A PUBLICATION OF THE FOREST HISTORY SOCIETY

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Forest History Today

MESSAGE FROM THE PRESIDENT

Expanding the World's Collective Wisdom

STEVEN ANDERSON

Libraries and archives constantly face the question of what information to preserve: Which documents, data, and other content might be valuable in the future? Which can be let go? The issue was the focus of an article in the May 4, 2016, edition of *The Chronicle of Higher Education*. In "The Risk of Digital Oblivion: What Knowledge Should We Save?" Abby Smith Rumsey recommends that "we should err on the side of including more rather than less, even if we have to keep most of the data at very low levels of curation until such time as people may be able to assess its value, 50 or 100 years hence." She might well have been describing the particular case of historical information related to the environment, since landscape and ecosystem changes often take a century or longer to unfold. One example of strategic preservation of information is the nineteenth-century ship logbooks containing temperature readings that now enable us to study climate change as it may affect us today. Similarly, data taken from long-term forest experimental plots starting in the early 1900s, even if not measured for many decades, can now help us understand forest change under different environmental conditions.

A basic tenet of ecosystem management and sustainability is to save all parts. The more diverse an ecosystem, the more likely it is to be resilient to disturbances and ecological change. Since we seek to be good stewards of the land, should we not then also seek to be good stewards of our inherited knowledge? From an archival standpoint, Rumsey suggests that "the faster the rate of cultural and ecological change, the more unpredictable will be the value of any given piece of information…the more culturally diverse our memory bank, full of seemingly outdated, obsolescent, or backward corpora of knowledge, the greater the chances that we will survive abrupt change through cultural adaptability."

The Forest History Society has been addressing questions surrounding the preservation of knowledge for seventy years. At its beginning in 1946, the Society's first charge was to identify, collect, and preserve forest history. That charge remains at the core of our work and our strategic priorities today. But knowledge is gained only when that information is organized and made accessible. The Society began to address this second aim, to expand knowledge of forest history, by creating unique and powerful bibliographies and databases in the 1970s. We transferred these resources to computers during the 1980s, and now, users can search across many varied content types with just a few keystrokes.

When we interpret this knowledge and help others to interpret and apply it to challenges faced by current and future generations, we translate knowledge into wisdom—the third aim of the Forest History Society's work. For the Society this is a multidirectional and collaborative process. We do this, in part, by publishing and helping others to publish a variety of books, articles, and visual resources. Society staffers organize and participate in workshops, symposia, and conferences where knowledge is shared. Our reference staff answer more than a thousand direct inquiries each year from students, teachers, landowners, journalists, foresters, scholars, and others with an interest in history, forests, and conservation. Our latest documentary *America's First Forest: Carl Schenck and the Asheville Experiment* was shown more than twelve hundred times on 346 PBS stations in forty-five states. A conservative estimate of the number of people who viewed the program tops 2.6 million.

In the coming months you will be hearing about exciting plans to build a new headquarters that will transform the way the Society works and contributes to the work of others. Our current facility has served us well for thirty years but is bursting at the seams. Space is critical because during the next two decades, the Society will be asked to accept and preserve the remaining large collections of paper records held by companies, organizations, and individuals working in forestry and natural resources. The new building will expand our library and archives and also include dedicated space for processing and digitization, addressing one of our greatest challenges to ensuring widespread public access to our resources. In addition, we will be able to offer new collaborative space for workshops, colloquia, and symposia on topics where a historical context can help inform forest-centric debates and issues.

With an effective collaboration involving the board of directors and other volunteers, Society staff, fundraising counsel, and dedicated donors, the Society has made excellent progress toward raising funds for our new home. Making this building a reality is our highest priority for the next two years, one that will increase our ability to preserve information, expand knowledge, and help society gain true literacy in the digital, textual, visual, and audio materials that trace the relationship of people and forests through time.

We envision the new library and archives as a future point of pride for the forest and conservation community. And it will be if, 50 to 100 years from now, we have resources at hand that help people assess the authenticity and value of information so that they can make intelligent choices for themselves and society. We trust you agree that this is a vision worth sharing and supporting. □

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ON THE COVER
An ausubo tree along Big Tree Trail in El Yunque National Forest. Photo by Tim Palmer.

Articles appearing in this journal are abstracted and indexed in HISTORICAL ABSTRACTS and AMERICA: HISTORY AND LIFE.

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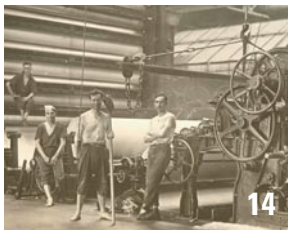


FEATURES

PHOTO ESSAY

DEPARTMENTS

EDITOR'S NOTE

by James G. Lewis

Earlier today I finished revising a guest column for the Asheville (NC) *Citizen-Times*, which you can read in its entirety on our blog, "Peeling Back the Bark." I wrote "The Gift of the Pisgah National Forest" for the centennial of the establishment of the Pisgah National Forest on October 17, 1916. Here are the concluding paragraphs:

> *In 1914 George Vanderbilt's widow, Edith, sold Pisgah Forest for a fraction of its value in part to honor and preserve the conservation legacy of her husband, and as a "contribution" to the American people. Pisgah Forest became the nucleus of the Pisgah National Forest, the first established under the Weeks Act, and Biltmore Forest School graduate Verne Rhoades became its first supervisor, in 1916.*
>
> *But that is the past. The future of the Pisgah National Forest (and its neighbor the Nantahala) is being written now. The U.S. Forest Service is drafting a forest management plan to guide how it manages the forests for the next dozen or so years. At open houses, the Forest Service has been hearing from citizens and groups like the Pisgah Conservancy to help it craft the forest's future. Like Carl Schenck and Vern Rhoades before them, Pisgah's current managers face great uncertainties, only now in the form of forest pests and disease, climate change, and a place so attractive that its visitors are "loving it to death." Those who cherish the Pisgah for its "beautiful, working landscapes" can honor those who gave us that land by continuing to sustainably manage it. That can ultimately be our greatest gift to future generations.*

The Pisgah National Forest is at a turning point in its history, and the Forest Service is trying to develop a forest management plan that, as Pinchot famously said, will serve "the greatest good for the greatest number in the long run." I don't remember where I saw the following adage but I know it was spoken about working in the Forest Service: it's not about managing the land, it's about managing people. Bringing a wide variety of stakeholders to the table and satisfying everyone's expectations is no mean feat. The challenge the U.S. Forest Service and other government agencies face, then, is one of inclusivity.

On a much smaller scale and with much less at stake, inclusivity is also a challenge I face as editor of this magazine. I try to maintain balance between interests in several informal categories. For example, the Forest History Society has members all over the world, so I often include an article or two about places or events outside North America. Doing so also alludes to the diversity of our archival collections and library holdings. After all, they have a global focus. What is in this magazine should reflect that. In this issue our global perspective is found in the "Biographical Portrait," which looks at the life and work of Fujikazu Nakagawa, a Japanese lumberman, a piece that came courtesy of the World Forestry Center. I also keep a global focus in mind when selecting items for the "Books and Films of Interest" column.

When it comes to articles that look at North America, naturally the majority of articles have focused on the United States. But because of the long-time relationship with our friends to the north, I strive to always address some aspect of Canada's forest history. In this issue Mark Kuhlberg brings the two countries together with his look at an American forester, Benjamin Avery, and his silvicultural program in Ontario. In future issues I would like to include more on Central and South America. If you are working on a topic that involves Latin America, or if you know someone who is, I invite you to consider submitting proposals and articles. With a nod in that direction, the "History on the Road" column offers a look at El Yunque National Forest in Puerto Rico, with text by Char Miller and beautiful photos by Tim Palmer.

I believe that the scales should also be balanced between public and private forestry, the latter of which can encompass either industrial or nonindustrial lands. Who owns private lands (and why) has undergone great transformation in the past few decades. To help us understand one of the major engines for that change, Brooks Mendell gives us a short history of timber REITs and TIMOs.

Regarding public forest management, I hope to complement articles on national forests with articles focusing on national parks as well as forest management at the state level, whether in the United States or abroad. Next year, in addition to producing our regular issue, I'll be curating a special issue on the National Park Service. But in this issue, Ronald Billings recounts the establishment of Texas Forest Service in 1915, and I wrote the text to accompany a photo essay on the Great Smoky Mountains National Park.

With articles on the United States I try to keep things regionally balanced as well. I am very excited about two articles in this issue. First, Jack Reid examines the role of the lumber industry in Arizona in influencing African American migration patterns in the mid-twentieth century. Then Leslie Kemp Poole illuminates an overlooked aspect of Florida's environmental history—the role of women in forest conservation. I hope to include more work on minorities and women in future issues. Both of these subfields are wide open and fertile ground for researchers and historians. Again, if you are working on such a topic, or know someone who is, please submit proposals and articles.

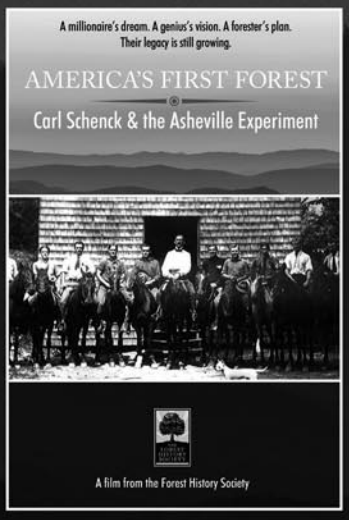
Achieving a good balance of subjects to cover in each issue requires a range of papers from which to select. Some of our articles are unsolicited, others come about through conversations at meetings and conferences, or are sparked by a question someone poses to Forest History Society staff. In short, if you know about a topic that would interest our readers or if you see an article that you think deserves to be reprinted in *Forest History Today*, please contact me via email at james.lewis@foresthistory.org. □

"I soon realized that German forestry was as impossible of success in the United States as was Indian or Swedish forestry. A brand-new sort of forestry was needed."

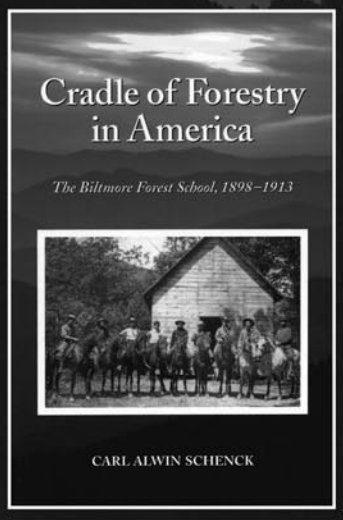
AMERICA'S FIRST FOREST

Carl Schenck & the Asheville Experiment

In 1895, at the magnificent Biltmore Estate nestled in North Carolina's Blue Ridge Mountains, German forester Carl Alwin Schenck began restoring the land using the "new" science of forestry. Then he established the Biltmore Forest School, the nation's first. Using a log cabin for their school house and George Vanderbilt's Pisgah Forest as their outdoor classroom, Schenck taught "his boys" how to manage a forest—and demonstrated how America could conserve *all* its forests. Based on Schenck's memoir *Cradle of Forestry in America*, the new documentary film *America's First Forest* tells the story of the birth of the American conservation movement through the efforts of one of its founders. The DVD includes this film and the 28-minute featurette *First in Forestry: Carl Alwin Schenck and the Biltmore Forest School*, adapted from *America's First Forest* and is ideal for classroom use.



DVD includes *America's First Forest* (55 min.)
and *First in Forestry* (30 min.)
$24.95



Cradle of Forestry in America:
The Biltmore Forest School, 1898–1913
by Carl Alwin Schenck, $14.95

To order the DVD and book, please visit www.AmericasFirstForest.org. Order both together and save!
Look for *America's First Forest* on public television stations around the country.

THE FOREST HISTORY SOCIETY

OFFICIAL SELECTION
Colorado Environmental Film Festival
2016

CRADLE OF FORESTRY
B F S
Interpretive Association
IN AMERICA

The majority of scholarship on what is called the Great Migration focuses on the large number of African Americans who moved from the South to northern industrial cities in the early to mid-twentieth century. However, a growing historiographic trend has been to study the smaller migrant flows to western cities such as Phoenix, Los Angeles, and San Francisco. This examination of migration to northern Arizona's lumber country expands our understanding of that phenomenon.

"I WANTED TO GET UP AND MOVE"

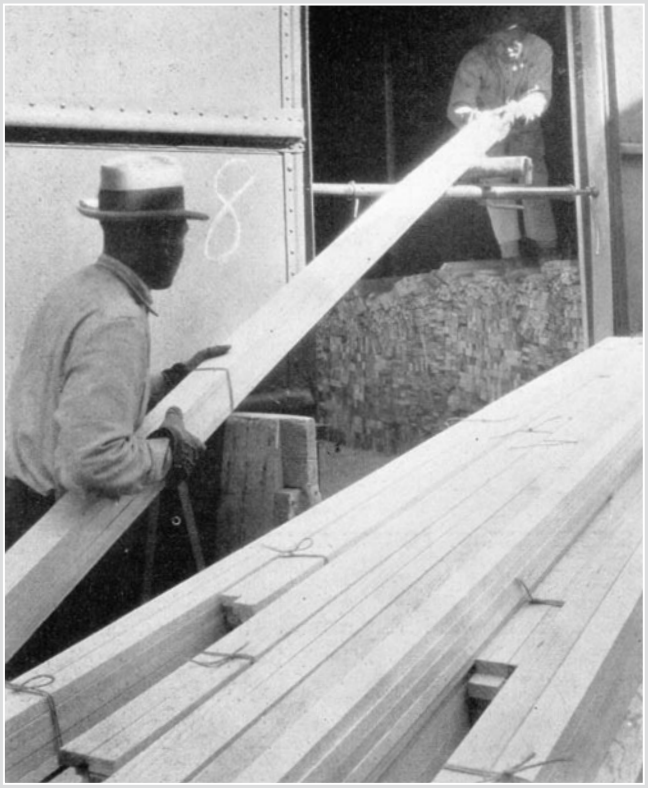
THE ARIZONA LUMBER INDUSTRY AND THE GREAT MIGRATION

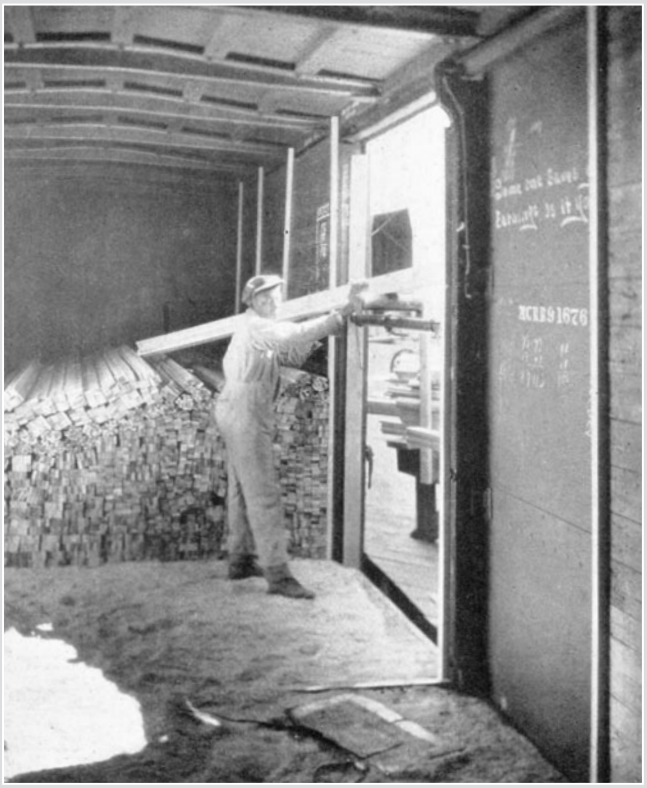
On July 5, 1944, twenty-two-year-old Katherine Hickman and her older sister arrived in Flagstaff, Arizona, each with two young children in tow. Rain was pouring down as they stepped off the train into the summer darkness, and the station was full of Native Americans congregating for the annual powwow celebration that weekend. The two African American women had left the South for the first time and knew very little about the West. With their only knowledge of Native Americans culled from popular culture, the pair were terrified. They clutched their daughters' hands and prayed they would not be scalped. It was only when they saw their father and their godmother waiting to take them to their uncle's residence that they began to feel more at home in their new community.

