later serve as the long-time book review editor for the *New York Times.*[36] In 1903, he was working for the *Atlanta Constitution* when he ventured into the mountains to report on the "sang diggers and witches of old Kentucky." Trading in many of the mountain stereotypes that helped him frame Appalachia as the "Land of Feuds,"[37] Smyth "discovered" a people so thoroughly behind the times that they applied the same ancient superstitions regarding the mandrake plant to ginseng. Specifically, they believed that if ginseng was pulled from the earth in the evening under a new moon, it made a moaning cry and left traces of blood on the ground. For Smyth, this was an "old world tradition that their descendants have localized in their isolated environment, thus preserving and bringing down to the present time a genuine legend, a fairy garland, unwithered by the breath of the modern spirit."[38] This specific legend of the mandrake actually dates to at least the first century, A.D., when the Roman physician and

[35] "Big Profits in Ginseng," *The New York Sun*, 17 September 1899.
[36] "Clifford Smyth, Writer, 77, Dead," *New York Times,* 2 December 1943.
[37] See Clifford Smyth and Hartley Davis, "The Land of Feuds," *Munsey's Magazine,* 30, 2 (November 1903).
[38] Clifford Smyth, "With the Sang Diggers and Witches of Old Kentucky," *Atlanta Constitution,* 22 February 1903.

historian Dioscorides first recorded the story of the screaming mandrake.[39] In the 1730s, William Byrd also suspected that ginseng was the same as the mandrake.[40] Whether or not the mandrake legends persisted into twentieth century Appalachia is difficult to tell, but Smyth's claim certainly reinforced the common perception of the mountains as a repository of Old World traditions.[41]

Newspapers, more so than literature, helped bring sang diggers national attention. In general, sangers were not the primary literary targets of local color writers who did so much to create the idea of Appalachia as a "strange land inhabited by peculiar people." Indeed, novelists and short-story writers like Mary Noalles Murfree, James Lane Allen, John Fox, Jr., and even Rebecca Harding Davis—authors who have attracted nearly all of the scholarly attention—did not describe sang diggers to their middle-class readership. Part of this can be attributed to the fact that, as Allen Batteau has argued, these writers wanted to portray Appalachia as a domestic haven. They wanted to sympathize with a group of family-oriented frontiersmen who had escaped the social disintegration and the environmental destruction of industrial capitalism. Cabins—simple yet quaint and comfortable and complete with handlooms and spinning wheels—were central to the setting. In his famous article, "Through the Cumberland Gap on Horseback," which appeared in *Harper's Weekly* in 1885, James Lane Allen was careful to suggest that digging ginseng and other roots and herbs was "formerly…a general occupation"

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[39] Charles Randolph, "The Mandragora of the Ancients in Folk-lore and Medicine," *Proceedings of the American Accademy of Arts and Sciences,* Vol. 40, No. 12 (Jan., 1905); H. F. Clark, "The Mandrake Fiend," *Folklore,* Vol. 73, No. 4 (Winter, 1962), 257-269.

[40] William Byrd to John Perceval, 20 August 1730, in Byrd, Byrd II, and Byrd III, *The Correspondence of the Three William Byrds of Westover, Virginia, 1684-1776*, 436.

[41] Smyth's claim is certainly plausible. The mandrake legends proved remarkably durable across time and space, spreading from the Mediterranean region through western Europe across two millennia. When William Byrd first learned about the Chinese regard for American ginseng around 1729, he thought that it "as fabulous as that extraordinary plant mentioned by Theophrastus," referring to mandrake. Byrd remarked that if ginseng "should be the same with Theophrastus's plant, the ladys will cry it down and with very good reason, because it will make their spouses exceedingly troublesome, and introduce a new way of shortening their own lives." See William Byrd to John Perceval, 20 August 1730, in Ibid.

and even then only the women and children took part. He acknowledged that "entire families may still be seen 'out sanging,'" in the "wildest parts of the country," but these were not his people. Similarly, William Goodell Frost, the Berea College president who did so much to influence the mountain uplift movement, was not talking about sang diggers when he described mountain people, whom he wanted to cast as worthy poor. "The mountain men were not the poor whites because they were landowners," he asserted in an article for *The Independent.* They also maintained a "code of honor" and a certain "moral standard." This depiction clearly contrasted with the sang digger myth.[42]

Missionaries proved to be more sensitive to the class dynamics in mountain society, and the sang digger myth did seem to inform many missionaries' depictions of mountain society. One of the first to incorporate components of the sang digger myth was Marion G. Rambo, a former resident of East Tennessee who became a Methodist minister in Iowa. The typical mountaineer, Rambo wrote in 1905, "understood the beauty and advantage of the simple life long before Charles Wagner became the special apostle of it beyond the seas." Because he was a hard farm worker and surrounded by the bounty of nature, he could afford to "forego the artificial luxuries" of the civilized world and avoid the "nervous tension which is experienced by his more strenuous brothers elsewhere." However, he argued that there was a poorer class of mountaineers, "denizens of the most inaccessible portions of the habitable parts of the mountains," that comprised roughly ten percent of the mountain population. This "submerged tenth" lived from hand to mouth and "were shiftless and lazy, utterly worthless as farm laborers." They were squatters who moved through the forests after they used up the soil fertility. They "know the mountains and the forests well" and "are acquainted with the haunts and habits of the wild beasts." Because he lacked self-respect and self-reliance, "he is given to

[42] William G. Frost, "Our Southern Highlanders," *The Independent,* 4 April 1912.

small pilfering."[43] These were what the eminent Appalachian scholar Cratis D. Williams called "branchwater mountaineers," which he claimed was the mountaineer of fiction.[44] It was also the class of mountaineers to which the sang digger belonged and the perceptions of which it helped inform. The cleavage of mountain society into classes caught on with other missionaries, who used Rambo's class distinctions to identify the populations that missionaries would target.[45]

In parts of western North Carolina, missionaries referred to this same class as "galax gatherers," although these depictions were not nearly as fantastic. In the 1890s, Harlan P. Kelsey, a Boston landscape architect who had come South to design the towns of Linville and Highlands, established a successful nursery in Linville that sold Appalachian flora largely to urban markets in the Northeast. He became the first to market galax, a low-growing evergreen perennial, to northern consumers as a Christmas decoration, the leaves turning a beautiful bronze in the winter months. He also marketed mistletoe, holly, princess pine, and other Christmas evergreens. In the winter of 1901, the influential Presbyterian missionary Edward O. Guerrant toured the backwoods of east Tennessee and western North Carolina. He observed that many mountain families resorted to gathering galax leaves. "It is a hard way to make a living," he wrote."[46] Guerrant would base the title of his 1910 book, *The Galax Gatherers: the Gospel Among the Highlanders,* on this encounter with the residents of northwestern North Carolina.[47]

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[43] Marion G. Rambo, "'The Submerged Tenth' Among the Southern Mountaineers," *The Methodist Review,* July 1905.
[44] Cratis D. Williams, "Who Are the Southern Mountaineers?" *Appalachian Journal,* (Autumn, 1972), 54.
[45] Samuel Tyndale Wilson, president of Maryville College and leader of the Presbyterian Synod of Tennessee, published *The Southern Mountaineers* in 1906. Four years later, Samuel H. Thompson published *The Highlanders of the South* on behalf the Presbyterian Church's Home Missionary Board. Both of these divided mountain society in similar ways.
[46] Edward O. Guerrant, "The Galax Gatherers," *Christian Observer,* 8 October 1902.
[47] Edward O. Guerrant, *The Galax Gatherers: The Gospel among the Highlanders*, 1st ed, Appalachian Echoes (Knoxville: University of Tennessee Press, 2005).

Guerrant and other missionaries used the image of the galax gatherer to raise public, and financial, support for their education initiatives in the mountains. Edgar Tufts, a Presbyterian minister and educator who founded what would become Lees-McRae College in Banner Elk, North Carolina, as a school for women, was appalled at the conditions of the galax gatherers. He admitted that such work "in some respects [has] been a great blessing to the mountain people."[48] A good galax puller could make $1.25 to $1.75 per day, selling leaves for twenty-five cents per one thousand. However, he argued that in other ways, it was a curse. First, he said, the women and children "are exposed in pulling the leaves to all sorts of weather," leading to sickness and, in some cases, death. Secondly, the children are kept out of school to pull leaves, which causes them to "grow up in ignorance and the homes left in filth and disorder." And finally, according to Tufts, dependence on galax gathering causes "the spendthrift habit [to be] abnormally developed," as they trade the leaves for goods at the stores and, thus, have no opportunity to save money.[49] Thus, the galax gatherers served the same function for these missionaries as the sang digger did for Rambo and others. While they were most fixated on the social traits exhibited by mountaineers, Rambo and other writers defined the mountain classes according to the way they used the forests. Sang diggers, galax gatherers, or the submerged tenth—however writers defined them—essentially lived on the commons, scavenging the forest to make a living.