The previous month had been a busy one. With their husbands away serving in World War II, the two sisters had sold the family cows, hogs, and other property to follow their father, who had moved to Flagstaff in June, after the lumber mill in the small company town of Alco, Louisiana, had closed. The mill was the sole source of employment in the area, and its closure devastated the community. But for the logging men, the closing of the mill offered opportunity as well. Hickman's father immediately contacted his wife's three brothers, who had moved to Arizona to work in the lumber industry in the 1920s. These family connections provided him a place to stay while he found work in the more lucrative lumber business of northern Arizona. Katherine's and her sister's husband, both skilled lumbermen, would likewise relocate to Flagstaff after the war.[1]

The Hickman family was part of a wave of African American families from the rural South who moved west during the 1940s

BY JACK REID





AMERICAN LUMBERMAN, APRIL 10, 1926

The April 10, 1926, issue of the industry journal American Lumberman *included a 56-page special advertising section for the Cady Lumber Company of McNary, Arizona. Situated within the Apache Indian Reservation, the company employed whites, blacks, and Native Americans. The promotional section included photos of all three races at work, including these two photos of workers loading molding onto a railroad car.*

and 1950s in what historians have dubbed the Great Migration. Most continued on to California, but some settled in northern Arizona to work in the lumber industry doing jobs similar to those they had left behind. They moved west in search of opportunity and upward economic mobility, but also to escape racial discrimination in the Jim Crow South. Their experiences shed light on race relations in both the rural South and the West during the postwar years. Fortunately, Katherine Hickman and fifteen other African Americans who made the great migration from the South to Flagstaff recorded their experiences in oral history interviews conducted by historian Carol Maxwell between 1998 and 2002.[2]

ARIZONA'S SOUTHERN ROOTS

A significant majority of African Americans who moved to northern Arizona during the 1940s and 1950s had roots in the rural South—Louisiana, Mississippi, and to a lesser extent East Texas. Racial segregation and discrimination were pervasive in nearly all facets of life and shaped the everyday experiences of African Americans who grew up there. Towns were almost always sharply divided into white sections and black sections. According to Felton Combs, who grew up on a farm just east of Shreveport, Louisiana, during the 1930s and 1940s, "We was in a total black community. …Wherever the white people lived, their road was paved, and our road was just dirt." Despite the economic disparity that Combs recalls, this separation afforded African Americans some control over their neighborhoods and an escape from the Jim Crow laws and racial restrictions that governed all encounters between blacks and whites. But Combs and others never forgot who ultimately had control. As a child, Combs had watched as five white men beat to death with axe handles a black man who owed a storekeeper money. Thereafter, Combs's father kept his children within a five-mile radius of the family farm to avoid trouble. Although demeaning and often dangerous, segregation fostered the creation of insulated black communities where neighbors were able to sustain an African American–centered culture that defied the rampant racial oppression beyond their neighborhoods.[3]

Once African Americans had left their insulated communities, however, a far different reality greeted them. Not only were schools, restaurants, and movie theaters segregated, but blacks were expected to conform to whites' expectations of conduct as well. Conflicts could arise quickly whenever whites felt challenged, and often the only reasonable response for blacks to avoid violence, including lynching, was to appear compliant. Grady Graham recalled never being afraid of whites while growing up in Carthage, Mississippi, during the 1930s, but he knew he had to be careful around them. The number-one rule he learned in order to stay alive was to keep his distance from white women. Conversely, if a white man desired a black woman, "well, you'd just have to take it." Anyone who breached this rule would likely end up dead. As much as African Americans resented their treatment, many felt that their wisest choice was to pray for change rather than confront the violence and possibly wind up dead.[4]

Company lumber towns and mills in both the South and the Southwest provided similar experiences for African Americans: they were segregated and the African American communities practiced self-sufficiency. Logging was a major industry in

Mississippi, Louisiana, and East Texas until southern forests were depleted beginning in the 1940s. While some workers and their families occupied rural patches near the mills, others lived on the company grounds where the male breadwinners worked alongside whites and, to a lesser extent, ethnic Mexicans. Mexican workers were less common in Louisiana than in the Southwest, but they still were a large enough presence in some southern lumber towns that management built segregated living quarters for them alongside the separate white and black quarters. James W. Williams, who spent part of his youth in the Mississippi logging town where his father worked, distinctly remembered the segregated camp: "They had a fence around one of the camps, and the white people live over there on that side of the fence, and you live over on that side." When asked whether living in segregated quarters was demeaning, Williams explained that he knew it was not right, but "being raised that way, I felt more comfortable. I've always felt that if a person don't want to be around me, I don't want to be around them." Moreover, white men held all the management positions, had the greatest opportunity to perform skilled labor, and were paid higher wages than blacks and Hispanics for the same work.[5]

Despite the company town's segregation, there was only one commissary where workers could purchase groceries. Katherine Hickman recalled, "You would buy everything you needed at the commissary…but the prices were a little bit higher." Thrifty families like Hickman's saved money and kept from going into debt to the company by growing food in home gardens at their cabin and churning their own butter. Adult male incomes were crucial to a family's survival, but women such as Katherine and her sisters and mother stretched those wages by establishing efficient household work patterns.[6]

Other families lived outside town, where they sustained themselves by sharecropping for white landlords or, in exceptional cases, farmed their own land. For many rural blacks, lumber work was a useful side job if, for example, their cotton crop failed and they needed an alternative source of income. As was common in Mississippi and other southern states, Graham's family worked a white man's farm. The landowner furnished them with mules and plows and then kept half of what they produced. Some black families owned their own land. Williams's father was able to purchase his own land near Carthage, Mississippi, with money from an injury settlement after he lost his arm in a sawmill accident during the Great Depression. Others, like Combs's family, saved money and borrowed from relatives to purchase land.[7]

Whether they sharecropped or lived in company towns, most African American lumbering families were self-sufficient. Those who lived on farms built their own homes, raised livestock, grew food in their gardens, and often made their own clothes. Most Depression-era families recognized the truth in Graham's axiom, "If you didn't raise it or grow it, you didn't have it." Williams explained that during the 1930s he truly knew what it meant to be hungry. With few jobs that offered any kind of income, the only food his family had was what they could grow or slaughter. Because meat was hard to come by, they mostly relied on seasonal crops to sustain them through the year. Combs recalled that his father built a house with help from neighbors, his mother sewed most of the family's clothes from cotton feed sacks, and home remedies—not doctors—treated most illnesses. "We grew everything; if you name it, we grew it: watermelons, peas, butter beans. We had our own cows to milk. We had butter, we had chickens, everything."[8]

Despite their basic self-sufficiency, most African American families in the rural South were bound together in religious communities where neighbors looked out for one another. According to Combs, "If one family had something in a community, they divided it with everyone else. Everything was in common, you see. When we would dress a hog or something, Mother would send a boy over to the neighbor and give them some." Combs underscored the importance of religion when he added, "everybody had everything in common; it was kind of biblical in that way." Other black families had different experiences. When Williams bought a farm in 1934, his family moved into a new community. As outsiders and strangers, they experienced difficulty obtaining help from settled residents. It took time to forge community networks and to build trust and camaraderie, without which families struggled to get by.[9]

Most young people worked hard and grew up fast during the Great Depression. Young women took care of children and siblings, milked cows, prepared food, cared for animals, and worked in the fields. Boys too young for heavy lifting or dangerous labor often worked in the fields—picking cotton, for example—or performed low-risk tasks at lumber yards, such as stacking small pieces of lumber, for little pay. As a young boy, Graham worked long hours—often from before sunup until sundown—for the white man who owned his family's farm. "It wasn't no eight o'clock to four or five, it was dark to dark, not sun to sun," he said, laughing. It seems that by age twenty, most young men advanced into more dangerous and skilled work, either as log cutters or mill workers. In 1936, at age twenty-one, Graham began working as a log cutter for the Great Southern Lumber Company in Carthage, Mississippi, and eventually moved up to log scaler, the less physically demanding job of determining how much wood could be cut from each log. Because he liked the fast pace of working in the woods and "just wanted to get out and see the world," after two years he moved to Louisiana, where he continued to cut lumber for Great Southern.[10]

Graham was not alone. In interview after interview, respondents explained that in their late teens or early twenties they began working in lumber mills or in the woods logging. It was hard labor, and most did not make much money. Although timber cutting was a relatively skilled position, wages were low because of the generally depressed southern economy and the declining quality of the lumber being cut. Nor did it help that white men always made more money for the same work. Nevertheless, many young southern black men earned important experience in the lumber industry that would serve them for the rest of their lives. In the early 1940s, they began to hear from friends and seasonal lumber workers, who traveled west and returned south in the winter, that far greater opportunities and more money beckoned in the dense forests of northern Arizona. Many decided to leave.

ECONOMIC PUSH AND PULL

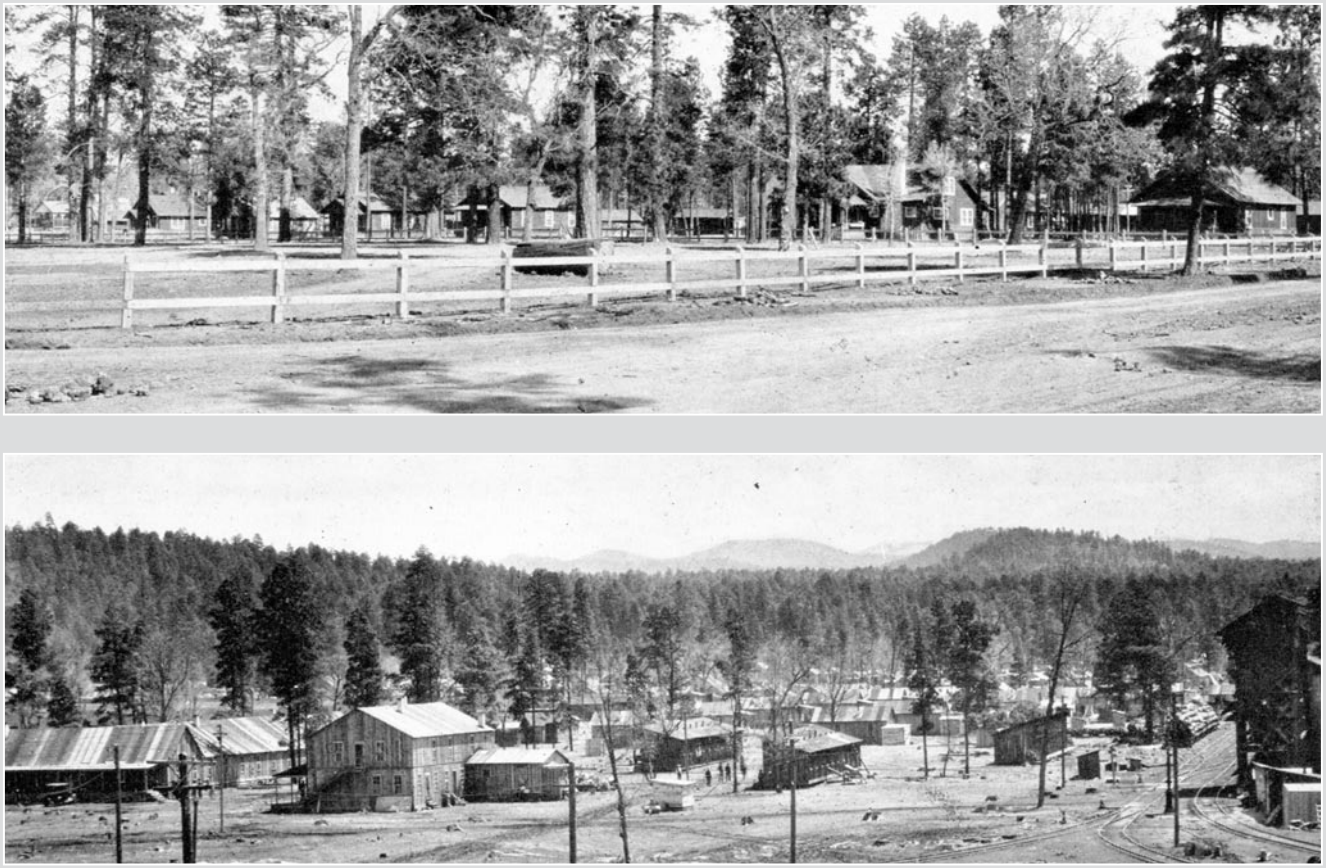
The Great Migration is often broadly divided into three corridors: northeast to the Atlantic Coast, particularly New York City; north to Chicago and the Midwest; and west to Los Angeles and the Pacific Coast. In many ways, the lumber migration corridor between Louisiana, Mississippi, and Texas to Arizona was already in place by the 1920s. By 1924, the Cady Lumber Company of Louisiana had depleted its Louisiana forests. When it failed in its attempts to buy new tracts of land in the South, the company bought tracts previously owned by the Apache Lumber Company

near Arizona's White Mountains. Subsequently, the company moved more than five hundred of its black laborers and their families to McNary, Arizona, as well as the buildings and houses, where Cady set up its new lumber operation. Several years later, in 1928, groups of black workers moved to Flagstaff to avoid a typhoid epidemic and to escape the isolation of the White Mountains. Because much of lumber work is seasonal, many African American laborers left Flagstaff in the winter and returned to work in the southern lumber industry, where they could supplement their income while visiting family and friends. In doing so, they made frequent use of the routes between the southern states and northern Arizona.[11]

The economic pull of northern Arizona on African American timber workers was compelling. By the 1950s, the best forests in Louisiana, Texas, and Mississippi were cut out. Timber harvested in the region was smaller and of poorer quality, and consequently brought lower financial returns—including lower wages—than trees cut elsewhere. By comparison, northern Arizona boasted a rich supply of premium lumber, which meant higher financial returns for lumber companies and higher wages for timber workers. The Second World War created a large demand for lumber, which in turn generated brisk competition for labor. After the high unemployment rates of the Great Depression, Flagstaff lumber companies began experiencing labor shortages. Rather than quickly dissipating, this boom market was sustained in the postwar years by the growth of metropolitan areas (specifically Phoenix), fueled by defense contracts as well as migration.[12]