Playing on these delineations within mountain society, at least one local colorist portrayed sang diggers as the "other" class of mountain folk. In John McElroy's 1897 serialized novel, *Where the Laurel Blooms and Men and Women Live Near Nature's Heart*, sang diggers served as the secessionist element in the otherwise homogeneous Unionist stronghold of East Tennessee. McElroy was himself a native of the ginseng country of eastern Kentucky who

[48] Edgar Tufts, "The Galax Industry," *The Christian Observer,* 27 December 1905.
[49] Ibid.

served in the Union army and spent time in Andersonville. After the war, he became a writer of fiction and non-fiction about the Civil War, an active member of the Grand Army of the Republic, and, eventually, editor and publisher of the GAR organ, the *National Tribune.* He began his novel, set in east Tennessee during the war, by dividing mountain society into two classes, who were "as different from one another as if belonging to separate races." One class, descended from the "hardy men who penetrated the mountains" were independent farmers who lived in "rude but comfortable homesteads, which supplied them with substantially everything they ate, used, or wore." The other class consisted of sang diggers, descended from English convicts and paupers.[50] The heroes of the story were mountain Unionists who despised slaveowners as lazy parasites who "eat bread that has not been airned by the sweat o' their own brows, as the Bible orders." They remained loyal to the old flag when the South seceded, but the Sang Diggers followed the slaveowners into war and did their bidding to persecute the mountain Unionists. Historians Tom Lee, Ken Noe, John Inscoe, and Samuel McGuire have thoroughly debunked the myth of Unionist Appalachia, arguing that Civil War loyalties were much more complex and complicated than the myth suggests, but the myth was important to contemporaries like McElroy.[51] While his depiction of mountain society was slightly more nuanced than others, he still essentialized an entire class of people as Unionists. His casting of sang diggers as universally secessionist contributed to the perception that sang diggers were fundamentally different from the "true mountaineers."

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[50] John McElroy, "Where the Laurels Bloom and Men and Women Live Near Nature's Heart," *National Tribune,* 12 August 1897.

[51] John C. Inscoe and Gordon B. McKinney, *The Heart of Confederate Appalachia: Western North Carolina in the Civil War*, Civil War America (Chapel Hill: University of North Carolina Press, 2000); John C. Inscoe and Robert C. Kenzer, eds., *Enemies of the Country: New Perspectives on Unionists in the Civil War South* (Athens: University of Georgia Press, 2001); Samuel B. McGuire, "East Tennessee's Grand Army: Union Veterans Confront Race, Reconciliation, and Civil War Memory, 1884-1913" (PhD Dissertation, University of Georgia, 2016); Tom Lee, "The Lost Cause that Wasn't: East Tennessee and the Myth of Unionist Appalachia," in Andrew L. Slap, ed., *Reconstructing Appalachia: The Civil War's Aftermath*, (Lexington, Ky: University Press of Kentucky, 2010), 293–322; Kenneth W. Noe, "Toward the Myth of Unionist Appalachia, 1865-1883," *Journal of the Appalachian Studies Association* 6 (1994): 73–80.

Civilization, Savagery, and the Sang Digger

Mountain town dwellers and farmers had their own reasons for criticizing sang diggers, but as the myth reached national proportions, it was abstracted from its local context and took on a more philosophical commentary on progress and civilization and the proper relationship between nature and culture. Indeed, the "discovery" of sang diggers in the wilds of Appalachia activated powerful cultural symbols with a long history in western civilization. Despite the fact that ginseng diggers were directly engaged in global commodity chains, the appearance of a seemingly nomadic group of hunter/gatherers punctured America's pretensions to civilization. It harkened back to the frontier, that "meeting point between savagery and civilization," as Frederick Jackson Turner famously defined it. In order to understand the popularity of the sang-digger myth and how it grew over time, we must return to a familiar discussion in American cultural history.

In 1893, Turner laid out his theory of frontier development, in which successive waves of pioneers, beginning with the hunter/gatherers and proceeding up to through the farmer and planter, subdued the forests, spread democracy, and amalgamated the different European ethnicities into one American race. Turner's theory of the advance of civilization was not new. In fact, in his speech to the American Historical Association quoted at length John Mason Peck's 1837 *A New Guide for Emigrants to the West,* in which he claimed that the earliest pioneers lived closest to savagery and depended largely on hunting and the "natural growth of vegetation," but they were soon supplanted by the sturdy agriculturist.[52] The progress of civilization depended on the displacement of the hunter/gatherer in both its Indian and white forms. It required replacing a culture that lived in the landscape with a culture that controlled

[52] Frederick Jackson Turner, *The Turner Thesis Concerning the Role of the Frontier in American History,* 3rd ed. (Lexington, MA: D.C. Heath & Co., 1972), 15-16.

and dominated it, of one that used nature with one that owned it and raised it. This was the Lockean version of progress adapted by American thinkers like Thomas Jefferson.

The boundary between civilization and savagery was never firm and fixed. It had to be constantly policed because, quite simply, some people found savagery too attractive. Edmund Morgan has shown that when the earliest settlers of Virginia arrived at Jamestown and first contrasted the European commitment to fixed agriculture with the Native American lifestyle based on hunting and gathering, many preferred the Indian way. They found in it much more freedom. Some even left Jamestown "to live idle among the Salvages," much to the chagrin of colony leaders.[53] Perceiving the same tendency 150 years later, Benjamin Rush mobilized the discourse of civilization to both condemn such tendencies and build a nationalism on Jeffersonian ideas of agriculture. In his 1774 speech to the American Philosophical Society, Rush divided nations into savage, barbarous, and civilized. "The savage live by fishing and hunting, the barbarous by pasturage or cattle, and the civilized, by agriculture," he posited, lamenting that "even the manners of the most civilized nations partake of those of the savage. It would seem as if liberty and indolence were the highest pursuits of man; and these are enjoyed in their greatest perfection by savages, or in the practice of customs which resemble those of savages."[54] By preferring to live in "idleness" in the forests, these people blurred the boundary between savagery and civilization, and many were uneasy with such a porous border.

Perhaps the most ardent and sustained attack against this way of life came from J. Hector de St. John de Crevecoeur, who dedicated part of his famous 1782 essay, "What is an American?" to denigrate the "wild inhabitant of these venerable woods." In the remote districts far from the seats of government, he wrote, there were men who "appear to be no better than

[53] Edmund S. Morgan, *American Slavery, American Freedom: The Ordeal of Colonial Virginia*, 1st ed (New York: Norton, 1975), 78.
[54] Rush, *An Oration, Delivered February 4, 1774, before the American Philosophical Society.*, 9.

carnivorous animals of a superior rank, living on the flesh of wild animals when they can catch them." According to Crevecoeur, these "back-settlers" did not move into the backcountry out of a preference for the freedom it enabled—for such an admission would cast doubt on the civilizing agricultural project he sought to promote—but, rather, they were driven there by misfortune, by idleness, by ancient debts, and "frequent want of economy." Once there, "In a little time their success in the woods makes them neglect their tillage. They trust to the natural fecundity of the earth, and therefore do little." Their property "no longer conveys to their minds the same pleasure and pride," and they fall into degeneracy. "Their wives and children live in sloth and inactivity," he wrote. "Their tender minds have nothing else to contemplate but the example of their parents; like them they grow up a mongrel breed, half civilized, half savage."[55] Crevecoeur upheld the agrarian standard not as the antithesis to manufacturing, finance, or centralized government, as later agrarians would, but rather as the antithesis to these backwoodsmen.

This was the reason why ginseng and other roots and herbs have been all but overlooked by historians of and in the nineteenth century. Virtually no one living then touted them as important commodities moving forward. Local historians who wrote county-level histories in the nineteenth century were obsessed with documenting the progress of their counties, the construction of railroads, schools, industries, agriculture—and those that do happen to mention ginseng were careful to consign it to a distant frontier past. Occasionally one might suggest that the root was still being dug but only by women and children in their spare time. Toward similar ends, William Holland Thomas never publicly discussed the Cherokee involvement in the ginseng trade. Throughout his adult life, Thomas was a vocal

[55] J. Hector St. John de Crevecoeur, *Letters from an American Farmer* [reprinted from the original edition with a prefatory note by W.P. Trent and an introduction by Ludwig Lewisohn] (New York: Fox, Duffield, 1904), 59-60, 63-66.

promoter of the Cherokee in western North Carolina. In attempting to secure recognition of the Cherokee as worthy citizens of North Carolina in the 1830s and 1840s, he was constantly trying to convince state and federal officials of the progress they have made. As John Finger has noted, this typically meant extolling their agricultural accomplishments and portraying them as an "idealized Jeffersonian stereotype."[56] Ginseng, too tinged with savage symbolism to discuss publicly, never appeared in his voluminous correspondence with government officials, despite his heavy involvement in the trade. It conflicted too much with the dominant narrative of civilization. This was the early impetus behind the sang digger myth.