Meanwhile, the rise of strong industrial unions during the 1940s led to more favorable conditions for experienced minority workers. As union members, African Americans and ethnic Mexicans were more likely to secure well-paying jobs in the lumber industry. Mirroring their successes in the mining industry statewide, unions in this period also led effective strikes for across-the-board wage increases at lumberyards in Flagstaff and northern Arizona. Word spread to lumber workers in the South of higher pay and greater benefits in Arizona. At the same time, Flagstaff lumber companies were posting job listings, hoping to entice skilled lumbermen to emigrate. African American workers interviewed fifty years later recalled abundant opportunities in northern Arizona. In addition, the existence of an established immigrant community meant that many southern blacks already had contacts in Arizona who could help them find work, secure housing, and make the move more easily. No doubt these migrants also hoped that they would face less racial discrimination in the West than in the Jim Crow South.[13]

Interviews suggest that most African Americans who left the South for northern Arizona did so in search of higher-paying jobs that they had learned about through family and work. While John L. Williams was serving in the military overseas during the war, a friend wrote letters boasting "about the hundred dollars that he was making" in Flagstaff. "And I couldn't stand that," Williams recalled. "I said if I got out, I had to go there and make me some



AMERICAN LUMBERMAN, APRIL 10, 1926

The photo on top is of "a typical residence street in McNary, showing roomy, comfortable homes" of Cady employees. Note the trees and wooden fence, indicators of some landscaping having been done in the neighborhood. At bottom is "The 'Quarters'—the separate residence district for the homes of all colored employees…" Train tracks are on the right, immediately adjacent to the neighborhood.

of that big money. So that's what I done. I came out here and went right to making that big money." Asked if he, in fact, had made high wages when he went to Flagstaff in 1946, Williams responded, "I sure did! Oh, plenty days we'd go there and make a hundred dollars a day"—a stark contrast with the fifty to seventy dollars he made every two weeks in Mississippi. Ben Shird, who came to Flagstaff in 1945, confirmed Williams's recollections, stating that he made more in one day cutting lumber in Flagstaff than he did in a week in Louisiana.[14]

Lumber company pay records from three days in 1954, well after the initial boom in logging in the area, are the only extant documents that list Williams's and Shird's daily wages. They show each man making roughly thirty-five dollars per day. Though much less than they recalled later, it nonetheless represented a substantial increase over their wages in the South. Even if one hundred dollars a day was not as common as Williams and Shird suggested, it is likely that when migrants first arrived in the mid-1940s, northern Arizona forests yielded more and higher-quality lumber, which would have translated into higher pay. Regardless, nearly all the interviewees *remembered* receiving a substantial increase in wages when they arrived in Flagstaff. At the very least, it reflects their excitement at the prospect of boosting their pay and the critical role this played in their decision to migrate.[15]

Although most interviewees stressed higher wages and upward mobility as the main reasons for moving to the West, escaping oppressive discrimination in the South was additional motivation. Mack Jones, who left Mississippi in 1951 to seek a high-paying job in northern Arizona sawmills, said, "Well, what you had to think about was, you wouldn't be lynched, and you would get the same wages that the white guy got." Records show that by the 1940s, after the unions organized the workers, wages for black men in the northern Arizona lumber industry were roughly equal to those of Anglo whites and Mexican Americans, though Anglos still held the bulk of managerial positions.[16]

TRAVELING WEST

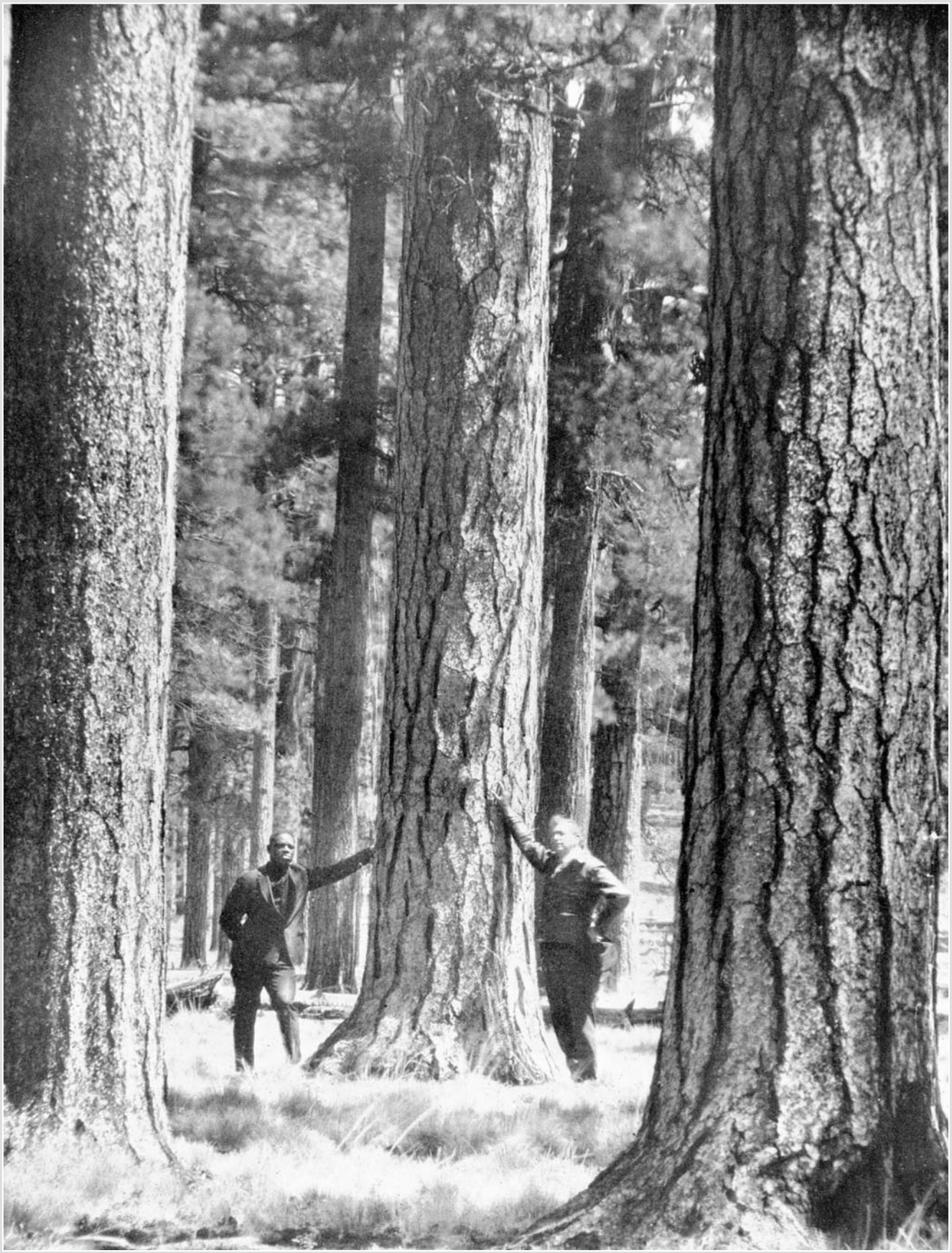
Single males or male heads of family commonly made the westward migration to Flagstaff and northern Arizona alone or with coworkers. After arriving, married men generally waited until they had secured employment and living quarters before sending for their wives and children to join them. In the meantime, most sent money home to support their families. These migrations provide a window into gender roles and female agency, as some women, often in their early twenties, refused to move west with their husbands, preferring to remain with their families in the South. Daniel Broomfield, who left Mississippi in 1945 to work in the Flagstaff lumber industry, was among those whose wives refused to move west. "I sent her money to come with," he said. When she failed to respond, "I said, 'Well, she don't wanna come, she don't wanna come.'" Although males were considered the heads of household, women were still able to control their lives in important ways, in this instance by choosing to not migrate.[17]

The westward migration of African Americans makes clear the era's differences in mobility for African Americans and whites. It also illustrates how blacks negotiated racial barriers while traveling. While in the South, blacks experienced a sense of autonomy and power within their own community; traveling made them feel exposed. Placed in uncomfortable situations and in close proximity to whites, they were unsure how to act. Most migrants bound for northern Arizona lumber camps took the train, which conveniently stopped in Flagstaff. Train cars were segregated throughout the South until roughly the stop following St. Louis; even then, many dining establishments at stops along the way either refused to allow blacks inside or imposed segregated seating. Jim Crow laws and customs created anxiety and caused confusion for some African Americans, especially as they crossed state lines and encountered unfamiliar or different rules. Broomfield, for example, was uneasy sitting next to white people on the train from Jackson, Mississippi, to Flagstaff, where he followed his parents in 1945. After switching trains in Amarillo, Texas, an older white woman sat down next to him. Years later, he recalled that "I wanted to get up and move, and I did!" He explained, "Well, I was just scared. I don't sit aside no white person." The woman, who turned out to be from California, asked, "What you runnin' for?" To which he responded, "Well I'm not supposed to be sittin' beside you." The woman explained that he could sit beside her all he wanted. Later, she took him to the dining car and bought him lunch. When people stared at them, she told Broomfield, "Don't worry about it, they ain't gonna say a word."[18]

Although most migrants rode the train to Flagstaff, a few traveled west in automobiles. Because of wartime rationing, not many working-class African Americans owned automobiles. Few cars were produced during the war, making them scarce and generally affordable only to more affluent whites. Although automobiles offered an enclosed space and a degree of separation from racial discrimination, they frequently raised other problems. African Americans who traveled by automobile were typically unable to find adequate lodging; forced to sleep along the roadside, they hastened to their destinations. Dining along American highways was also problematic, as most cafes and restaurants enforced discriminatory practices that African American motorists tried to avoid by preparing their own meals. Even stopping to use the restroom was challenging.[19]

James W. Williams's experience driving west with three other lumber workers in 1942 illustrates these problems. Asked if the trip had been peaceful, Williams retorted: "Peaceful, yeah. Such as people could be. At that particular time you couldn't sleep or eat anyplace. You had to get a store-bought lunch if you were going to eat, no cafés." Pressed to explain, he elaborated: "You could go to a café, but you had to go around back.… You'd have to drive all night and have to look for the colored part of town, maybe you could find a room." Rather than go through this charade, Williams and his friends stopped along the side of the road to sleep—four adults in the car—and then woke up and kept driving. "We never slept in a hotel or motel," Williams recalled. Whereas in the South, African Americans were familiar with segregation laws and knew where to find all-black communities that would offer them hospitality, on the road the situation was much different.[20]

Problems of this nature led Victor Green to publish a "negro travel guide," called the *Green Book*, aimed at helping African American travelers find accommodations while "avoiding humiliation." Published from 1936 to 1966, the widely read booklet offered state-by-state and city-by-city listings of fuel stations, restaurants, and lodging establishments that catered to African Americans. In a sense, the *Green Book* allowed blacks to extend along highways across the country the insulated communities in which they lived and exercised control, thereby avoiding humiliation and violence. Even with the stark differences separating African American and Anglo versions of mobility, the automobile



AMERICAN LUMBERMAN, APRIL 10, 1926

The American Lumberman *had several photos of men standing among the white pine trees for scale. There are several with two white men in the photo, and several with a single African American man. This is the only one with both a white and black man.*

was still seen as a fleeting symbol of freedom and autonomy from the racial politics that dominated American life, especially in the South. The automobilist was able to control, to some extent, his or her pace, direction, and destination. Blacks could ride in the driver's seat, instead of being forced to the back of the bus. And yet, this autonomy went only so far. Every driver and passenger would eventually have to pull over and interact with strangers, some of whom might be hostile. Even so, the *Green Book* increased the sense of freedom for African Americans moving across unfamiliar terrain.[21]

ADAPTING AND ADJUSTING TO ACHIEVE SUCCESS

African Americans who participated in the Great Migration encountered different circumstances depending on their destination. The dominant course was north to big industrial cities like Chicago, Cleveland, Detroit, and New York, where low-level positions in defense industries were open to African Americans during the war. Aside from defense work, the steel and meatpacking industries appear to have commonly drawn African Americans north. Once there, they often moved into crowded and unhealthful inner-city tenements. Those who moved to the urban West during the early 1940s commonly found work in the defense industry or in the fields outside Los Angeles and Phoenix. Rather than offering freedom from residential discrimination, communities like Phoenix were segregated, with most African Americans and ethnic Mexicans living in disease-ripe slums on the south side of the city. Other southern blacks settled in seasonal labor camps, where conditions for minority workforces were highly exploitive. Still other African American migrants moved to rural towns centered on the cotton industry south of Phoenix.[22]

Blacks who moved to Flagstaff in the 1940s and early 1950s discovered a small but quickly expanding mountain community of roughly five thousand people. By 1940, the population had grown 25 percent in ten years. John L. Williams recalled that when he arrived in 1944, most of the streets were unpaved, even downtown, and neighborhoods south of the railroad tracks lacked sidewalks. Although other sources report that Route 66 and several downtown streets were, in fact, paved by 1940, Williams's recollection provides insight into the process of forging an identity within a small and rustic but growing town. What is now Northern Arizona University was then only a small teaching college consisting of a few buildings scattered south of Flagstaff's downtown. Today's south campus was wooded hunting ground. Apart from lumber mills and the small community of Sunnyside, nothing interrupted the tree-filled landscape east of town.[23]

Most Flagstaff residents were Anglo and lived north of the train tracks that divided the community both spatially and racially. The town's large minority of ethnic Mexicans resided alongside a smaller community of African Americans south of the tracks. Native Americans, mostly Navajo and Hopi, lived in town and on nearby reservations, or commuted back and forth. Although Flagstaff was less overtly segregated than southern communities, there was a clear separation between white and minority homes and businesses.[24]

Even with a severe housing shortage resulting from the town's rapid growth in the mid-1940s, family and friends helped African American migrants find places to live and work fairly soon after they arrived. Most accommodations were far from desirable, however. Few oral history accounts dwell on the crowded and uncomfortable housing; interviewees instead talked about their excitement at arriving in northern Arizona and reestablishing contact with relatives and acquaintances. Friends and family members often met migrants at the train station and directed them to boarding houses or residences on the town's south side. Some, like Broomfield, asked strangers to direct them to the "negro quarters" and were pointed toward the bustling social center of South San Francisco Street (south of the tracks from downtown), where African American restaurants, clubs, and bars were interspersed with ethnic Mexican establishments. From there, members of Flagstaff's relatively small and close-knit black community might direct newcomers to wherever they needed to go. Many of the new arrivals stayed in boarding houses or with acquaintances until they could find jobs and begin looking for homes of their own. Their ability to use connections within the community, often acquaintances they had known previously in the South, was critical in helping them become situated in a new, unfamiliar environment. In effect, migrants were able to recreate some aspects of the communities they had left behind, even though there were far fewer blacks, and the racial order was substantially different, in Flagstaff.[25]

Most men with prior experience and work connections quickly found employment with either Saginaw and Manistee Lumber or Southwest Lumber Industries, the two major companies in the area until 1953, when Southwest took over its major competitor. Raymond Flemons simply showed up with his friends who worked at the mill and was hired on the spot, without so much as an interview. But not everyone was so lucky. Broomfield was unable to find work for six months. Until he got a position at the lumber mill, he survived by selling liquor to Native Americans, who were legally prohibited from purchasing alcohol in bars. Previous experience and company connections were critical in landing a job in the lumber industry.[26]

As in the South, lumber work was divided between cutting logs in the forest (near the Happy Jack logging camp forty-two miles south of town) and working in the sawmills (along the railroad tracks within city limits). Ben Shird already had a job when he arrived in 1945: he said he had been recruited from the South as a skilled timber feller. He worked spring, summer, and fall at Happy Jack and during the winter at the sawmill in town. Although the work was difficult and dangerous, Shird moved through the ranks to higher-paid positions. Shird said his approach was to let his boss know of any job he desired so that when an opening came up, the boss knew Shird was interested. Shird's ability to navigate Flagstaff's racial politics was also likely crucial to his success. For example, it would have been important to know how aggressive he could be to gain respect from white employers while not directly challenging the racial norms.