Critics of such a life drew on the discourse of race, gender, and civilization to perpetuate the sang-digger myth. As cultural historian Gail Bederman has ably shown, the discourse of civilization was used extensively around the turn of the twentieth century to both defend and attack racial and gender hierarchies. According to the hegemonic theory of civilization in the 1890s, Anglo-Saxons stood at the pinnacle of civilization, and non-white peoples were lower down on the evolutionary scale. Gender distinctions became more pronounced the higher a race ascended up the scale. Civilized (Anglo-Saxon) men were chivalrous, worked hard, and protected their women. Women, for their part, mastered the domestic arts and focused on raising children in refinement and culture. Savage (non-white) men, on the other hand, avoided labor, lacked a protective instinct, and women were forced to perform exhaustive labor in the fields and forests.[57] Sang diggers offered a glaring and intensely problematic exception to these rules. These were, after all, part of "the purest Anglo-Saxon stock in the United States," or so claimed geographer Ellen Semple in 1901.[58]

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[56] Finger, *The Eastern Band of Cherokees, 1819-1900*, 81.
[57] Gail Bederman, *Manliness & Civilization: A Cultural History of Gender and Race in the United States, 1880 - 1917*, 4. Dr, Women in Culture and Society (Chicago: Univ. of Chicago Press, 2000), 26–28.
[58] Ellen Churchill Semple, "The Anglo-Saxons of the Kentucky Mountains: A Study in Anthropogeography," *The Geographic Journal*, June 1901.

Unsure of how to deal with this embarrassment to the race, some perpetuators of the sang-digger myth tended to darken their skin, lumping them in with swarthy gypsies and wild Africans. One newspaper described their skin not as white but as "yellow as parchment."[59] Marion Rambo claimed they had a "mixture of the aboriginal Indian blood."[60] Tellingly, when Ive Ingle and Tom Hodge were arrested for robbing a ginseng patch near Asheville (discussed in chapter 6), the *Asheville Weekly Citizen* mistakenly labeled them "colored."[61] "There is absolutely no glamor or romance around the people or their history," one especially brutal critic wrote, asserting that they were "as savage in instinct as those who roam the impenetrable wilds of Zululand and who seem even more impervious to the softening influences of civilization than do the benighted blacks of darkest Africa."[62] Critics also asserted that sang diggers lacked any gender distinctions—both men and women hunted and gathered ginseng—and disavowed any commitment to marriage. Women exhibited "no trace of womanly grace."[63] Readers of the *Cincinnati Enquirer* were shocked to learn of one West Virginia sang digger who salted down his dead wife to keep her body from spoiling.[64] In this way, critics used conventional ideas regarding race, gender, and civilization to effectively excise sang diggers from the white race, thus solving the problem they posed to dominant narratives of race and progress.

Yet, as it grew, the sang digger myth became more complex. It emerged at a time in which the lessons of savagery and civilization were being remade. Bedermen has argued that a crisis of American manhood precipitated this remaking. Challenges to Victorian ideals of manhood seemed to come from all corners in the 1890s: working-class and women's rights

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[59] "Like a Hog," *Cincinnati Enquirer,* 5 December 1891.
[60] Marion Rambo, "The Submerged Tenth Among the Southern Mountaineers," *The Methodist Review*, July 1905.
[61] "Chase them over Mountains and Down Ravines," *Asheville Weekly Citizen,* 23 July 1909.
[62] "Kentucky Mountaineers," *Morning Oregonian* (Portland), 18 January 1895.
[63] "North Carolina," *New York Herald,* 29 April 1867.
[64] "Like a Hog," *Cincinnati Enquirer,* 5 December 1891.

advocates; the proliferation of desk jobs and managerial jobs; the erosion of small businesses; racial progressives; the dearth of wars; and the closing of that great proving ground of American masculinity, the frontier. Men were, in effect, becoming too civilized, too separated from nature. Concerned about the way society was positioning them in this new order, some American men in the burgeoning middle class believed that some savagery would do a male's character good. Around the 1890s, "back to nature" became a rallying cry. Psychologists like G. Stanley Hall began preaching that American boys needed to return to "the primitive" in order to restore virility to American manhood. They formed clubs like the Boy Scouts and fraternal orders. They hunted big-game and moved west to become ranchers. They took up boxing. The manly self-restraint held up as the Victorian ideal no-longer seemed applicable to modern problems, and so millions of American men turned to a more primitive form of masculinity to help men feel like men. This impulse initiated a widespread movement that, as Roderick Nash and others have demonstrated, helped pave the way for greater protections of wilderness and natural resources, as well as greater emphases on nature study and naturalist writing.[65]

It was this context that gave rise to more sympathetic accounts of the Appalachian sang diggers and a romantic version of the sang digger myth. One of the earliest was an 1882 article written by Guy LaTourette, a New Jersey insurance salesman who moved to Fayette County, West Virginia, to manage a fire insurance company after the Civil War. In his article in the *Pharmaceutical Journal,* he portrayed the sang diggers as happy-go-lucky creatures who may have disliked work, but they were content and even admirable in some ways. "The sang digger is called lazy and shiftless," he wrote,

> but I confess that wandering among the mazes of the wild hills and mountains, by the side of rocky, foaming trout streams, and through the cool wind-swept forests in pursuit of one's livelihood is far more agreeable to one's senses and feelings than hoeing corn on a blistering hillside during the dog days, and even for those who do not have to dig

[65] Roderick Nash, *Wilderness and the American Mind* (New Haven: Yale University Press, 1969), 135–61.

> ginseng for a living, there is a strange fascination in the search for the plant that cannot be fully understood except by those who have experienced it.[66]

From his descriptions, it is likely that LaTourette engaged in some ginseng digging himself, no doubt a welcome distraction from his desk job. While it is hard to know LaTourette's sentiments regarding the back-to-nature movement, he adapted well to his new mountain home, for he remained there his entire life and later wrote articles for local newspapers recounting the early pioneers of Fayette County.[67]

Sang diggers found able defenders among proponents of the "back to nature" movement that was gaining steam in the 1880s. Some writers praised sang diggers as students of nature. "The digger is a pretty shrewd fellow about nature," one writer observed of the Tennessee herb diggers. "He was a weather prophet, a woodsman, and a natural astronomer from infancy, and the encouraging pay of the pharmacists made him a mixture of businessman, herb doctor, and botanist."[68] Similarly, the writer and naturalist Maurice Thompson found the sang diggers' ways alluring. Born in Indiana in 1844, Thompson moved to the hills of north Georgia with his family in 1853, where he "grew up a mountaineer boy."[69] Wandering the hills with bow and arrow, browsing and nibbling at the luxuriant flora that surrounded him, he developed an "unlimited love of savage, absolute freedom."[70] After fighting for the Confederacy, he returned to north Georgia and continued his "savage" life, but he also studied law, literature, and mathematics, and became a traveling naturalist, studying the flora and fauna across the Southeast. In the late 1870s, he embarked on a literary career and became a well-

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[66] Guy LaTourette, "Ginseng and its Diggers," *Pharmaceutical Journal and Transactions,* Vol. 12 (London: J.A. Churchill, 1882), 379-380.
[67] See, for example, "Early Days on Bracken's," *The Raleigh Herald,* 17 October 1907.
[68] "Tennessee's Herb Diggers Often Reformed Moonshiners," *Springfield Daily Republican,* 22 April 1895.
[69] Maurice Thompson, *Stories of the Cherokee Hills* (Boston, New York, Houghton, Mifflin and Company, 1898), 2, http://archive.org/details/storiescherokee00thomgoog.
[70] Ibid., 18.

known writer and naturalist, championing a return to nature as an antidote to excessive ciivilization. In an 1884 article for the popular magazine *Outing and the Wheelman,* which was published the following year as part of his book, *By-Ways and Bird Notes,* he recounted a summer spent with sang diggers in the mountains of North Carolina. He described them as a "queer folk; very interesting in a way, ignorant, superstitious, strong, stingy, and honest—a sort of mountain tribe to themselves." But he admitted that "I really had grown to like their careless, nomadic life, with its flavor of chestnuts and ginseng."[71] Thus, while Thompson still saw them as a unique "tribe," he appreciated their closeness to nature, their wild, "savage" freedom. Indeed, Thompson was an outspoken proponent of the back-to-nature movement and believed that the future of civilization depended on it. "There must be a safety-valve to any high-pressure system, social, moral, or intellectual," he wrote in the same article, extolling the reader to "let us go out occasionally to browse and nibble, and gather the savage sweets of primeval things; to revel in the crude materials of creation; to get the essential oils, the spices, the fragrance, the pungent elements of originality."[72] From his primitivistic perspective, sang diggers were romantic figures, living off the fruits of nature as denizens of the wilderness.

Primitive masculinity, however, posed a potential problem for white American civilization, and so did the romantic portrayal of sang diggers. White males like Theodore Roosevelt were obsessed with carrying the torch of civilization forward in time and space, and while a temporary return to savagery could help invigorate American civilization, a life of idle hedonism in which savages ostensibly engaged posed a threat to progress. At the same time they were preaching a virile manhood rooted in nature, Roosevelt and others advocated what Daniel T. Rodgers has called the "cult of strenuosity," which, in essence, meant that white American men should embrace their responsibilities of building a better and ever-expanding

[71] Maurice Thompson, *By-Ways and Bird Notes* (New York: John B. Alden, 1885), 96–97.
[72] Ibid., 104.

civilization. They should become excellent managers, factory workers, businessmen, imperialists, all for the good of progress. And when they engaged in recreation, they should do it for a purpose. "A life of slothful ease, a life of that peace which springs merely from lack either of desire or of power to strive after great things," Roosevelt told the Hamilton Club in his famous speech in 1899, "is as little worthy of a nation as of an individual."[73] The ideas embodied in the cult of strenuosity had deep roots in western history, stretching back to Puritanism and beyond, and it found fertile ground primarily in northern, middle-class protestant society through the nineteenth century. Rodgers argues that the cult of strenuosity that emerged in the late nineteenth century was, in part, a way to legitimize the factory-based economy and ennoble factory labor in the face of increasing criticism over the degradation of such work.[74] But the idea that strenuosity was the only way to advance civilization had implications for the sang diggers of Appalachia.

Sang diggers provided a cautionary tale for those who might be seduced by a primitive life on the commons. James Lane Allen called them "lotos-eaters," and it was an apt symbol to use. Alfred Lord Tennyson's 1833 poem, "The Lotus-Eaters," based on an Odyssean legend, told the story of Greek mariners who landed on a mysterious island, lush and covered with delicious and possibly narcotic lotos flowers that grew in the forest. The natives, "mild-eyed lotos-eaters," lived lives of indolence and pleasure off of nature's abundance in a "land where all things always seem'd the same." When the mariners ate the lotos, they lost all worry, ambition, and care for other humans, including their wives, and they drifted into a perpetual dream-like state. Once in this state, they realized that their previous lives of constant labor and strife was worthless, and they gave up on the "ill-used race of men that cleave the soil/ sow the seed, and

[73] Theodore Roosevelt, *The Strenuous Life: Essays and Addresses* (New York: Century Co., 1900), 2.
[74] Perhaps the most relevant passages on this are found in Daniel T. Rodgers, *The Work Ethic in Industrial America, 1850-1920* (Chicago: University of Chicago Press, 1978), 7–29.

reap the harvest with enduring toil." The poem became a commentary on Epicureanism, on the life of ease and pleasure, limited ambitions, and simple contentment.[75] By linking them to lotos-eaters, Allen and others were providing a commentary on the lives of sang diggers as well. They posed a similar philosophical conundrum. By all accounts, sang diggers avoided labor and lacked ambition, but they seemed content with their lives. Even their most critical observers occasionally remarked that "They seem to enjoy this nomadic life hugely."[76] Indeed, the sang-digger was "a happy fellow, not much given to musing upon the whys and wherefores which disturb his more cultured brother."[77] Yet, these were people who had turned their backs on society and on the civilizing project of the United States. They had no interest in wealth, time, property, or any kind of social commitment. In short, they disavowed every value necessary for civilization to progress. In progressive-era America, sang diggers became a symbol for this Epicurean philosophy, and the myth served to undermine it.

Medicinal Plants and Progressive Culture

Two novels written by progressive women eighteen years apart undoubtedly did more to popularize the sang digger myth than all the newspaper articles combined. Amelie Rives was a 30-year-old sensation among the New York literati when she published *Tanis, the Sang Digger* in 1893.[78] Born in Richmond to a family of wealthy Virginia aristocrats, she was raised near Charlottesville and married into one of New York's most illustrious families, the Astors, in 1888. Her first novel, *The Quick and the Dead?,* published that year established her fame as a writer, but her private life, especially her high profile divorce in 1893, generated as much gossip among

[75] For a good discussion on Tennyson's poem as a commentary on Epicureanism, see Malcolm MacLaren, "Tennyson's Epicurean Lotos-Eaters," *The Classical Journal,* 56, 6 (March 1961), 259-267.
[76] J.C. Watkins, "Ginseng," *Frank Leslie's Popular Monthly,* 39, 5 (May 1890), 614.
[77] "Julie the Huntress," *Baltimore Sun,* 19 November 1888.
[78] Amelie Rives, *Tanis, the Sang-Digger* (New York: Town Topics, 1893).

the New York elite, earning her the reputation of an independent and, thus, controversial woman.[79] In 1911, Gene Stratton-Porter, another progressive writer from Indiana, published *The Harvester* about a sang digger-turned-gardener. Stratton-Porter was one of the most well-known writers and photographers of her day, and she was heavily involved in many progressive causes, most notably conservation.[80] Her previous novel, *Girl of the Limberlost* (1909) brought her widespread fame. Together, *Tanis, the Sang Digger* and *The Harvester* drew on the tension between the savage and the romantic sang digger mythology, as well as perceptions of Appalachia, to weave stories of romance and nature. In doing so, they reveal much about how these progressive women viewed the proper relationship of nature and culture.

No novel drew more attention to the Appalachian sang-diggers than *Tanis, the Sang Digger*. Set in the growing western Virginia vacation destination of Warm Springs, *Tanis* was the first—and last—novel to cast an American sang-digger as a main character in a sympathetic role. It told the story of a "primitive princess," Tanis, a proud sang-digger who lived in the forest as an outcast from mountain society. Rives framed her story around the themes of savagery and civilization. George Gilman was a railroad engineer who had come South to help punch a track through the western Virginia wilderness when he encountered Tanis, half naked and ornery. He was fascinated with and captivated by her and brought her to visit his wife, Alice Gilman, a sickly city woman who hoped that being in the mountains would cure her neuralgia. Seeming dissatisfied with sang-digger life, Tanis persuaded Alice to hire her to perform some "honest work" around the house, and the experience changed her. She learned about love, work, kindness, manners, and God. But the pull of the mountains was strong and came in the form of

[79] "Amelie Rives, 81, Dies in VA," *The Washington Post,* 17 June 1945.
[80] Richard Armitage, "Gene Stratton Porter's Conservation Aesthetic," *Environmental History* 14, no. 1 (January 2009): 138–45.

an unconventional romance with a hulking, hard-headed, passionate, and violent man named Sam Rose.

Indeed, Rives uses two competing conceptions of love to frame the dichotomy between civilization and savagery. Tanis had deep feelings for Sam, but she knew he was a "bad man" (although we never know exactly how he earned this reputation) and wanted to remain with the Gilmans living around "respectable" people. Unfamiliar with her emotions for Sam but increasingly captivated by it, Tanis sought advice from both the Gilmans, who taught her about love, marriage, and commitment, and her Aunt Libby, another sang digger who believed that marriage unnecessarily complicated life. Tanis initially decided that Sam could not really *love* her. He only *wanted* her, and she feared that he could not provide the commitment she desired. She tried to subdue her passions, even going so far as to ask her Aunt Libby for a potion to "kill love," but she felt herself drawn back to the mountains and to Sam. "A wuz bawn i' the' mountains. We b'longs tuh each other," she told herself. "Seems like that thar house 'll kill me, sometimes. A wan't meant tuh live in a house, no more'n that deer wuz meant to wear a shell like a snail."[81] After Sam kidnapped Alice in a fit of revenge, Tanis made a promise to Sam in exchange for Alice's safe return to her husband. Readers are left purposefully in the dark about the nature of that promise. With Alice back safe, the Gilmans tried to persuade Tanis to remain in the valley, but Tanis's desire to be with "my people" and her commitment to her word nudges her to return to the mountains. "[I] loves th' valley, but th' mountains owns me," she told them.[82] The novel ends with Sam and Tanis sitting side by side in their mountain arcadia, the readers left wondering to what kind of relationship she had committed herself so that the Gilmans' marriage might be saved.

[81] Rives, *Tanis, the Sang-Digger*, 71.
[82] Ibid., 180.