James W. Williams also quickly found work because of his previous experience in the South. Like Shird, he had a seasonal job cutting timber for Southwest Lumber, then worked at a local steam plant in the winter. Since most of the new arrivals had lumber industry experience, the work was familiar—only in Flagstaff, they were earning higher wages and working with larger trees. Even though whites still held the management positions, blacks had more potential for upward mobility than in the South. Company records show that by the late 1940s, African Americans were working in the upper levels of skilled labor, such as lumber foremen in charge of cutting crews, and earning wages in the top bracket below management.[27]

Still, blacks were not equal in the white-dominated economy. African Americans might earn more in northern Arizona and

NORTHERN ARIZONA UNIVERSITY, ITEM NUMBER 18609

An African American worker at Flagstaff's Southwest Lumber Company in 1947.

move to higher positions than was possible in the South, but they had to be adept at understanding and manipulating the opportunities offered to them. Whereas American mythology held that hard work would bring success, many working-class people—Anglos and people of color alike—found this not to be the case. Working hard was important, but race, class, connections, and an understanding of how to negotiate often-unspoken racial codes in order to avoid conflict were equally crucial.[28]

The same can be said of African American women in the workforce, most of whom found low-status jobs in Flagstaff's quickly developing service sector. After the war, the town began attracting growing numbers of tourists en route to the Grand Canyon. Many would stop to eat and stay for the night. The most common jobs for African American women were washing dishes or cooking in restaurants, although a large number also worked as domestics for affluent whites, which suggests continuity between the West and the South in terms of how working relationships were framed between blacks and whites. Other women stayed at home, raised their children, and cooked meals for their families. Still others operated businesses. Viola Chapman, for example, ran El Rancho Grande, Flagstaff's only black-owned bar, for almost twenty years after her husband's death.[29]

Most newcomers with jobs and solid pay rented homes on Flagstaff's south side, where discriminatory housing practices forced African Americans and ethnic Mexicans to reside. Representative of many migrant living situations was Hickman's uncle's large house, where her family and other lumber workers boarded. Six to eight men lived there, and the women cooked and cleaned. Over time, some families were able to save enough money to buy property and build homes, often using low-grade lumber donated by the company that employed them. Because banks often refused to lend money to African Americans, home and land ownership among Flagstaff blacks was rare. Raymond Flemons, a well-respected preacher in the black community, was an exception when he obtained his bank loan. Similarly, John L. Williams, a foreman who earned higher wages than most African American lumbermen, purchased land from the Babbitt brothers for one hundred dollars down and cash installments thereafter, when prominent business owners vouched for him. Other African Americans used their higher wages to buy brand-new automobiles within a few years of their arrival in Flagstaff. But they were exceptions. Private property and new automobiles were uncommon luxuries in Flagstaff's black community.[30]

Although race relations were generally similar to what the immigrants had experienced in the South, Flagstaff's black community was much smaller than in most rural southern towns, which meant more interaction between blacks and whites and more dependence on the town's white elite for everyday needs. Interviews confirm that although not all of Flagstaff's African American residents improved their lot, many were able, through hard work and navigating the racial politics of northern Arizona, to attain the upward mobility they were looking for when they moved. Whether through business savvy or religious leadership, enterprising individuals were able to carve out opportunities for themselves.

While it remained small in relation to the dominant Anglo white population, and even to the Mexican American community, Flagstaff's African American population increased, from 115 in 1930 to 667 in 1950. Although only elementary schools were officially segregated, in practice movie theaters, bars, and restaurants all restricted black access. As in Phoenix, Flagstaff's black citizens were relegated to theater balconies into the 1950s. Nor would some restaurants in the white business district serve blacks. Aside from work, most African Americans spent much of their lives south of the tracks, participating in church activities or enjoying the bars and restaurants along South San Francisco Street. In either case, they were attempting to recreate the community structure that many had left behind in the South.[31]

The church was the center of spiritual and community life for many of Flagstaff's newly arrived African Americans. Hickman's social circle completely revolved around the church, and she mostly avoided the crowds drinking and gambling along San Francisco Street. Melvin Williams, who was born in 1942, remembered the 1940s and 1950s as very church-oriented for his family, especially Sundays: "We went to Sunday school, we went to church, and then we went to Bible Training Union in the evenings. So Sunday was an all-day church day." For some, church membership overlapped with membership in fraternal orders like the Black Masons and Black Elks Club, both of which were important community social organizations. The latter was primarily a thriving dance hall and drinking establishment during the 1950s, but the Elks also gave scholarships for the top African American young scholars in the neighborhood to attend Northern Arizona University.[32]

The bars and clubs on San Francisco Street were also integral parts of the Flagstaff's African American community. According to Okie Taylor, besides the Elks Club, El Rancho Grande was the only place where blacks could go out and have a drink throughout the 1940s and into the 1960s. Run by Lloyd and Viola Chapman, the bar was next door to Charlie Scoto's pool hall on San Francisco Street. Together, they offered release in the form of strong drink, music, and dancing. At the more risqué end of the social scene, gambling and prostitution were common along San Francisco Street.

Nearly all the interviewees remembered a tight-knit African American community where people looked out for one another. James W. Williams recalled, "There were just a few of us. Everyone knew everybody. I even knew all the kids." In fact, the neighborhood adults formed a disciplinary network for young children: several interviewees recalled that any adult in town was likely to discipline them if they were caught misbehaving. Neighbors shared game killed on frequent hunting trips, as well as homegrown vegetables. All in all, their Flagstaff experience reminded many newcomers of their southern upbringing. But important differences existed as well. Strict segregation in the South meant that blacks often owned their own businesses, organized their own churches, and controlled their own neighborhoods; Flagstaff's African American community was much smaller and African Americans worked and socialized in much greater proximity to whites on a daily basis. In Flagstaff, African Americans worked to create a sense of empowerment on a smaller scale than in the South.

Outwardly, race relations in Flagstaff were cordial, especially compared with the overt oppression of lynching and violence in the South. Jonnie Lee Egan, for example, credited newspaper editor Platt Cline with assisting local African Americans, especially when it came to helping educate young people. Other interviewees mentioned respectful working relationships with their white bosses and coworkers. Still, racial discrimination and de facto segregation were the norm in Flagstaff, as elsewhere in Arizona, until the 1960s: sheriffs enforced segregation in restaurants and movie theaters even though they were not legally obliged to.[33]

During the civil rights era Arizona promoted itself as more progressive than the South, but it often fell far short of the mark. The children of Flagstaff's African American immigrants grew up knowing that certain places were off-limits and that they should avoid conflict with whites. In 1960, Melton Williams was elected the first black student body president of Flagstaff High School. Although his election appears to be evidence of the town's progressive racial outlook, the student body's white vice president took Williams's place to escort the white homecoming queen onto the football field. According to Williams, "Those kinds of things give you a sense of the times." The anecdote is a telling example of the strong current of discrimination that still flowed in Arizona.[34]

Racial tensions also affected the seemingly cordial relations between blacks and ethnic Mexicans. African Americans were frequently denied access to El Charro Mexican restaurant on Flagstaff's south side until a successful sit-in by the black community stopped this discriminatory practice in the early 1960s. Likewise, many ethnic Mexican residents strongly discouraged African Americans from moving to Sunnyside. Judging from the oral history interviews, most interactions between African Americans and Native Americans revolved around blacks' selling bootlegged liquor to Native people at exorbitant prices. Elsewhere, interactions among Flagstaff's racial and ethnic minorities were positive and mutually beneficial. Graham, the African American foreman of a mixed crew of black, Mexican, and Native American log cutters, fondly recalled that Native people were the fastest learners with whom he had ever worked.[35]

COMPARING THE SOUTH WITH FLAGSTAFF

Interviewees who reflected on racial politics in the South versus Flagstaff generally concluded that they were similar. Robert Joe, born in northern Arizona and active in Flagstaff's NAACP youth council, said, "I don't think it was a lot of a change for our parents after they left the South. I think in the South, like they always say, it's just obvious.... I think it was more covered up, or tried to be covered up, in Flagstaff and other places that was away from the South."[36]

In a similar vein, Melton Williams said, "Well, there were two different cultures. There was a culture [of] who was in control, and those who were subject to control. That was a southern tradition. And it came to Arizona with the lumber mill." He observed, "From what I've heard, people who grew up in southern Arizona, it came with the cotton and that industry from the South. Now, kids were somewhat sheltered from it. But the adults, who lived and worked daily, were very much aware of it."

Williams was quick to point out that not all white people were overtly or intentionally racist, explaining that "a lot of good people looked out for others because they were people—not because they were one color or another." Still, when he was growing up, it was common for Williams and his friends to call Arizona the "Mississippi of the West" because of its strong ties to the southern racial order and resource extraction–based economy. Thus, even as westward migration gave African Americans the possibility of greater upward economic mobility, these advances were made possible by the same forces that brought southern norms of racial subjugation to the West. And by moving to a region with a smaller black population, African Americans lost some of the autonomy they were accustomed to in the vibrant (if strictly segregated) black communities they had left behind in the South. These were just some of the compromises they were forced to make while seeking opportunity in the rural West.

Ultimately, the history of Flagstaff's African American migrants expands our understanding of the Great Migration and, more broadly, of the development of the twentieth-century United States. They are clear examples of how African Americans could employ skills they had acquired in the South to achieve the typical Great Migration goals of higher wages and upward social and economic mobility. In doing so, they provide insights into the continuities and differences of southern and western racism and show how migration changed the nature of the African American community.

In the end, the skilled lumber workers and their families who moved west achieved their goals and, in the process, demonstrated the resilience of the African American community. Perhaps most striking is the power of communication and relationship networks in accommodating and navigating life changes. It was lumber companies' recruitment that prompted westward migration, but communication lines and community support systems were central to the success of African American migrant families. Despite the danger and uncertainty, the journeys these men and women undertook were made easier by the knowledge that someone was waiting for them on the other side. After all, as Katherine Hickman stood amid crowds of exotic strangers in the pouring

rain at the Flagstaff train station in 1944, it was not until she glimpsed her family that the Southwest began to feel a little bit more like home. □

Jack Reid is a history instructor at Embry Riddle Aeronautical University. A longer version of this article was first published as "The 'Great Migration' in Northern Arizona: Southern Blacks Move to Flagstaff, 1940–1960," in The Journal of Arizona History, *Vol. 55, No. 4: 469–98 and received the Theodore C. Blegen Award for the best scholarship in forest and conservation history published in a journal other than* Environmental History. *Readers can find full, expansive citations in the original article.*