By 1893, if anyone among the reading public had not heard of sang diggers, they had now. First published serially in the New York-based magazine *Town Topics,* Rives's book was published amidst great hype and introduced many middle-class northerners and southerners to the myth. It was reviewed by and advertised in many major newspapers and generally well-received. The Cleveland *Plain Dealer,* for example, called it "a most unconventional and brilliant piece of work." *Book Chat* called it a "savage poetry of untutored nature."[83] Some believed it revealed a "people as ignorant and wretched as in the worst hovels of the Czar's domain."[84] Others saw them as creatures of "intense fascination and remarkable characteristics."[85] They called Tanis a "devoted and noble savage."[86]

Scholars have rightly understood *Tanis* to be an overtly derogatory portrayal of mountain culture, but taken within the context of the the sang digger myth, it was somewhat sympathetic.[87] Rives may have had personal encounters with sang diggers around her home in Charlottesville, but she chose to perpetuate much of the sanger myth her reading public had come to know. Lacking houses, Tanis and her fellow diggers found homes in nature itself, a fact that Alice Gilman found both concerning and intriguing. Their manners and speech were crude. They lived by the whims of their passions, frequented witch doctors, believed in strange superstitions, and knew the woods and its biota like the backs of their hands. In an attempt to get her readers to identify with Tanis, Rives built a character that defied many of the negative stereotypes perpetuated by the valley inhabitants. Upon his first meeting with Tanis, George Gilman inquired of the locals who she might be. "I reckon, sir, she was a sang-digger," one told him. "They're a awful wild lot, mostly bad as they make 'em, with no more idea of right an'

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[83] *Book Chat,* 8, 11 (November 1893), 243
[84] Ibid.
[85] "Amelie Rives Chanler's Latest Novel," *Henderson Gold Leaf* (Hendersonville, NC), 19 October 1893.
[86] "Tanis, the Sang Digger, by Amelie Rives," *The Athenaeum,* 2 December 1893.
[87] Elizabeth Sanders Delwiche Engelhardt, *The Tangled Roots of Feminism, Environmentalism, and Appalachian Literature* (Ohio University Press, 2003), 38–46.

wrong than a lot o' ground-horgs."[88] Yet, as the novel unfolds, the Gilmans find Tanis to be more complicated. She was industrious and honest; ignorant but inquisitive; naïve but sharp. She was willing to work and, most importantly, she was virtuous. Tanis and Alice found common interests in their love of the mountains, their appreciation for nature, and, after Tanis learned about love and commitment, their femininity. Initially bragging about her bulging muscles and crude manners, she comes closer to Gilman's (middle-class) idea of femininity as she learns about love.

Tanis's commentary on Epicureanism was complicated. Sang-diggers, lotos-eaters in the flesh, were nature's children, living in a mountain paradise off the fruits of nature, numbed and rendered carefree by whiskey. The dramatic tension in the novel is essentially the conundrum of the mariner—whether or not Tanis would return to such a world or remain in the valley, in a land of hard work, refinement, and the "strenuous life." Tanis's return to the mountains is something of an unexpected twist, as it disrupts the triumphalist savagery-to-civilization narrative, but the resolution comes with the hope that she would carry her ideas of love and civilization back to her people. Rives did not convey a "back-to-nature" message or a plug for primitivistic masculinity. Sam was certainly nothing any middle-class man would want to emulate. George Gilman, the railroad engineer, was still held up as a more model specimen of manhood.

Gene Stratton Stratton-Porter's 1911 novel, *The Harvester,* offers an intriguing comparison to *Tanis, the Sang Digger.* The book was not set in Appalachia but in Stratton-Porters' native eastern Indiana near the fictional town of Onabasha, and its main characters were not sang diggers. Rather, *The Harvester* laid out a vision for nature and culture that reconciled the tensions between the romantic and the savage sang digger myth. The hero,

[88] Rives, *Tanis, the Sang-Digger*, 17.

David Langston, lives the life of a hermit with his dog on a piece of property he named Medicine Woods where he very conscientiously cultivated literally hundreds—Stratton-Porter names them all throughout the book—of medicinal roots, barks, leaves, herbs, seeds, and fruits. Langston, the consummate nature-lover, harvested them and sold them to the doctors and hospital in Onabasha. He was content with his bachelor life, but after having a dream of meeting the perfect girl—beautiful, innocent, virginal—he decided he would dedicate his life to attracting this girl to Medicine Woods, rather than leaving his hermitage for the city. In Thoreau-esque fashion, he single-handedly built a luxurious new cabin by Loon Lake on his property with this woman in mind, paying close attention to everything she might need. Then, after several months of waiting, he found his "dream girl" in Onabasha. Her name was Ruth Jameson, and she had come from Chicago a sickly girl to live with her Uncle Henry after her mother died. David married her to protect her from her violent and vengeful uncle and then worked hard to "earn her love" for the remainder of the novel, pampering her, buying her things, and teaching her how to commune with nature. Sober, industrious, moral, and responsible, Langston was the antithesis to Sam Rose.

Through the character of Langston, Stratton-Porter provided a masculine ideal for a new era of responsible stewardship of nature. Here was a man who demonstrated how to blend an ascetic life with a worldly life, an Epicurean life with a responsible life, a life of commercial success, ambition, and intelligence with an admiration and respect for nature. Perhaps most importantly, unlike Sam Rose, he was a reformed commoner. When Langston's mother died, he inherited six hundred acres of woodland. Rather than clear the land and plant corn, like his neighbors did, he kept it in forest and harvested the wild-growing medicinal herbs growing on his and his neighbors' woodlots, but this commons practice faced pressure from both overharvesting and deforestation for agricultural purposes. Growing scarcity of roots and herbs

forced him to rethink the commons idea. As he told Ruth, "When medicinal herbs, roots, and barks became so scarce that some of the most important were almost extinct, it occurred to me that it would be a good idea to stop travelling miles and poaching on the woods of other people, and turn our land into an herb garden."[89] So he began transplanting medicinal plants from other peoples' property to his own, building a garden that rivaled the best in the country. Some of his neighbors ridiculed him for refusing to drain his lake and swamp, fell the tress, and plant corn.[90] Others greedily eyed his ginseng beds, forcing him to take elaborate precautions to prevent theft. Langston remained something of an outcast from the rest of rural society, having closer ties to the town intelligentsia. Indeed, he presented a different land ethic than both the city dwellers and the rural farmers. Stratton-Porter was critical of the commons custom, and although she never discussed Appalachian sang diggers, they were clearly one of the foils to her story. Unlike them, her rural hero had realized the error of the commons ideal and amended his ways to be more environmentally responsible.

Langston's virtues were reflected in the landscape. Medicine Woods was a rural paradise for Stratton-Porter. In the forest around Loon Lake and Singing Waters, beds of ginseng, may apple, bloodroot, jimson weed, goldenseal, and dozens of other species of medicinal plants were scattered among the giant hardwoods. Wildlife abounded. Birds sang. In this paradise, there was no tension between man and nature. All species seemed to live in harmony. Even "the Harvester," Langston, who maintained a spiritual relationship with the creatures in the woods, often expressed regret that he had to dig plants up at all. Rejecting the prevailing agricultural trend of consolidation and expansion, he found a way to make money, contribute to society, and maintain his independence without destroying the natural landscape. It is unclear exactly how much money he made from selling roots and herbs, but he could afford

[89] Stratton-Stratton-Porter, *The Harvester*, 271–72.
[90] Ibid., 250.

to buy Ruth clothes, food, and materials for decorations around the house. He even hired an interior decorator.

The Harvester can be read as an attempt by Stratton-Porter to legitimize this new standard of manliness based on a cooperative relationship to nature rather than an imperialistic one, one that had a little more femininity in it. Langston's male ancestors were "men of the woods, hunters, trappers, herb gatherers" who instilled in him a love for dirt, forests, and campfires. His mother was from the country, educated as a teacher, who taught him the laws of nature and how to live a moral life, "to read good books, to study subjects that puzzled me, to tell the truth, to keep my soul and body clean, and to pursue with courage the thing to which I set my hand."[91] He was raised primarily by his mother, as his father died when he was young, and he remained sensitive about his manliness throughout the novel. When Langston first met Ruth Jameson, she was struck by his reluctance to kill a moth. "Why you are more like a woman!" she scoffed. Growing red with anger, he replied that "to appreciate beauty or to try to be just commonly decent is not exclusively feminine…If you should see me, much covered, grubbing in the earth or on a raft washing roots in the lake, you would not consider me like a woman."[92] Unsure whether Ruth really loved him and fearing she did not view him as manly, Langston sent Ruth away to Philadelphia to live with her ailing grandparents, hoping that the distance would put their relationship to the test and she would return to him with an entirely new love. Her grandfather was critical of Langston's manhood, dismissing him as a lowly denizen of the woods. While she was in Philadelphia, however, Langston was invited to give a speech to the "National Medical Association" in New York about his life's work, which proved to be a turning point. His speech was at once a defense of Stratton-Porter's masculine ideal,

[91] Gene Stratton-Stratton-Porter, *The Harvester*, (Bloomington: Indiana University Press, 1987 [1913]), 524–26.
[92] Ibid., 184.

shaped by nature and his mother's love and ultimately answerable to nature. He implored the physicians and pharmacists in the audience to teach their sons the value of a clean life close to nature. "In this way only can men arise to full physical and mental force, and become the fathers of a race to whom the struggle for clean manhood will not be the battle it is with us," he told them.[93] His speech was covered in the daily newspapers, and Ruth read about it in Philadelphia. When she showed it to her grandfather, he changed his view of Langston, calling him "one of nature's noblemen."[94] Her love invigorated, she returned almost immediately to Medicine Woods, bringing her grandparents to live with them. His standard of manliness vindicated, Langston settled in as husband and master of Medicine Woods.