NOTES

1. Katherine Hickman, interview by Carol Maxwell, 1998, African American Pioneers in Flagstaff Oral History Collection, Arizona Humanities Council, Northern Arizona University Cline Library Special Collections, Flagstaff (all interviews cited in this article are from this collection and conducted by Carol Maxwell); W. T. Block, *Early Sawmill Towns of the Louisiana-Texas Borderlands* (Woodville, TX: Dogwood Press, 1996), 178–93; Robert Vance, "Lumber and Sawmill Workers in the Flagstaff Timber Industry, 1917–1947" (master's thesis, Northern Arizona University, 1992), 38–40.
2. The majority of scholarship on the Great Migration focuses on the largest stream of emigrants who traveled from the South to northern industrial cities in the early- to mid-twentieth century. However, a growing historical trend has been to study the relatively smaller migrant flow that moved to western metropolitan areas, such as Phoenix, Los Angeles, and San Francisco. Moving one step farther from the mainstream, this essay builds on Geta LeSeur's study of African American cotton workers' migration to the rural West, *Not All Okies Are White: The Lives of Black Cotton Pickers in Arizona* (Columbia: University of Missouri Press, 2000).
3. Felton Combs, interview, October 1, 2002; Jennifer Ritterhouse, *Growing Up Jim Crow: How Black and White Southern Children Learned Race* (Chapel Hill: University of North Carolina Press, 2006), 22–54.
4. Grady Graham, interview, April 22, 2002.
5. Block, *Early Sawmill Towns of the Louisiana Texas Borderlands*, 67–68; Vance, "Lumber and Sawmill Workers in the Flagstaff Timber Industry," 38–40; Arizona Lumber and Timber Company, Collection 47, Box 436, Correspondence, 1947, NAU Cline Library Special Collections.
6. Hickman, interview.
7. James W. Williams, interview, May 13, 2002; Combs, interview.
8. Graham, interview; James W. Williams, interview; Combs, interview.
9. Combs, interview; James W. Williams, interview.
10. Graham, interview.
11. Blyden Jackson, "Introduction: A Street of Dreams," in *Black Exodus: The Great Migration from the American South*, ed. Alferdteen Harrison (Jackson: University of Mississippi Press, 1991), xvii; Earl Hutchinson, *A Colored Man's Journey* (Los Angeles: Middle Passage Press, 2000), 29–36; Vance "Lumber and Sawmill Workers in the Flagstaff Timber Industry," 101–108; Block, *Early Sawmill Towns of the Louisiana-Texas Borderlands*, 4–5 ; LeSeur, *Not All Okies Are White*, 15–18.
12. Block, *Early Sawmill Towns of the Louisiana-Texas Borderlands*, 4–5; Vance, "Lumber and Sawmill Workers in the Flagstaff Timber Industry," 41, 108; John Findlay, *Magic Lands: Western Cityscapes and American Culture after 1940* (Berkeley: University of California Press, 1992), 14–51; Bradford Luckingham, *Minorities in Phoenix: A Profile of Mexican American, Chinese American, and African American Communities*, 1860–1992 (Tucson: University of Arizona Press, 1994), 149–72.
13. Platt Cline, *Mountain Town: Flagstaff's First Century* (Flagstaff: Northland Publishing, 1994), 357; Eric Meeks, *Border Citizens: The Making of Indians, Mexicans, and Anglos in Arizona* (Austin: University of Texas Press, 2007), 155–79; Vance, "Lumber and Sawmill Workers in the Flagstaff Timber Industry," 77–79; Employment Security Commission of Arizona, "Labor Market Information Statement for Flagstaff Area, October 1947," Arizona Lumber and Timber Company, Collection 47, Box 435, Folder 1, NAU Cline Library Special Collections.
14. John L. Williams, interview, December 14, 1999; Ben Shird, interview, August 12, 1999.
15. Daily Time Sheets, July 25, 1954, September 1, 1954, October 1, 1954, November 1, 1954, Saginaw and Manistee Lumber Company, Collection 84, Box 12, Folder 450, NAU Cline Library Special Collections.
16. Mack Jones, interview, September 9, 1999. Vance, "Lumber and Sawmill Workers in the Flagstaff Timber Industry," 68.
17. Daniel Broomfield, interview, August 13, 1999. Raymond Flemons's wife also refused to move because she did not want to be away from her family.
18. Broomfield, interview.
19. Thomas Sugrue, "Driving While Black: The Car and Race Relations in Modern America," *The Automobile in Life and Society*, accessed at http//www.autolife.umd.umich.edu/; Hutchinson, *A Colored Man's Journey*, 35–36; Susan Sessions Rugh, *Are We There Yet? The Golden Age of American Family Vacations* (Lawrence: University Press of Kansas, 2010), 68–91; Cotton Seiler, *Republic of Drivers: A Cultural History of Automobility in America* (University of Chicago Press, 2008), 105–28.
20. James W. Williams, interview.
21. Rugh, *Are We There Yet?*, 68–91; Seiler, *Republic of Drivers*, 105–28; Sugrue, "Driving While Black." Others took the bus and experienced the same discriminatory practices. When Grady Graham traveled west via bus, his wife packed lunches so that he would not have to patronize bus station cafés.
22. Jackson, "Introduction: A Street of Dreams," xvii; Hutchinson, *A Colored Man's Journey*, 29–36; Luckingham, *Minorities in Phoenix*, 158–61; Findlay, *Magic Lands*, 38–42; Meeks, *Border Citizens*, 118–19; LeSeur, *Not All Okies Are White*, 100–04.
23. Vance, "Lumber and Sawmill Workers in the Flagstaff Timber Industry," 105–16; U.S. Census Bureau, *Sixteenth Census of the United States* (Washington, D.C.: Government Printing Office, 1932), 381; Cline, *Mountain Town*, 375–78; Flagstaff Historic Properties Survey, Final Report, 1985, NAU Cline Library. Vance states that Sunnyside came about in 1937 and was populated by Mexicans. Blacks were strongly discouraged from settling there.
24. John L. Williams, interview. The information here is culled from oral history interviews and from Vance, "Lumber and Sawmill Workers in the Flagstaff Timber Industry," 52–56.
25. Employment Security Commission of Arizona, Labor Market Information for Flagstaff Area, October, 1947, Arizona Lumber and Timber Company, Collection 47, Box 435, Folder 1, NAU Cline Library Special Collections; Broomfield, interview; Hickman, interview.
26. Historical Note, Saginaw and Manistee Lumber Company, Collection 84, NAU Cline Library Special Collections.
27. Cline, *Mountain Town*, 358. Although other employers existed, such as the power and steam plant, the logging camp and sawmills were the primary places of employment.
28. Meeks, *Border Citizens*, Chapter 6.
29. Sarah Knight, interview, December 7, 1999; Sally Viola Chapman, interview, January 26, 2000.
30. Meeks, *Border Citizens*, 158–59. Also see Meeks for information on discriminatory practices in Phoenix. Raymond Flemons, interview, May 29, 2002.
31. Flemons, interview. Wilson Riles, who was the principal at the black elementary school, an integral figure in the church, and a local disc jockey, fought this segregation most aggressively. Platt Cline, a well-known Flagstaff journalist and writer, praised Riles as the man who most changed minds about segregation during the 1950s. Cline, *Mountain Town*, 394; William Cummins, "A History of Flagstaff Public Schools" (1987), unpublished monograph, Arizona Collection, Flagstaff Public Library, 33–39.
32. Melton Williams, interview, August 3, 2002; John L. Williams, interview.
33. Jonnie Lee Egan, interview, April 29, 2002; Cline, *Mountain Town*, 394; Cummins, "A History of Flagstaff Public Schools," 33–39. J. Peery Francis, a Texan who was first elected sheriff in 1940 and reelected until 1954, was primarily responsible for enforcing segregation in Flagstaff. According to Mack Taylor, Francis was often cruel to African Americans.
34. Melton Williams, interview.
35. Graham, interview. The El Charro sit-in was mentioned in numerous interviews, but Melvin Williams offers the most detailed and accurate account.
36. Robert Joe and Jack Peters, interview, 2002.

The historical literature on Canada's timber industry has largely characterized it as one bent on exploitation for short-term profits. But for every rule there is an exception.

AN AMERICAN FORESTER, A CANADIAN PAPER COMPANY, AND THE SPANISH RIVER

BENJAMIN F. AVERY AND HIS SILVICULTURAL PROGRAM IN ONTARIO

The literature of Canada's forest history is long on stories of degradation and mismanagement and short on tales of progressive accomplishments. Authors who have examined the forest industry's relationship to the woodlands have almost universally condemned it for its allegedly wanton ways.[1] What these accounts have overlooked, however, are the instances—more numerous than one would have ever expected—in which firms that harvested Canada's trees implemented sound silvicultural practices.

One of the most important examples occurred in the immediate wake of the First World War. Benjamin F. Avery, an American forester, spurred the effort, and it was undertaken by the Spanish River Pulp and Paper Mills Company, which operated in north-

BY MARK KUHLBERG

UNIVERSITY OF TORONTO ARCHIVES, A1972-0025/059(37), "FROM SPRUCE TO NEWSPRINT"

As Canada's newsprint industry underwent exponential expansion, so, too, did its need for fiber. The wood from this enormous pile fed one of Spanish River's mills and dwarfs the eight men who are working on moving it.

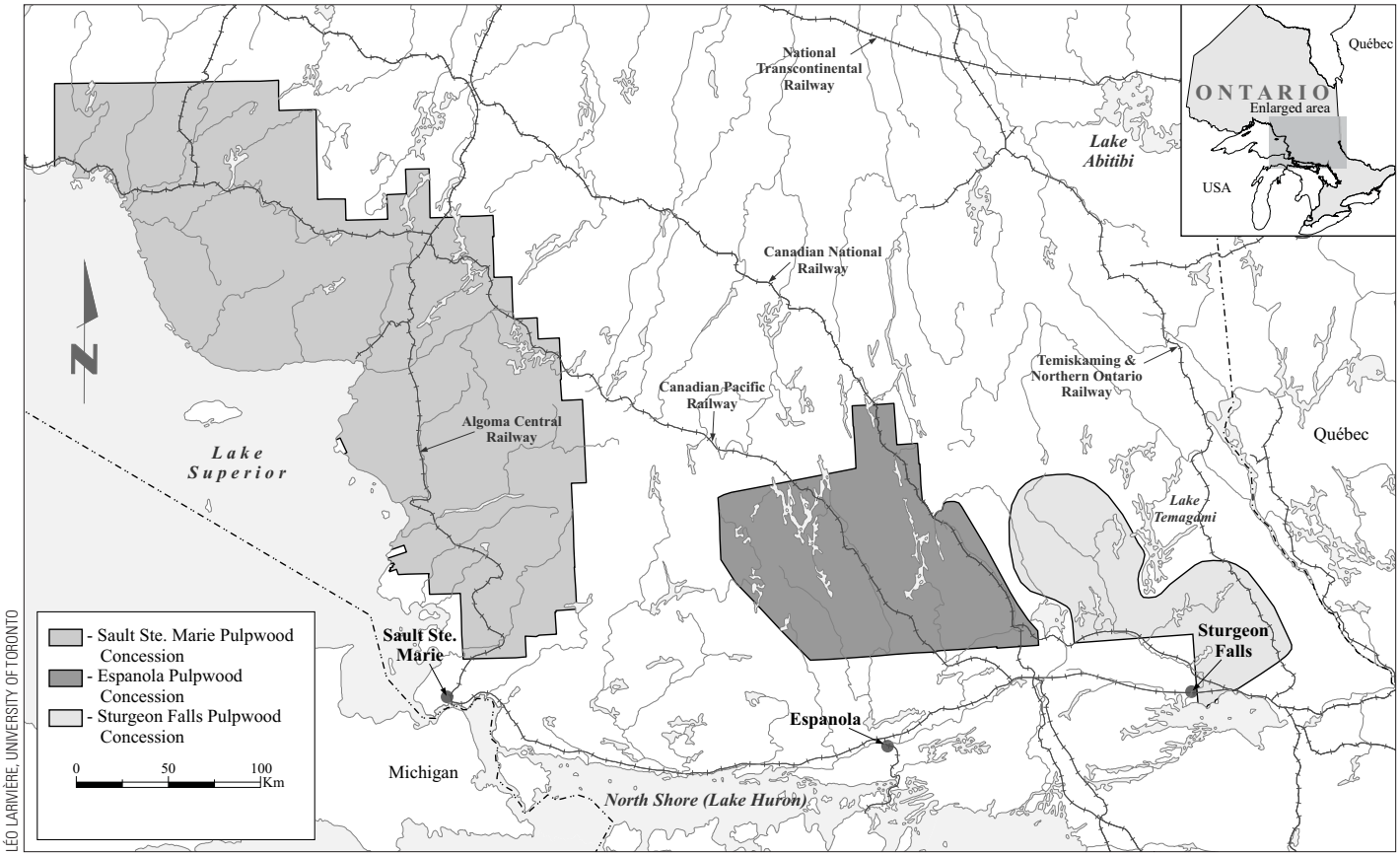
eastern Ontario. In the decade after the war, this firm was driven by several forces, most notably a corporate culture that embraced forward thinking, to implement a comprehensive forestry program committed to managing timber on a sustained-yield basis.[2] This story has remained untold for nearly a century; reviewing it reminds us of the dangers inherent in making generalizations about the past, particularly when discussing the woods.

PAPER'S EXPLOSIVE GROWTH

By the time the Treaty of Versailles formally ended the war in 1919, Canada's most populous province—Ontario, located roughly in the middle of the country—had become the nation's leading producer of newsprint. Capable of producing 100 tons a day in 1905, fifteen years later its capacity had risen to more than 1,200 tons per day. This exponential growth had been fueled by numerous factors, most notably northern Ontario's profuse supply of black and white spruce and hydroelectric energy, and the region's proximity to the midwestern states south of the border, where demand for newsprint was growing by leaps and bounds.

The Spanish River Pulp and Paper Mills Company had been front and center during this period of explosive growth largely because of its president, American paper-maker George H. Mead. He had been instrumental in introducing to the family's eponymous firm in Ohio the tenets of Taylorism, which held that the best way to maximize a firm's efficiency, and thus its profits, was to apply scientific methods and ideas to all aspects of the enterprise. After taking the helm of Spanish River on the eve of the war, Mead imported this ethos to his Canadian firm. It controlled three newsprint mills in northeastern Ontario, in the towns of Sault Ste. Marie, Espanola, and Sturgeon Falls, and Mead's ascendancy signaled the beginning of their revitalization. All aspects of the plants' operations were modernized and their capacities increased. By the end of the conflict, Spanish River's mills represented roughly 20 percent of Canada's capacity and 7 percent of North America's.[3]

The company's aggressive expansion program created wood supply problems, however, ones the provincial government proved unwilling to resolve. Each of Spanish River's three mills had been operating for well over a decade, and the one in Sault Ste. Marie had been going since the mid-1890s. During this time, they had cut a fairly large volume of pulpwood on the timber concessions they held from the Ontario government. In addition, the cutting crews had reported that the forests in which they were operating each season were deficient in spruce. This impression was confirmed during the late 1910s, when Spanish River began undertaking comprehensive surveys of its woodlands. Investigations revealed that the mill in Espanola had but a half-dozen years of wood left, and the others not much more. To augment their wood supply, Mead's management team applied to the provincial government for supplemental timber limits but was rejected.[4]



This map shows the location of Spanish River's three mills and the pulpwood concessions it leased from the Ontario government.

A NEW TYPE OF "WOODS MANAGER" ARRIVES

Those forces coalesced to compel Spanish River to seek out a forester to maximize the efficiency with which it administered its woodlands. Benjamin F. Avery, born in 1890 in the tiny village of Aurora, in the Finger Lakes area of New York, had grown up in a time of reckless overharvesting. After earning his BA in 1914 from Yale University (where he played varsity football and earned honorable mention on Walter Camp's All-America team), he pursued a forestry degree at Yale. As an undergraduate he won a silvicultural prize that came with a small monetary award, which he used to defray the costs of traveling to Sault Ste. Marie to work for Mead's firm in the summer of 1915. He was smitten by the region's natural beauty and returned to "the Soo" after graduating top of his class the following year to become Spanish River's first full-time forester. He interrupted his career to serve in the U.S. Army during the war but returned two years later to take over the company's newly created forestry branch.[5]

Avery recognized early in his tenure with Spanish River that he would have to convince its management team that spending money in the short term would actually save it over the long term. He based his campaign to implement a forestry program on a solid foundation of empirical data and concrete evidence. He also avoided casting aspersions on those who had been heretofore responsible for shaping Spanish River's wood procurement policy.

They had, after all, acted in a rational way, considering the circumstances. The company's woods manager, responsible for overseeing the firm's timber harvest, had been involved in developing an industry in its infancy, an industry whose viability had not yet been confirmed. Moreover, the mill managers had scanty knowledge of the woods in which they had been operating, and they had relied solely on spruce for their fiber supply. Their goal each year had been to obtain the volume of wood needed at the lowest possible cost.

Avery diplomatically pointed out that operating in this manner had actually been counterproductive. Spanish River's cutting teams had been forced to venture farther afield each year in search of wood, and by cutting only spruce—and nominal volumes of balsam fir—they had left many species standing. This had pushed up operating costs, most notably by necessitating more frequent camp moves and longer river drives. Whereas an efficient operation would concentrate harvesting activities in areas closest to the mill, Spanish River's modus operandi had been doing precisely the opposite. Moreover, removing all the mature spruce and leaving the other trees had guaranteed that the future forest would support less and less of this most valuable pulpwood species. And because this shortsighted approach held no hope of sustained employment, it attracted unskilled woodsmen—and thus lowered productivity.[6]

Avery outlined a multifaceted approach to rectifying the situation. One of the first steps would involve compiling an inventory of the company's woodlands to obtain an accurate and detailed picture of the species, age classes, and volumes of timber available to its mills. To realize this goal, the firm employed the latest technology of the day, namely a decommissioned army aircraft and a pilot who had been trained by Orville Wright. The plane would fly over the forest while a timber sketcher mapped the different stands, generating more accurate information about its wood basket in a fraction of the time it would have taken ground crews to perform this task.

Both industry and government feared forest fires, and Avery identified as a high priority the need to improve dramatically the

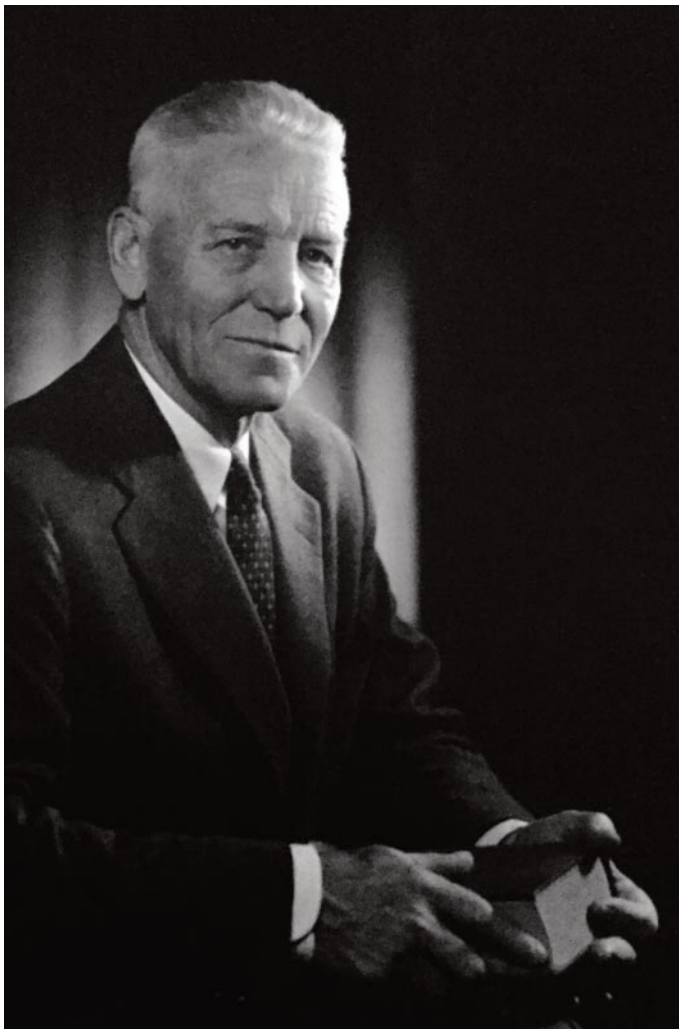
manner in which Spanish River protected its trees against fire. Heretofore the provincial government had administered a small corps of rangers to perform this function, for which the firm was required to pay a fee, but the level of service had been found wanting. Avery reviewed the vast cordages of timber that the company had historically lost to fire and concluded that it would be cost-effective to supplement this system with its own effort.

To improve the firm's harvesting operations, Avery presented some groundbreaking ideas that reflected his training as a forester and his profession's view that the best means of fostering robust regeneration of the desired species was to incorporate that goal into how the trees were cut in the first place. Avery argued that Spanish River could harvest its woodlands on a much shorter rotation than previously believed and rely on their natural regenerative capacity as long as it took one crucial step: it had to educate its cutters to protect the "advance growth," the immature spruce already established at the time of the first harvest. This would allow these young trees to be released—and thus develop rapidly—when the cutting occurred. Moreover, the advance regeneration would crowd out unwanted competition from hardwoods, provide a seed source for additional spruce regeneration, and most importantly, permit the same tract of forest to be cut every generation or so. This rotation represented less than half the time contemporary foresters believed it would take northern forests to produce a new crop of spruce.

Some areas of the forest would simply not regenerate to spruce, however, and so remedial measures would be needed. Avery argued in favor of supplementing nature with a modest tree-planting program. To provide the seedlings for such an undertaking, he explained, it would be necessary to establish a nursery.[7]

Avery directed a major part of his forestry message at the team of managers who oversaw production at Spanish River's three newsprint mills. He had estimated that spruce made up, at most, 50 percent of the trees on the forestland the company leased from the provincial government; the rest of the tracts were covered with jack pine and balsam fir, species that had not traditionally been used to make newsprint. He therefore insisted that Spanish River begin trying to match its wood requirements with the actual composition of the forests on which it relied for fiber. Developing a means of processing jack pine and balsam fir—and not solely spruce—into newsprint would dramatically increase the volume of wood available and lower the costs of procuring it, and also decrease the presence of these species in the woods while creating conditions that favored spruce reproduction.

Finally, Avery's central message to Spanish River's top brass was to adopt professional forestry's defining mantra: to manage its timber holdings on a sustained-yield basis. Instead of allowing the mills' timber needs to dictate how much wood was harvested each year, the volume of spruce taken out from each "operating unit" should instead be limited to the increment that it could produce every year. To help his case resonate with the firm's accountants, Avery likened this approach to that of the contemporary banker whose job it was to protect his capital and draw off only the annual interest on his investments. He contended that Spanish River could make lasting progress in its timber management program only if it authorized him to do precisely what he had been trained to do as a professional forester—limit the company's harvesting to the forest's annual allowable cut, the volume of timber that could be cut perpetually without diminishing the forest's total growing stock.



COURTESY OF ROSEMARY AVERY

Benjamin F. Avery

OVERCOMING HURDLES

Like leading foresters in both Canada and the United States, Avery recognized full well that all the policy directives in the world would fail miserably if they were not embraced in the field. He shared their view that one of the biggest hurdles to any successful forest management program was the itinerant nature of the industry's labor force. Each season brought a new crew of woodsmen to the bush, and once work began, many of them "jumped" from one camp to another in search of better wages or conditions. The introduction of the piecework system in the wake of the First World War only exacerbated the situation by giving cutters incentive to maximize their incomes by increasing their productivity.[8] The crux of the problem was thus how to get the lumberjacks, whose reputation for independence and unbridled behavior was legendary, to feel that they, just like Spanish River, had a vested interest in preserving the health of the forests in which they were operating. Raphael Zon, a forest economist with the U.S. Forest Service and one of Avery's confidants, was adamant that this was indeed North American forestry's greatest challenge. At a Forest Service meeting in 1921, Zon had noted that "in the long run it is upon the attitude of the woodsmen that the success or failure of forest management depends. With hobo labor there can be no forest management."[9]

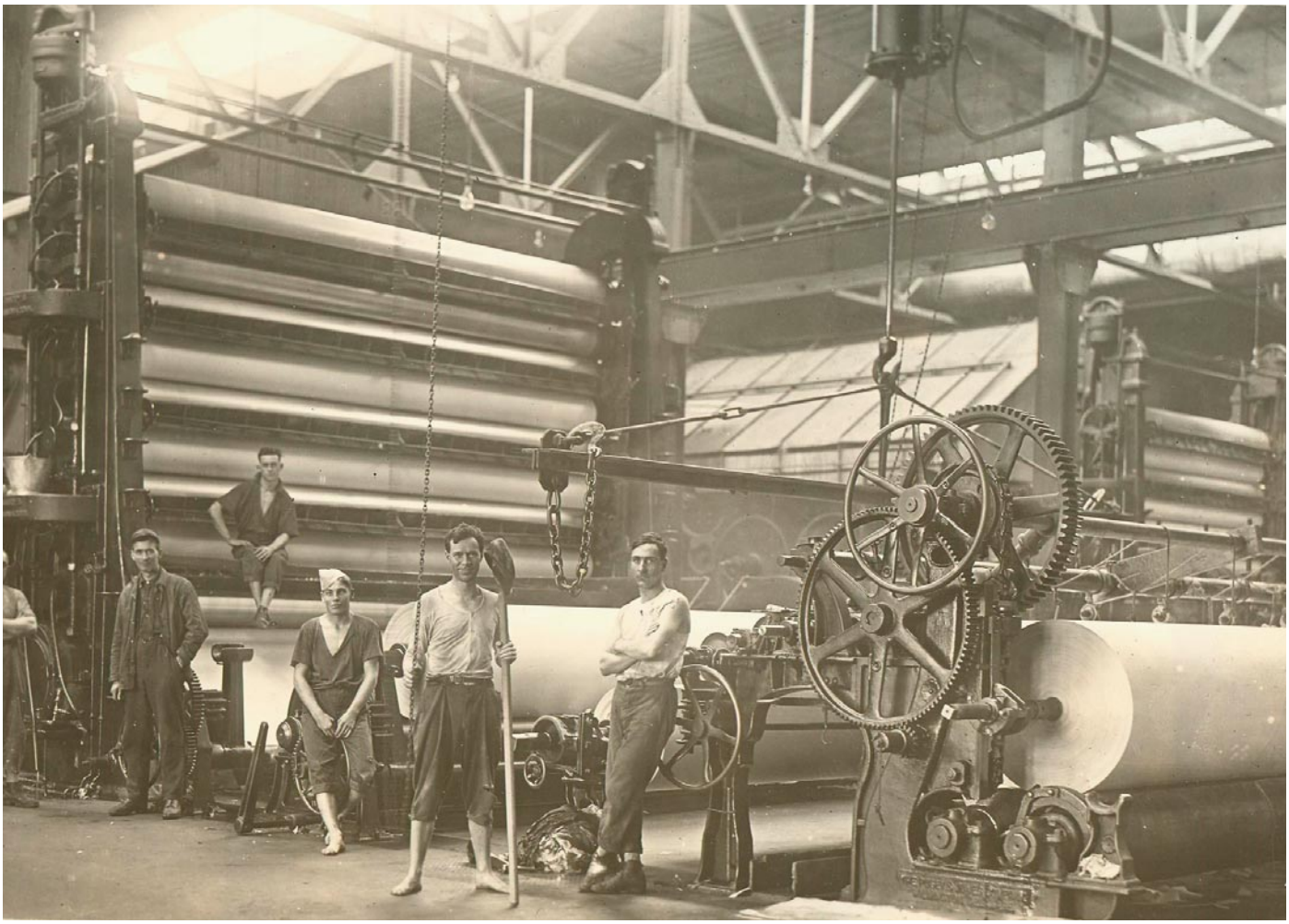
UNIVERSITY OF TORONTO ARCHIVES, A1972-0025/059(37), "FROM SPRUCE TO NEWSPRINT"

Mead ensured that Spanish River incorporated scientific principles into all aspects of its operations. Here, the firm's chemists are working on concoctions that would improve its mills' productivity.

To address this situation, Avery proposed a novel concept that had already been firmly embraced by the Forest Service's "progressive bloc": establishing permanent forest communities. These independent villages—they would not be "company towns"—would be built in the forest on each of the operating units that made up Spanish River's timber limits, and they would have the full range of services, such as schools, post offices, and churches, of any small town. The difference would be that the residents would rely year-round for employment on the woods that surrounded the community. Springtime work would involve river driving and tree planting, and the summer, fall, and winter would see the workers engage in fire protection, timber cruising, and harvesting. Avery, convinced that this was the panacea for the problem of a transient work force, shared his views with William B. Greeley, the Forest Service chief. The arrangement would provide permanent employment to the woodsmen, Avery wrote to Greeley, because "labourers whose homes are within or on the border of the forest where they receive employment will develop a sense of responsibility for the safety of the forest, and will be the best insurance of the successful operation of the plan."[10]

As Avery began presenting his ideas to Spanish River's senior administrators in the wake of the First World War, serendipity smiled on his campaign. Canada's Commission of Conservation (1909–1921) had been particularly active in investigating issues involving the country's forests. This aspect of its work was overseen by the newly appointed American dean of the University of Toronto's Faculty of Forestry, Clifton Durant Howe. Deeply interested in how commercial forests responded to harvesting, he had begun overseeing studies under the commission's auspices of how pulpwood tracts in eastern Canada were faring. Spanish River was keen to have just such a project conducted in its woodlands, and over the course of 1919–1920 it realized this aim. The commission's small team of foresters, namely E. F. McCarthy and C. R. Mills, investigated conditions on the Goulais River watershed, which formed part of the timber tracts leased by Spanish River's mill in Sault Ste. Marie.

Their study produced large volumes of data and insight that further buttressed the message that Avery had been preaching to Spanish River's management team, and it also added a few new ones. McCarthy and Mills noted, for example, how Spanish River's woodsmen had habitually cut trunks relatively high off the ground and did not use all the merchantable timber in the treetops. To illustrate just how uneconomic this practice was, they tallied up the thousands of cords of usable wood left to rot in the cutovers each year. Moreover, the commission's foresters validated Avery's avant-garde idea of protecting advance growth as the means to using natural regeneration to ensure Spanish River's future yields, and to do so on a rotation of roughly a few dozen years.[11]



UNIVERSITY OF TORONTO ARCHIVES, A1972-0025/059(37), "FROM SPRUCE TO NEWSPRINT"

Ben Avery's forestry program included pushing Spanish River's three mills to develop processes for turning species other than spruce into newsprint, an endeavour in which they largely succeeded. The barefoot workers did not wear shoes in an effort to maximize their traction on the plant's wet and slippery floor.

And so, Avery's campaign to implement a comprehensive forest management program at Spanish River had now received the imprimatur of Canada's most esteemed body of natural resource management experts. Forces coalesced for an immediate effect. By the early 1920s the company had committed to managing "the woodlands upon which it holds cutting rights, on the principle of sustained yield." More importantly, it was actually practicing what it preached: it was limiting its harvest in each of its operating units to the annual allowable cut. This was an extraordinary accomplishment. Spanish River was probably the first company in Canada to take this approach to its forests. Meanwhile, the Ontario government—which owned almost all the woodlands in which Spanish River operated—was still a half century away from achieving this aim.[12]

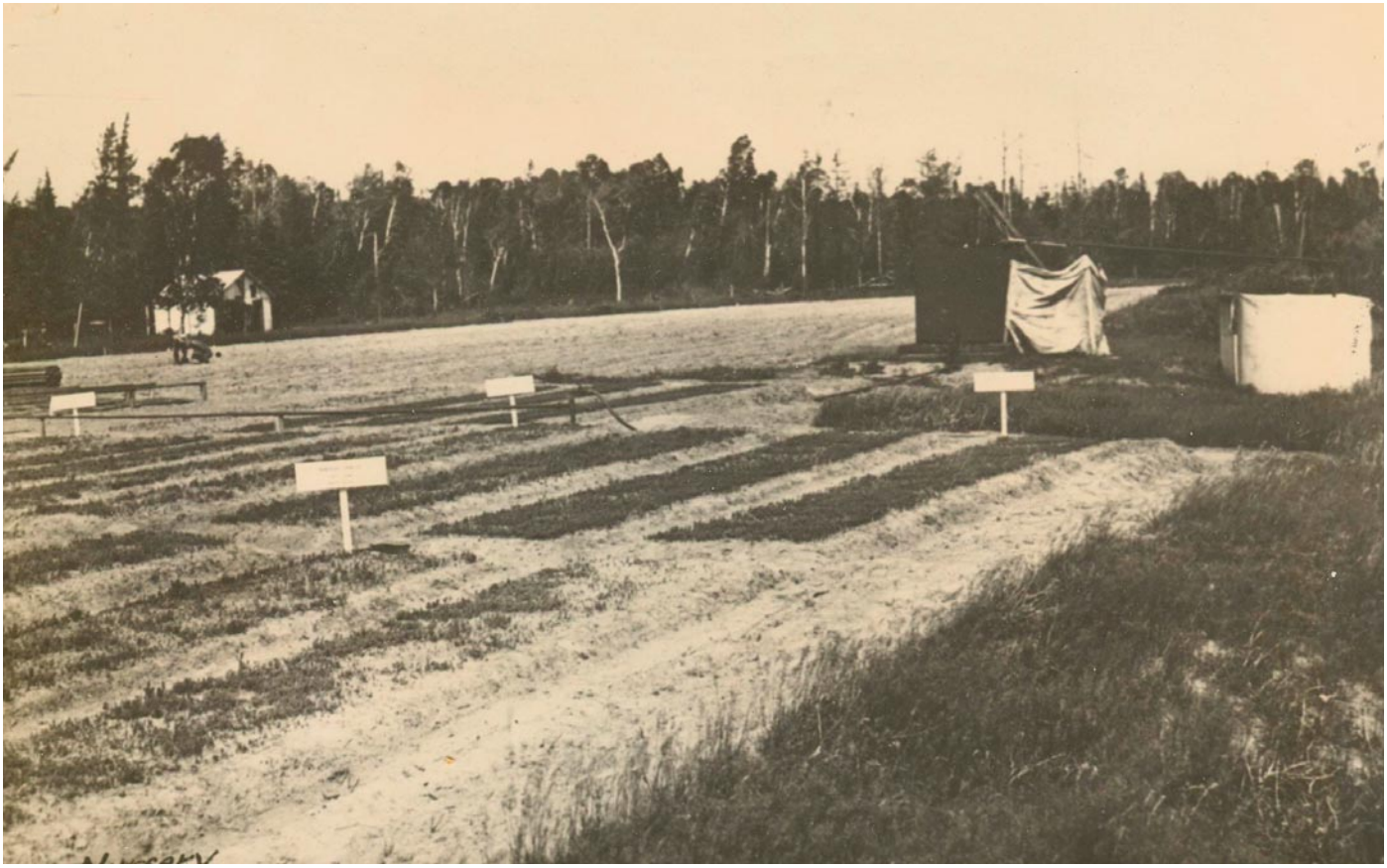
Other evidence confirms that the firm had adopted—and was profiting from—Avery's forestry plans. During the mid to late 1920s, for example, Spanish River's forestry branch was spending $45,000 per year on its operations, a sum that represented a little more than two days' worth of production from one of the company's mills.[13] To assist Avery in realizing his goals, Spanish River now permanently employed a small cadre of graduate foresters and hired dozens of summer students who came from forestry schools across North America and beyond (including Michigan State, New York State College of Forestry, University of Toronto, Yale Forestry School, and Royal College of Forestry in Sweden). Their duties included overseeing timber cruising, drawing up harvesting plans, and helping educate the cutters about better harvesting methods; they also suggested and supervised work in both the company's new experimental forest and its commercial woodlands. In addition, Spanish River was operating its own forest fire protection service, which included manning its own fire towers and establishing wireless radio communication among the fire spotters; the system proved so effective that it even drew praise from government officials. Furthermore, the company had begun reforesting areas that were not regenerating naturally, such as cutovers that had been repeatedly burned, using seedlings from its new nursery for this purpose. By the end of the decade, more than a million seedlings had been established.