In *The Harvester,* Stratton-Porter offered a critique of the prevailing trends of civilization in the rural Ohio River Valley from the perspective of a devoted conservationist. She believed that the best way to interest Americans in conserving and preserving nature was for them to develop a personal relationship with what Henry David Thoreau called the "reality which surrounds us."[95] As Kevin Armitage argues, her conservation ethic stemmed from a distinctly feminine perspective on nature, promoting the study of everyday nature over the more masculinized subjects of sublimity and grandeur.[96] Like other conservationists, Stratton-Porter had grown critical of the environmental costs of industrial progress, witnessing the clearing of forests for agriculture and the draining of the many swamps she played in as a child. The thematic dichotomy that she establishes in *The Harvester* is not savagery and civilization, as it was for Rives but, rather, city and country. Whereas the city represented moral depravity, artificiality, unhealthiness, and greed, the country represented simplicity, healthiness, and a

[93] Ibid., 526.
[94] Ibid., 554.
[95] Ibid, 79.
[96] Kevin Armitage, "On Gene Stratton Stratton-Porter's Conservation Aesthetic," *Environmental History* 14, no. 1 (2009): 138–45.

moral superiority rooted in a closeness to nature. Stratton-Porter turned the traditional view of cities as the apex of civilization on its head. To her, they were corrupt and unhealthy, both physically and spiritually. Yet, the country was not inherently better than the city. The urban-industrial system reached into the country as well, as demonstrated by Langston's neighbors who either sought to entirely rearrange local ecosystems for the sake of commercial agriculture or harvested roots and herbs from the commons until they were exhausted. Thus, Stratton-Porter offered criticism of both the urban-industrial complex and the prevailing rural relationships to the natural world. Indeed, Langston embodied her ideal relationship between nature and culture. He gave voice to Stratton-Porter's own conservation ethic.

Like *Tanis, the Sang Digger, The Harvester* was published amidst great hype, and also like *Tanis,* it did not disappoint. Indeed, Stratton-Porter's novel became something of a sensation. Doubleday, Page, & Co. exhausted the entire run of first editions in less than a week, prompting them to begin immediately on a second edition.[97] Reviewers compared Langston to Thoreau, to whom Stratton-Porter dedicated her book, and praised his "large heart and trained mind environed with primitive forces."[98] He was a hero to many, a "man of the woods and fields who draws his living from the prodigal hand of Mother Nature herself."[99] The novel developed such a following that it was made into a play and, then, in 1936, a major motion picture by the Hollywood studio, Republic Pictures. Yet, as the common lament goes, the movie was nothing like the book. There were orphans, a scheming mother, and outdated costumes. Langston lost his manly image and became something of a comic bumpkin, quaint, picturesque and entirely naïve. He was nothing of the model of masculinity that Stratton-Porter had envisioned.

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[97] *The New York Times,* 3 September 1911.
[98] "Novel with an Indiana Setting," *The Indianapolis News,* 16 September 1911.
[99] "The Harvester," *The Dailey Reporter,* 18 September 1911.

Both *Tanis, the Sang Digger* and *The Harvester* worked to bolster the changing political ecology of progressive America. In bringing national fame to the sang digger myth, Rives illustrated both the temptations of a wild, carefree life of harvesting the forest commons and the social and cultural degeneracy that followed from it. To Rives, there was a distinct binary between civilization and savagery. Male sang diggers were physically impressive but morally bankrupt. They lived among beauty and sublime splendor but they lacked any requisites of civility and treated their women poorly. Female sang diggers were much like men, proud of their strength and their ability to work hard and withstand hardships. There were certainly benefits to a life in the woods, but to Rives and others, it was not worth the cost. Like the lotos-eaters of legend, sang diggers provided a parable to those who might consider drinking the lotos nectar and living in the woods. Stratton-Porter, who was wary of progress, offered another parable that charted a middle course somewhere between the savagery of the woods and the civilization of the cities and the countryside. It blended primitivity and civility, masculinity with femininity. Thus, Stratton-Porter displayed a way to reconcile progress and simplicity, the cultural refinement of civilization with the moral lessons of the woods, thus maintaining what Leo Marx has called a "happy balance of art and nature."[100]

The key difference between Rives's and Stratton-Porter's woods dwellers, of course, was that Langston *owned* the land on which his herbs grew, at least after he became enlightened. He eschewed the commons tradition after the roots and herbs grew scarce and began stewarding plant communities and protecting them from destruction. This is what separated him from both his neighbors and the sang diggers. In enforcing his own property rights and maintaining a forward-looking, progressive attitude toward nature and business, he became personally invested in the long-term health of the small ecosystem on his property.

[100] Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (New York: Oxford University Press, 2000), 226.

Whether or not this was a viable solution to resource depletion and ecosystem degradation is beside the point. What matters for this chapter is that Stratton-Porter's novel reveals the progressive vision of order on the landscape. It served to bolster the changing political ecology by offering a compromise between the lotos-eaters and the cult of strenuosity. As a means of improving society, Langston manipulated and controlled the landscape, and although not to the same extent as his farming neighbors, it was measurably more than the sang diggers. He was, in essence, a small-scale land manager. The sang diggers of Appalachia, representatives of disorder, exploitation, and social irresponsibility, had no place in this progressive vision.

Undoubtedly, sang diggers continued to be a topic of conversation around hearths and campfires well into the twentieth century, but by the 1920s, the myth had largely dissipated among the literati. Parts of it had been absorbed into more general mountaineer, or "hillbilly," stereotypes, but ginseng stopped being the defining point for an entire class of people. Ginseng digging became merely one of the many peculiar habits of the branchwater mountaineers. One reason for this is likely the fact that the realities of mountain life had shifted. As the forests were cleared, the plant overharvested, and population increases brought more property boundaries and property laws, people found fewer opportunities to make money from the forest commons, and so they found other sources of income. The myth also disappeared because it no longer spoke to the needs of twentieth century Americans. Changes to the American landscape rendered common rights increasingly anachronistic, unsustainable, and backward, even in the New South, even in Appalachia. People who insisted on them were seen as, at best, quixotic and, at worst, criminals. From its origins in West Virginia politics, the sang digger myth grew to national proportions because newspaper reporters, missionaries, local colorists, and novelists wanted to distance themselves culturally from such commoners, and the

need for doing so disappeared with the commoners. The nature-culture relationship promoted by progressive-oriented individuals like Stratton-Porter, Rives, and others had prevailed.

EPILOGUE

The Decline of Root Digging and Herb Gathering and the Fate of the Commons in the Twentieth Century and Beyond

Over the latter half of the twentieth century, gathering medicinal roots and herbs became less and less important to local communities. There were many reasons—economic, ecological, and social reasons—for this shift. Perhaps the most important had to do with changes in drug markets. Another "therapeutic revolution" over the first half of the century saw the rise of antibiotics and synthetically created drugs. Although markets for indigenous medicinal plants remained relatively strong through the 1920s and 1930s, by around 1962, American pharmaceutical companies, physicians, and consumers all but abandoned botanical medicine. Pharmacists and physicians, many of whom maintained a prejudice against botanical medicine dating back to the heyday of patent medicines, eagerly embraced the new class of drugs and discarded botanicals.[1] Furthermore, the Pure Food and Drug Act of 1906 set up a regulatory regime that made it difficult for proprietary medicines, many of them relatively small ventures compared to the modern pharmaceutical corporation, to continue to compete.[2] Thus, there were few buyers like B. A. Fahnestock, who regularly purchased 5,000 pounds of bloodroot in the 1850s. The lack of profitability of botanical drug-making also played a role. According to Purdue Professor of Pharmacognosy Varro Tyler, pharmaceutical companies

[1] Varro E. Tyler, "Pharmaceutical Botany in the U.S., 1900-1962: Its Heyday, Decline, and Renascence," *Pharmacy in History* 38, no. 1 (1996): 20–23.
[2] James Harvey Young, *The Toadstool Millionaires: A Social History of Patent Medicines in America before Federal Regulation* (Princeton, N.J: Princeton University Press, 1961), 235–260.

moved away from botanicals in part because it was more difficult to patent. S.B. Penick, Jr., admitted as much to him in the 1970s.[3] By 1960, virtually all native American plants, including lobelia, bloodroot, sarsaparilla, sassafras, Seneca snakeroot, Virginia snakeroot, pinkroot, and hellebore had been dropped from the official U.S. Pharmacopoeia. May apple was the only one to remain.[4] Pharmaceutical botany was removed from the curricula of many pharmacy schools, and botanical drugs seemed to be on the verge of irrelevancy.[5]

The crude botanical drug houses in Appalachia either moved away from botanicals or got out of the business altogether. R. T. Greer's business declined precipitously after World War II. In 1945, it closed its Brownwood, North Carolina, herb warehouse, and the building eventually became a feed-and-seed store. Greer continued to operate the main warehouse in Marion, Virginia, until it, too, was sold in 1968.[6] Penick, the botanical giant based in western North Carolina, acquired New York Quinine and Chemical Works in 1947, which signaled their move away from botanicals. They subsequently started manufacturing antibiotics, specifically Tyrothricin, Basitracin, and Neomycin. However, financial troubles soon engulfed the company, and in 1967, it was sold to a large conglomerate, Corn Products Co.[7] The Wallace Brothers Company continued to operate in a diminished capacity throughout the 1920s and 1930s, but after World War II, they met the same fate. In 1944, its botanic depot in Statesville was razed, and in 1950, the last of the Wallaces in the business, Sigmond Wallace, closed shop.[8] Boone, NC,-based Wilcox Drug Company proved the longest lasting of the region's crude drug companies. The 1960s and 70s brought a renewed interest in herbal medicine, following the

[3] Tyler, "Pharmaceutical Botany in the U.S., 1900-1962: Its Heyday, Decline, and Renascence."
[4] Benjamin R. Hershenson, "A Botanical Comparison of the United States Pharmacopoeias of 1820 and 1960," *Economic Botany,* 18, 4 (Oct.-Dec., 1964), 342-356.
[5] Tyler, "Pharmaceutical Botany in the U.S., 1900-1962: Its Heyday, Decline, and Renascence," 21–22.
[6] Wyatt, R. T. Greer and Company Root and Herb Company Warehouse National Register of Historic Places Nomination, 10.
[7] "Corn Products Merger," *Wall Street Journal,* 21 Dec. 1967.
[8] Freeze, "Roots, Barks, Berries, and Jews: The Herb Trade in Gilded-Age North Carolina," 122.

folk revivals of the counterculture, which gave Wilcox a boost that sustained it until 1982, when it was sold to a Swiss company and reorganized under the name, Wilcox Natural Products, which lasted until 2000.[9]

Changing drug markets were not the only threat to root digging and herb gathering in the mountains. Habitat destruction and overharvesting continued to contribute to a general decline in the practices. Deforestation for agricultural purposes, as well as for homebuilding and other building construction, altered prime ginseng habitat, particularly in areas like western North Carolina. In West Virginia and other parts of central Appalachia, invasive surface coal mining was been even more destructive, physically removing the mountaintops that have served as commons areas and deforesting large swaths of land around the mining sites. Using surface mining techniques, giant corporations obliterated much of the forests in several central Appalachian valleys, flattened dozens of mountains, and filled valleys with earth. In addition to endangering human health and contaminating ecosystems for generations to come, mountaintop removal has been a severe threat to mountain people's way of life, which has historically been dependent on the forest.

Consequently, ginseng and a few other lucrative roots have continued to decline. "You could hardly ever find a little root of ginseng—it was about all gathered," Watauga County native Council Main recalled of the 1930s. This was a common perception. "There used to be a lot [of ginseng] around here," another resident agreed. "There is not much of it anymore."[10] Meanwhile, prices for ginseng have skyrocketed while harvests have steadily declined. In 2001, prices paid to diggers ranged from $180 to $300 per pound in North Carolina, and by 2014,

[9] Jackie Greenfield and Jeanine Davis, "Collection to Commerce: Western North Carolina Non-Timber Forest Products and Their Markets" (Raleigh: Department of Horticultural Science, North Carolina State University, 2003), 5.
[10] Beaver, Ballard, and Hicks, *Voices from the Headwaters: Stories from Meat Camp, Tamarack (Pottertown) & Sutherland, North Carolina*, 124, 198.

prices got as high as $1,000 per pound.[11] In 2001, just 46,000 pounds of wild ginseng was sold in the United States, although it generated more than $12 million.[12] As a point of comparison, in 1876 at the height of the post-war boom, 550,000 pounds were exported, generating $646,000. Indeed, wild ginseng has remained extremely scarce in most of Appalachia since at least World War II. A complex web of state, federal, and international laws has emerged since World War II that further restricted common rights to medicinal plants. It is now a common requirement across the region for harvesters to obtain and keep on their person written permission from landowners to harvest a wide variety of plants. Ginseng is, by far, the most heavily regulated. Diggers can only harvest during the season, which typically runs from September to December, depending on the state, and they cannot harvest plants less than five years old. In West Virginia, diggers are also forbidden from removing the seeds from a collection site and are required to replant them.[13]

In addition to ecological changes, the social renegotiation of common rights that began in the late nineteenth century continued well into the twentieth with the arrival of a wave of second-home buyers and migrants who held different values and attitudes toward private property. One study by the North Carolina Public Interest Research Group found that between 1968 and 1973, ten counties in western North Carolina experienced a 26 percent increase in the number of nonlocal land owners, a number that has undoubtedly increased in the last four

[11] Greenfield and Davis, “Collection to Commerce: Western North Carolina Non-Timber Forest Products and Their Markets,” 62; Kris Maher, "Demand for Ginseng Boosts Prices, Tempts Poachers," *Wall Street Journal,* 17 September 2014.
[12] Ibid.
[13] For more on ginseng regulations by state, see Kim Derek Pritts, *Ginseng: How to Find, Grow, and Use North America’s Forest Gold*, 2 edition (Mechanicsburg, PA: Stackpole Books, 2010); Persons, *American Ginseng*.

decades. The same study also found that landownership of native North Carolinians declined, while out-of-state landowners increased by 50 percent.[14]

Many mountain natives feel as though the commons has disappeared. Council Main, the owner of a used car dealership who grew up in the 1930s and 1940s in the Pottertown (now Tamarack) community of Watauga County, where people had gathered roots and herbs for botanical drug markets since Calvin Cowles started purchasing them in the 1840s, described this shift in tragic terms. "Up there under that Elk Knob, there was a lot of people who would gather roots and herbs," he told an interviewer in 2005.

> Back when I was little, you used to go anywhere and get it, and nobody would say nothing to you. That was the way of life, you know. If I found something on your land, I could get it. Or if they found it on ours, they could get it. You didn't have these 'no trespassing' signs. Seems to me if people get this property, the first thing they will do will be to put up a 'no trespassing' sign. And we never did do that. The tops of the mountains were just for everybody.[15]

Indeed, the forest commons was central to natives' community identity, and many felt that newcomers' enclosure of the commons was a threat to it. Leonard Greer, a native of Meat Camp, Watauga County, told an interviewer in 2010 that prior to their arrival, "There was somewhat of a feeling that those things that the land provided were intended to benefit everyone. Only those things built or cultivated were owned in total. It was shocking to the natives that newcomers would post land or prosecute trepassers."[16] Juanita Jones lamented that the forest is being "closed off and their houses are going to be going up and I hate to see it…When they come into an area, the first thing they do is put up a No Trespassing sign and they

[14] Appalachian Land Ownership Task Force, *Who Owns Appalachia?: Landownership and Its Impact* (University Press of Kentucky, 2015), 12.
[15] Beaver, Ballard, and Hicks, *Voices from the Headwaters: Stories from Meat Camp, Tamarack (Pottertown) & Sutherland, North Carolina*, 200–201.
[16] Ibid., 50.

don't want anything to do with the community."[17] George Washington Main, another Pottertown native, believed that the population growth spurred by in-migrants brought a general philosophical change toward the land.

> Many years ago, commons were common. Anybody who owned land, they didn't mind you going across it, if you didn't destroy it. They took a more philosophical view of it. It doesn't really belong to anybody, no matter how possessive you are. Because you're living much more close together, the attitudes change about land use and land access—and not for the better. I couldn't believe it, for example, in Watauga County, the first time I saw a gated farm. And people are now taking the attitude that 'I want mine, and you stay away from it,' but I feel free to share yours. I'm sorry, but that's the way it is, and we have a lot of people in Watauga County.[18]

The changes that have taken place over the past century have reduced the insulating power that roots and herbs—and the commons economy in general—once had. When hard times returned, as they did repeatedly since World War II, people no longer had the ability to retreat to the forests like they did after the Civil War. Roots and herbs were not the only resources affected by these changes. Beginning in the 1920s, the Asian chestnut blight destroyed that valuable tree. Hunting and fishing cost money and are subject to a wide range of regulations. Little by little, the shrinking and fragmentation of the commons undercut the ability of mountain people to make ends meet, pushing them increasingly into wage work.