Spanish River also made great strides in developing ways to mill an increasing percentage of both balsam fir and jack pine. During the mid- to late 1920s, two of its mills reduced their use of spruce to less than 80 percent of their total fiber intake, and one was able to use at least 10 percent jack pine to make newsprint.

Avery was unable to make much progress on other fronts, however. Spanish River did not support his idea of establishing forest communities on its timber limits; he would realize this goal only after the Second World War, when he worked for another firm—the Kalamazoo Vegetable Parchment Company—that had

UNIVERSITY OF TORONTO ARCHIVES, A1972-0025/059(37), "FROM SPRUCE TO NEWSPRINT"

Contemporary technology played a major role in minimizing some of the progress a forestry program could make in maximizing the volume of fiber harvested from the woods. Even when there was no snow, the use of two-man crosscut saws often resulted in tree stumps that were unnecessarily high.



UNIVERSITY OF TORONTO ARCHIVES, A1972-0025/059(37), "FROM SPRUCE TO NEWSPRINT"

This may be the only surviving photograph of the tree nursery Ben Avery established near Sault Ste. Marie, Ontario. It supplied the seedlings for Spanish River's reforestation program.

taken over some of Spanish River's timber limits. As a result, Avery was unable to build up a permanent, highly qualified, and forward-thinking gang of woodsmen who were open to his progressive ideas while with Spanish River.[14]

Moreover, climate and technology thwarted efforts to improve the efficiency of harvesting by cutting trunks low to the ground. Harvesting was done during the late fall and winter, when the forest floor was often covered in at least a few feet of snow, and downed trees and dead branches greatly limited how far down a tree trunk lumberjacks using two-man cross-cut saws could work. Many cutovers continued to be defined by the three-foot-high stumps they left behind.[15]

Nevertheless, Spanish River's ambitious and successful forestry program was attracting attention from many admirers. Royal commissions, professional foresters in both the public and private sectors, and financial analysts were applauding the firm for what the latter termed its "real scientific operation." Avery himself and his fellow employees were also deeply proud of what they were accomplishing. He delighted in providing Toronto's Clifton Howe with an update in 1925. "The company has expressed a policy… of operating for sustained yield," Avery explained, and "in every case excepting one, we are not cutting from the unit watersheds, more than that unit can yield, using a 60-year rotation and 30-year cutting cycle…. If the Government never does require pulp and paper companies to regulate the cut, this Company will, in carrying out its expressed policy, voluntarily undertake means of improving the stands." As Spanish River's solicitor had put it, "we are the pioneers in this business."[16]

COMING FULL CIRCLE

Unfortunately for Avery and Spanish River, the Ontario government proved uninterested in assisting its progressive initiatives despite compelling reasons for doing so. Officials from both the public and private sector, including Dean Howe and the government's own foresters, had repeatedly argued that because the province owned the forests in which companies operated, the government should at the very least share the cost of managing this renewable resource. It would, after all, reap increased timber revenues the next time the "treated" forest was harvested. But the politicians showed practically no interest in cooperating with Spanish River or any other firm in improving how it was managing "the people's forests." As a result, the great progress that Avery had made became a casualty of the austerity measures the newsprint producers began implementing as the Great Depression dawned.[17]

During the 1920s, other big names in Canada's newsprint industry were also engaged in similar efforts, even though historians have rarely mentioned them. For example, the Abitibi Power and Paper Company, which operated an enormous mill a few hundred miles from Spanish River's bailiwick, began the world's most northerly experimental tree-planting effort after the First World War. In nearby Quebec, the Laurentide Paper Company had been conducting a major reforestation effort since the early 1900s, and by the mid-1920s it was planting more than three million seedlings each year. Farther east, in Newfoundland—then still a colony of Britain and not part of Canada—the Anglo-Newfoundland Development Company's forester, John D. Gilmour, was conducting numerous projects, including prescribed burns in cutovers,

in an effort to foster natural regeneration in the woodlands where the mill's crews were harvesting. Other firms were engaged in similar projects, although on smaller scales, across the country.[18]

Perhaps the best testament to how historians—and foresters, for that matter—have overlooked Spanish River's early silvicultural work in particular was an initiative that came into vogue during the 1990s. Foresters managing pulpwood stands had been seeking a means by which they could reduce regeneration costs, operate in a more ecologically-sound manner, and crop the forest more quickly. The solution, they argued, lay in taking a "novel" approach to the woods. Instead of clearcutting a tract and then planting it to the desired species, they said it would be much more effective to protect the immature trees of the desired species that existed at the time of the initial harvest. Christening their approach CLAAG (Careful Logging Around Advance Growth), these "modern day" foresters did not appreciate that they were embracing the basic premise that had compelled Benjamin Avery to adopt the same system some eight decades earlier.[19] □

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NOTES

1. The most vociferous enunciation of this interpretation is Peter R. Gillis and Thomas R. Roach, *Lost Initiatives: Canada's Forest Industries, Forest Policy and Forest Conservation* (New York: Greenwood Press, 1986), chapter 4. As these authors declare on page 105, "unlike the Ottawa Valley men of the 1880s, their [the Ontario pulp and paper operators'] commitment to the forest seems to have been as small as their commitment to the balance sheets of their corporations was large. Because conservation appeared to involve increased costs, it was rejected." Others echo this view, including Donald MacKay, *Heritage Lost: The Crisis in Canada's Forests* (Toronto: Macmillan of Canada, 1985); and Paul Pross, "The Development of Professions in the Public Service: The Foresters in Ontario," *Canadian Public Administration* 10 (1967): 378.
2. In 1919 the chief forester for British Columbia delighted in informing a forestry professor at the University of Toronto that "support for forestry is coming from the industries, for business reasons." University of Toronto Archives [hereafter UTA], A72-0025, box 151, unlabelled file, M. A. Grainger to C. D. Howe, 31 December 1919.
3. Richard S. Hodgson, ed., *In Quiet Ways: George H. Mead, The Man and the Company* (Dayton, Ohio: Mead Corporation, 1970), 1–85.
4. Traditionally, historians have argued that the Ontario government acceded to almost every wish the province's newsprint producers (particularly Spanish River) made of it, including granting their requests for new pulpwood limits: see H. Vivian Nelles, *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1849–1941* (Hamden, Conn.: Archon Books, 1974), passim but particularly chapter 10; Peter Oliver, *G. Howard Ferguson: Ontario Tory* (Toronto: University of Toronto Press, 1977), passim but particularly 206–14 and 343–52. The evidence presented in Mark Kuhlberg, *In the Power of the Government: The Rise and Decline of Newsprint in Ontario, 1894–1932* (Toronto: University of Toronto Press, 2015), indicates, however, that this interpretation is in need of revision. For example, the government rejected almost every one of Spanish River's repeated requests for more fiber even though it agreed that these supplemental limits were needed. In fact, when Spanish River completed its "forest working plans" in the early 1930s for its plants in Espanola and Sturgeon Falls, it indicated that the "calculated allowable annual cut is insufficient to meet the maximum requirements of the mill[s]": St. Marys Paper Archives (Sault Ste. Marie, Ontario) [hereafter SMPA], A–1; file–Forestry 1933, Abitibi Power and Paper Company, "Forest Working Plan—Sturgeon Falls Concession," July 1933.
5. The summary of Avery's early years at Sault Ste. Marie is gleaned from Archives of Ontario [hereafter AO], RG 18-79, "Timber Commission Hearings," 9226–8; and from clippings/documents in the Honorary Degree Committee File, Laurentian University Archives, which includes an address by Stanley G. Mullins, the president of the university, on the occasion of Avery's death in 1965.
6. SMPA, A-1, file–Forestry 1911–1919, B. F. Avery to George Gray, 13 February 1918.
7. Ibid., A–2, file 6–6, Miscellaneous Reports, February 1920, "Report Re: Appropriation," by B. F. Avery. Avery had already presented most of these ideas to Spanish River prior to heading off to war: see ibid., A–2, file 6–5 Surveys, 27 April 1917, Avery to G.R. Gray; ibid., A–1, file Forestry 1911–1919, Avery to Gray, 13 February 1918.
8. Ibid., A–1, file–1921–B. F. Avery, Raphael Zon to B. F. Avery, 3 February 1922.
9. SMPA, A–1, file–1921–B. F. Avery, "Minutes of 959th Meeting of Service Committee, United States Forestry Service," 15 December 1921, 6.
10. SMPA, A–1, file–1921–B. F. Avery, B. F. Avery to W. B. Greeley, 24 January 1922.
11. Library and Archives Canada [LAC], RG 39, box 534, file 31-11, "Forest Regeneration Survey," *Goulais River Watershed*, townships 23 and 24, range 11, District of Algoma, 1920, 43.
12. SMPA, A–1, file–1921, B. F. Avery to George R. Gray, August 1921, "Working Plan for Goulais Watershed," 11–12.
13. SMPA, A–1, file–Forestry 1924, "Forester's Report for the Year Ending February 29th, 1924," 3 April 1924, 3.
14. Ian Radforth, *Bush Workers and Bosses: Logging in Northern Ontario, 1900–1980* (Toronto: University of Toronto Press, 1987), chapters 1–4.
15. Canadian foresters recognized the urgency of solving this problem: *Proceedings of the Annual Meeting of the Woodlands Section, Canadian Pulp and Paper Association* (Montreal: Canadian Pulp and Paper Association), 25–26 January 1928.
16. UTA, A72–0025, box 144, file – So–Sq, B. F. Avery to C. D. Howe, 18 March 1925.
17. SMPA, K–2, file–T–5–1 Timber Limits General, 24 January 1949, J. B. Matthews to D. J. Munro.
18. Mark Kuhlberg, "'We Have 'Sold' Forestry to the Management of the Company': Abitibi Power and Paper Company's Forestry Initiatives in Ontario, 1919–1929," *Journal of Canadian Studies* 34, 3 (Fall 1999): 187–209.
19. For example, Jamie Swift, *Cut and Run: The Assault on Canada's Forests* (Toronto: Between the Lines, 1983), 68–69, suggests that "perhaps the principal reason for the belief in the capacity of the forest to renew itself without human assistance was the fact that natural regeneration is cheap"; NA, RG 39, box 534, file–31–i–General, E. F. McCarthy and W. M. Robertson, "Investigation of Cutover Land for Pulpwood Production, 1920," 2–3, from which the citation is taken; Abitibi-Consolidated - Iroquois Falls Archives, unnamed file, c. 1926, notes by Professor O. Eneroth, forestry professor, Sweden.

Florida is often left out of the national narrative about conservation efforts, but as this article demonstrates, the state and its women were in the thick of things. Many women worked through their clubs—social and otherwise—to advocate for protection of longleaf pine forests.

FLORIDA'S "MUNICIPAL HOUSEKEEPERS"

AND THEIR ADVOCACY FOR LONGLEAF PINE

Two centuries ago, more than half of Florida was covered in forests of tall, majestic pines. From its northern borders with Georgia and Alabama to the upper shore of Lake Okeechobee, the state was home to massive stands of longleaf pine, a slow-growing tree that can reach fifty to sixty feet in height and five hundred years in age. Walking through a longleaf forest is akin to visiting an outdoor cathedral: the thick-barked trees shoot heavenward, breezes play a high-pitched hymn through the thin, spiky leaves, and the clean, piney scent is nature's incense. Early visitors to the nation's Southeast thought the sixty million acres of longleaf forests growing there would last forever. Pioneers marveled at the trees' size and height while alternately complaining about their monotony and the difficulty of traveling through them.[1]

These trees became settlers' homes, fences, and in some cases their livelihood as demand for turpentine and wood products increased with development and improved transportation such as railroads made getting lumber to market easier. Longleaf pines grew with other pine and tree species on an additional 30 million acres—all resources that supplied a growing nation whose citizens, for a while, were firmly convinced that the plenty of American forests would never end. For them, trees provided not only shelter but also commodities that brought personal wealth.[2]

By the end of the nineteenth century, however, it was clear that this was the delusion of a populace that had placed its faith in the "myth of superabundance"—a term first used in 1963 by U.S. Secretary of the Interior Stewart L. Udall to describe Americans' belief that our resources were inexhaustible. It was an assumption that had made wise management of the land and provident husbandry superfluous.[3] Forests across Florida as well as the nation were disappearing with little thought to replenishing them for future generations. Joining in the budding conservation movement, many Florida women worked to address this enormous problem. They sounded alarms, educated the public, and pushed industry and government to improve forestry attitudes and practices. They did this because they loved the beauty of trees as well as the birds and wildlife in them, but also because they saw the natural resource as vital to national economic health and independence.

BY LESLIE KEMP POOLE

STATE ARCHIVES OF FLORIDA, FLORIDA MEMORY, FW00036

This heavily logged longleaf forest in Florida in the early twentieth century shows the typical cycle of use. The chevron-shaped cuts in some stumps indicate the trees were tapped for naval stores. Once they stopped producing resin, the trees were logged.