Yet, root digging and herb gathering persists. Despite the gradual shrinking of markets, commons spaces, and herb populations, and changing economic opportunities, Appalachian residents, both old and new, continue to exhibit a remarkable tendency to piece together livelihoods, and the forest still plays an important role. Recent books by David Taylor and Kristin Johannsen colorfully document the persistence of ginseng digging.[19] Through her interviews with ginseng diggers in the Coal River region of central West Virginia, folklorist Mary Hufford has

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[17] Cooper, *The Pond Mountain Chronicle*, 188.
[18] Beaver, Ballard, and Hicks, *Voices from the Headwaters: Stories from Meat Camp, Tamarack (Pottertown) & Sutherland, North Carolina*, 212.
[19] Taylor, *Ginseng, the Divine Root*; Johannsen, *Ginseng Dreams*.

found that ginseng digging is still bound up in their identity, shaping the way they interact with the landscape and with each other. Place names such as Seng Run, Seng Camp Creek, and Three-Prong Holler still bear witness to the long cultural history of the plant in West Virginia. Before the Coal Valley's Sundial Tavern closed down in the late 1990s, a six-pronged ginseng top pressed in glass occupied a prominent place behind the bar, where tales of large patches and giant roots were still regularly swapped.[20]

Markets continue to exist for some Appalachian plants. The emergence of the herbal dietary supplement industry since the 1970s helped sustain a limited trade in some Appalachian plants, including bloodroot and black cohosh. Today, bloodroot is marketed primarily in Europe, where it is used as an anti-parasitic animal feed additive and appetite enhancer. Black cohosh is generating interest from some pharmaceutical companies for its value in treating menopausal symptoms. Other non-timber forest products, such as ramps (*Allium tricoccum*), morel mushrooms, and chanterelle mushrooms, have found niches in the recent "foodie" movement, while others—log moss, azaleas, mountain laurel, galax, and trilliums—make their way to markets for floral décor and ornamental nursery plants.[21]

While the *de facto* commons has been heavily fragmented in parts of Appalachia, in other parts, such as interior West Virginia, where patterns of corporate ownership of the mountain tops continues, it persists. In his interviews with the ginseng diggers of southwestern West Virginia in the late 1990s, Brent Bailey found that they hunt sang primarily on company lands, although they sometimes admitted not knowing who owned the land. "We just call it 'the mountain,'" one sang digger replied when he asked where she hunted ginseng. "Nobody lives

[20] Hufford, "Knowing Ginseng: The Social Life of an Appalachian Root"; Edwards, "Stewards of the Forest: An Analysis of Ginseng Harvesters and the Communal Boundaries That Define Their Identity in an Area of Environmental Degradation."
[21] Greenfield and Davis, "Collection to Commerce: Western North Carolina Non-Timber Forest Products and Their Markets."

up there, and my cousin's first wife's brother always used to tell us nobody'd mind if we went there. 'Course they'd never know, either."[22] Indeed, many still regarded sang digging as a "birth right" and remained defiant of any attempts to curtail their rights, whether it was perpetrated by the government or by corporate landowners. A 1983 survey of land ownership patterns in 80 Appalachian counties by the Appalachian Land Ownership Task Force found that nearly half of the 20 million acres surveyed were owned by absentee individuals and corporations.[23] In the upper Midwest, including Wisconsin and Michigan, intensive ginseng cultivation has all but replaced the digging of wild ginseng, but in the southern mountains, ginseng cultivation remains limited.[24] Root diggers and herb gatherers continue to obtain much of their commodities from private properties, whether their owners consent to it, as the law dictates, or not. A 2003 study found that 66 percent of the wild ginseng, 17 percent of galax, and 83 percent of bloodroot and black cohosh harvested in western North Carolina came from private lands.[25]

Those who have access to national forests have found that the *de facto* commons has been replaced by what Kathryn Newfont has called a *de jure* commons, one legally protected and managed by the U.S. Forest Service (USFS). The Appalachian Landownership Task Force found that some 8 percent of the total surface land in the surveyed area was owned by state and federal governments, including the USFS. From around 1914 through World War II, the USFS purchased large swaths of mountain lands from willing sellers, including timber companies, and by the end of the century, it owned nearly 5 million acres of land, mostly forested

[22] Bailey, "Social and Economic Impacts of Wild Harvested Products," 22.
[23] Force, *Who Owns Appalachia?*, 13–25.
[24] Close to 95 percent of the United States' cultivated ginseng crop comes from Wisconsin. See Brent Bailey, "Social and Economic Impacts of Wild Harvested Products" (PhD Dissertation, West Virginia University, 1999), 7; Alvar Carlson, "Ginseng: America's Botanical Drug Connection to the Orient," *Economic Botany,* 40, 2 (Apr.-Jun., 1986), 233-249.
[25] Greenfield and Davis, "Collection to Commerce: Western North Carolina Non-Timber Forest Products and Their Markets," 23, 29, 36, 53.

mountaintops. The federal government now makes decisions on who can harvest what resources. While timber has historically been given top priority, the USFS has increasingly given equal priority to a multiple uses, including hunting, fishing, hiking, and foraging. Newfont has found that the federal agency has been a more congenial neighbor than the National Park Service, which used eminent domain to acquire property and restricts hunting and foraging, but the USFS still generates mixed feelings in the mountains. As part of their mandate to manage resources according to conservation guidelines, the USFS requires plant harvesters to purchase low-cost permits, a constraint that many locals have found onerous. Ginseng has become so scarce that the USFS has severely restricted the number of permits it distributes, recently instituting a lottery in North Carolina to determine the lucky winners. Locals have mixed views of the forest service, but there is no question that they use national forests. A 1976 survey revealed that some 90 percent of respondents who lived near national forests used them regularly for multiple purposes, including hunting, fishing, firewood collecting and herb gathering.[26]

As they have done for generations, mountain people continue to turn to the commons—whether it is the *de jure* commons of national forests or the *de facto* commons—as a way to squeeze a livelihood out of rural areas that lack stable, dependable sources of income. Anthropologist Shannon McBride has found that natives in the more rural Graham County, North Carolina, continue to dig roots and herbs as part of their multiple livelihood strategies, although far less that they once did.[27] As one long-time resident of Graham County, North Carolina, put it:

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[26] Kathryn Newfont, *Blue Ridge Commons: Environmental Activism and Forest History in Western North Carolina* (Athens: University of Georgia Press, 2012), 52–110, 148–50.

[27] Shannon McBride also puts forth this argument in Shannon E. McBride, "Political Juxtapositions: Wildcrafting among Herb Diggers in Graham County, North Carolina (1900-2004)" (PhD Dissertation, University of Georgia, 2005).

> [Graham Countians] learnt how to live here by diversifying their income, by being flexible in so many different things that they found to do. From cutting timber, logging, splitting posts and rails, to gathering the log moss, catching spring lizards, to digging the herbs and selling rock. Just doing whatever they could find to do, you know, working on the farm, working in the plants and mechanicing—whatever they could find to do. And as you visit around you find a lot of people that's not really dependent on one occupation.[28]

In some cases, areas characterized by unstable wage work rely more heavily on non-timber forest resources. Brent Bailey's 1999 study of West Virginia ginseng diggers reveals a distinct correlation between the volume of ginseng sales and high levels of economic distress. In 1994, some 61 percent of West Virginia's ginseng came from an eight county-region in southwestern West Virginia that produces most of the state's coal. Boone County, which includes the Coal River valley, topped the list at 1,800 pounds sold that year. It was also the second leading coal producing county in the state. The valley sits on top of the state's largest coal field—the Kanawha coal field—and several large mining companies have been engaged across the valley in mountaintop removal since the 1970s. Increased mechanization and the vagaries of global markets make coal mining an unstable livelihood, and like they have done throughout their history when hard times descended upon them, they turn to the commons, or what is left of it. Coal River Mountain is the only intact mountain remaining in the Coal River Valley. It stands as both a figurative and literal battleground between the forces of modern capitalism engaged in mountaintop removal and a way of life built around the commons and the seasonal use of the forests. Thus, root digging, herb gathering, and the commons custom continues in Appalachia today, although it faces new enemies—social, cultural, economic, and ecological forces—that make it increasingly tenuous.

Appalachia has changed tremendously over the past hundred years, and the decline of botanical drug markets is just one more adjustment that mountain people have had to make,

[28] From an interview with John Jenkins in Ibid, 286.

one more instance in which they were forced to reckon with global market forces that were beyond their control. For generations, they have pieced together livelihoods from whatever resources were available. In the early nineteenth century, those resources came from the farm and the forest, and ginseng was the most important income-producing forest product. As markets for botanical drugs expanded in the late nineteenth century, they could find more marketable commodities in the forest. Some became entirely dependent on them. Most continued to use them to supplement their farm production. With the arrival of large-scale industry and the proliferation of wage work over the course of the twentieth century, mountain people used roots and herbs to insulate themselves from the destructive fluctuations in the global economy. Yet these commodities too were creations of global markets, and when these markets declined, they turned to other income-producing activities, including buying and selling used goods. And when global demands change and other markets for non-timber forest products expand or open in the future, they will find ways to supply them—if, that is, there are forest commons left.

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