"The time has arrived when the people of Florida must awake to the fact that beautiful forests of timbered land, pine trees and cypress swamps must be conserved if the picturesque landscapes of Florida count for anything in the welfare of the state," Veola Ezell of Leesburg warned members of the Florida Federation of Women's Clubs (FFWC) in a 1923 article that predicted a nationwide wood famine. She added: "Forests prevent cold winds from devastating orange groves and temper the cold waves from the north and the northwest." It was a particularly Floridian appeal.[4]

FLORIDA AND THE LONGLEAF PINE

By 1880, with the commercial stands of white pines once plentiful in Michigan, Wisconsin, and Minnesota nearly gone, timber speculators bought up Douglas-fir lands in the Pacific Northwest and swarmed the South, snatching up lands containing longleaf pine and other commercial species.

Longleaf forests had made up 80 percent of the pine forest covering the southern coastal plain in the colonial era.[5] Valued for naval stores and its durability in construction, longleaf was fast disappearing by the late nineteenth century. A U.S. Forest Service survey completed in 1936 estimated about 6 million acres of forest remained of the original 60 million acres of pure longleaf pine forests.[6] By 1996, only 2.95 million acres of the estimated 90 million acres at the time of European settlement remained in the Southeast, and almost all the old-growth areas were gone. This 98 percent decline made the loss "among the most severe of any ecosystem on earth," according to historian Lawrence S. Earley.[7]

"Need, greed, and mismanagement" were the culprits, Earley writes. "People cut the forest, burned it to farm and make spaces to live, exploited its resources, and changed the natural processes that had evolved with it and maintained it." The guilty included farmers, turpentine extractors, lumber and paper companies, foresters, and others who "made their livings from the forest and tried to shape it for their own ends." Loggers treated forests as inexhaustible mines "from which [they] extracted the trees and left the land" for another use, then moved on to the next forest without replanting the areas they had denuded. Those watching the resulting devastation advocated new forestry principles that called for treating trees as a crop, which meant that they needed

to be grown, harvested, and regenerated—an "enlightened" idea compared with previous practices.[8]

In 1860, Florida's longleaf forests were just beginning to open up for commercial exploitation, providing naval stores and lumber that amounted to big business for in-state and out-of-state companies. Following the Civil War and Reconstruction, huge tracts of public timberland throughout the South were sold to largely nonsouthern lumber companies, benefiting "northern owners, processors, and speculators" who quickly exploited the trees for naval stores before logging the timber.[9] Still, until 1890, Florida lagged far behind the Carolinas in production of turpentine, tar pitch, and other commodities derived from longleaf pines. But in the following decade, the percentage output by value jumped from 2.4 to 31.8 percent, which put the state behind only Georgia; by 1910, Florida commanded 53.7 percent of the market and had doubled Georgia's output. As demand rose, the process of collecting resin "became more reckless and trees were ruined permanently."[10] It was not until 1910 that a new system of collecting the resin gained widespread use, one that did not kill the tree within a decade of the first cuts being made to release the liquid gold.[11]

Close behind the turpentiners came the lumbermen. Once a tree was done producing resin for naval stores, it was cut for its strong, rot-resistant lumber. The two industries soon became intertwined and slowly worked their way toward and then into Florida, harvesting timber at a furious rate. When the industries reached Florida, they took off fast. In 1869, the state produced 158 million board feet of lumber. Two decades later, when Florida trailed only Georgia in naval stores production and had ten naval stores plants, its 135 sawmills were producing 248 million board feet of products annually and continuing to increase output. The state's lumber production peaked in 1909 at 1.25 billion board feet turned out by 471 mills, levels that coincided with the peak production in the naval stores industry.[12]

Lumbering matched turpentining in its wastefulness. In Florida, as in other southern states, timber often was floated by river to sawmills or to railroad spurs, but often logs were left rotting on riverbanks or sunken on river bottoms.[13] Where majestic longleaf forests once stood, loggers left behind three-foot-high stumps, and railroad logging and skidders tore up the land.

This visible wreckage, a by-product of the nation's rapid industrialization and urbanization, awakened many Americans in the late 1800s to the idea of conserving natural resources. During the Theodore Roosevelt administration, from 1901 to 1909, the president and U.S. Forest Service chief Gifford Pinchot worked together to set aside more forested land, developing a national policy that gained public support. By the time Roosevelt left office, the country had preserved 150.8 million acres in 159 national forests. By the mid-twentieth century, what had been an industry of exploitation had evolved into one that embraced long-term planning and sustained-yield forest management.[14] These managed forests, however, would not resemble the biodiverse woods of the past. They were planted and replanted with specific species desired for their quick growth and commercial value. It was an improvement over past practices, but still with an eye toward nature as a commodity.

Conservationists led or influenced by Pinchot and the Forest Service, and forester Austin Cary in the South, soon advocated for wise, scientific, efficient use of resources so that they would be available for future generations. That meant replanting acres that in the past were logged over and left barren or smoldering from fires. The conservation movement reached its peak in the reform-minded Progressive Era of the early twentieth century, embraced by scientists, politicians, professionals, and importantly, women.[15]

"MUNICIPAL HOUSEKEEPING"

Many upper- and middle-class white women during this era turned their attention to issues outside their homes, using their moral authority as wives and mothers to pursue community improvement—activities labeled "municipal housekeeping" by contemporary observers and historians. "The idea that women as the center of home life were responsible for the moral tone of a community did not vanish, but increasingly it was said that such responsibility did not end with the four walls of a home, but extended to the neighborhood, the town, the city," notes historian Anne Firor Scott.[16] Despite the fact that in most states, including Florida, they could not vote until 1920, women exerted influence in several arenas, including child welfare, temperance, and saving trees. Historian Adam Rome asserts that these women were "indispensable in every environmental cause in the United States, and they often justified their activism as an extension of traditionally feminine responsibilities."[17]

Women's groups across America, including the all-white national General Federation of Women's Clubs (GFWC) and the Daughters of the American Revolution (DAR), supported this new conservation model. Pinchot, whose mother served as chair of the DAR's special Committee on Conservation, declared that the DAR, a "federated and organized" society of women, "spells only another name for the highest form of conservation, that of vital force and intellectual energy." Like their sisters in the Audubon movement, whose cause was saving America's birds, GFWC members were particularly active in organizing campaigns to save the nation's forests.[18]

Women were horrified by the aesthetic toll of clearcut logging and its collateral damage—erosion, watershed pollution, and forest fires. Not bound by the constraints of business ties, they took action intended to conserve resources for future generations. Their purpose was "to preserve ideals that are higher than business," declared the leader of the DAR at the 1910 National Conservation Congress.[19] They rallied in all-female groups, expecting that the power of their congregate numbers would gain public and political attention and force change. Lydia Phillips Williams, of the Minnesota clubwomen's federation and the GFWC forestry chair from 1904 to 1906, organized members to seek the repeal of a timber act that threatened the Chippewa Forest Reserve. They traveled to Washington to threaten their congressmen, saying they had a state membership of "between six and seven thousand" who represented an equal number of husbands and "a few thousand sons who will possibly vote as their fathers vote." These nonvoting women used their male relatives' franchise to exert ballot pressure on male representatives—an interesting electoral twist. The GFWC also supported and coordinated efforts to create national forests in the southern Appalachians and New Hampshire and backed the passage of the federal Weeks Bill to protect stream watersheds. In 1910, some 283 clubs sent their representatives letters and petitions to press for forestry reforms.[20]

The GFWC created a forestry committee in 1902, as did many state and local women's groups, to educate its members and the public about better forestry practices. The federation invited professionally trained foresters to address meetings and appealed to state governments to create forestry departments, set aside forest reserves, create parks, and force better lumbering practices.[21]

STATE ARCHIVES OF FLORIDA, FLORIDA MEMORY RC04250

On the Oklawaha River in 1901, rivermen moved cypress logs cut in the swamps of central Florida and rafted them downriver to mills. The two front sections of the rafts pivoted to make navigating the winding river easier. The Oklawaha flows northward into the St. Johns River, both of which were used for transporting lumber to market in Jacksonville.

Local women's clubs often took the initiative to save forests, an effort that could lead to working both with and against members of the opposite sex. Sometimes it meant raising money to help purchase forest areas.[22]

Perhaps nowhere is the different approach to conservation taken by women more apparent than in a 1908 article for *Forestry and Irrigation*, written by Lydia Adams-Williams, a conservation writer and GFWC forestry chair. She argued that women's "integrity, resourcefulness, genius, and capacity for endurance" accomplished great work. And to Adams-Williams, conservation clearly was women's work. She said it fell to her sex to rally public sentiment to save natural resources: women were naturally interested in issues related to home, family, and future generations while male ventures tended to focus on economics, causing the destruction found across the country. Men, she wrote, were too busy "building railroads, construction [sic] ships, engineering great projects, and exploiting vast commercial and financial enterprises, to take the time necessary to consider the problems which concern the welfare of the home and the future." She noted that the GFWC, with a membership of 800,000, had long worked to preserve forests. "It is conceded that the almost universal sentiment in favor of preserving forests is due to the interest taken in the subject by the women's clubs and the work done for them."[23]

Initially, women were welcomed to the forestry movement by the American Forestry Association (AFA), which included them at its annual meetings and published their articles and poems in its journal. The GFWC was invited to submit reports on its forestry activities in 1906. But the door closed to women in the 1910s when the AFA decided to focus on professionalizing forestry—a field in which few women had credentials and were viewed as "unprofessional" because they concerned themselves more with the "beauty of forests than the resource value of trees," writes Rome.[24] However, Florida's women were welcomed by state forestry leaders, largely because some of them were politically powerful and adept women.

LEADING WOMEN OF FLORIDA FORESTRY

Like many others around the country, Florida women were alarmed by the state's disappearing forests. One of the earliest advocates for good forestry practices was Ellen Call Long, a Tallahassee author and daughter of a Florida governor. In a paper written for the 1888 American Forestry Conference, Long described the riches of the state's forests, including longleaf pine and red cedar; from the latter "millions of pencils annually are manufactured" at cedar sawmills, particularly in the Cedar Keys of Florida's west coast. Well before fire ecology was widely recognized, Long noted that forest fires may be destroyers in some areas but "there is good reason for believing that the annual burning of the wooded regions of the south is the prime cause and preserver" of the "grand" longleaf pine forests. Without fire, there might instead have been "a jungle" of hardwood and deciduous trees, she wrote.[25] In the next century scientists would confirm the importance of regular fires in maintaining healthy longleaf ecosystems.

Long also suggested forestry practices that would directly benefit Florida women. Specifically, she advocated growing mulberry trees for the silkworm industry—something she had spent a year studying in Philadelphia at the Woman's Silk Culture Association of the United States. Income from these practices, she wrote, might financially help "housewives and their child-help, resulting in giving healthful intellectual employment to tender hands that cannot usefully employ themselves in the rougher farm work."[26]

STATE ARCHIVES OF FLORIDA, FLORIDA MEMORY, RC09790

Born and raised in northern Florida, Ellen Long was an early promoter of the ecological benefits of fire in longleaf pine systems. This photo, taken in the 1880s, is contemporary to when she presented a paper on the subject.

The Florida Federation of Women's Clubs (FFWC) also advocated for better logging practices by publishing articles about the value of forests. In 1905, the group's forestry committee issued a report quoting Roosevelt, who cautioned that if the "present rate of forest destruction is allowed to continue, a timber famine is obviously inevitable." Roosevelt warned that a lack of lumber resources could hinder U.S. industry, a common sentiment that appealed to both male and female sensibilities.[27]

The most powerful woman—perhaps the most powerful *person*—in Florida's forestry conservation movement was May Mann Jennings, a committed conservationist born into the political life. Her father was an astute businessman and politician; her husband served as Florida's governor from 1901 to 1905, a period of progressive politics during which his administration achieved a variety of innovative social and conservation legislation, including protection for birds and timber. After his gubernatorial term, Jennings, described as her husband's "intellectual equal" and as enthusiastic about politics, became increasingly active in club work, serving in a variety of leadership roles at local, state, and national levels. She also served in the Florida chamber of commerce and worked on forestry conservation initiatives, earning the nickname of "Mother of Florida Forestry." According to her biographer, by age 42, Jennings, newly elected as president of the state women's clubs, was "the most politically powerful woman in the state."[28]

Jennings's love of nature derived from her childhood in rural Florida, where she developed a kinship with the outdoors. As an adult, she and her family had large timber holdings and thus a personal interest in their management. Jennings often worked with her son Bryan in forestry matters. In 1919, she spoke before the Conference of Southern Foresters, arguing that Florida needed a department of natural resources to oversee forestry and conservation programs. As a result, she was appointed to a committee whose work eventually led to the creation of the Florida Forestry Association (FFA). Bryan was named vice president, and Jennings was named the group's "special consultant on legislation"—something particularly notable since it was one year before women's suffrage and a clear indication of her influence in government. The new group had many tasks: saving forests, preventing wildfires, setting up county forest fire protection associations, pushing the creation of a state forestry board, and publishing pamphlets to educate the public. The FFA's first president remembered Jennings as "a public spirited woman [who] realized the

loss occurring the way forests were being handled. She at the time …conceived the idea of getting together a group to develop it into the forest service and she really sparked the flame that developed into the FFA."[29]

Although the FFA's attempts to get a state forestry board failed initially, Jennings's hard work paid off with legislative approval in 1927: "I handled the Forestry law entirely myself except for several days work done at different times during the session by my son, who is the author of the law," she wrote later. "We are very proud of this big step in conservation for Florida." Jennings was lauded by news media and national forestry officials for this achievement, which merged with men's interests in promoting state growth and economics. A friend congratulated her, confessing, "I wish Florida had a half dozen of you."[30]

OTHER FLORIDA CLUBWOMEN

Florida clubwomen enthusiastically joined Jennings in the campaign to save Florida's forests, producing pamphlets about fire prevention and tree planting to raise public awareness. Their interests also meshed with concerns about the state's dwindling bird populations, and protecting birds and wildlife added impetus to the movement to conserve trees. The women fought for forests, habitat, and wildlife, using a many-pronged approach to appeal to both sexes.

"It is idle to talk of game and bird protection if the forests are to be destroyed," wrote Maud Neff Whitman, FFWC conservation chair, noting in 1922 that some states had begun saving swamps and forests for wildlife. "Without forests in a land having no mountains or sheltered haunts for wild life there can be no birds or game."[31] Whitman, of Orlando, railed about devastation caused by lumber interests and forest fires and called on women to change things, using reasoning that combined conservation and economic messages:

> *It is useless to expect the average man financially interested in timber to heed any altruistic appeal. He is not concerned with the beauties of Nature, is indifferent to an appeal to sentiment but is quick to listen to sound financial argument. If he can be shown that his business and his children's business will come to financial loss unless it can be assured a continuous supply of timber he will at least give some attention to the conservation question.*[32]

Whitman used a conservation message designed to appeal to male and female sensibilities—economics and sports for men, beauty for women. Florida's female activists were demonstrating that they grasped all the issues pertinent to both women and men and were ready and able to address them in their efforts to protect forests and wildlife.

STATE ARCHIVES OF FLORIDA, FLORIDA MEMORY, N027125

After she was widowed in 1920, May Mann Jennings headed the Florida Federation of Women's Clubs and was cofounder of the Florida League of Women Voters. She campaigned for women's suffrage, prohibition, better treatment of children and prisoners, education funding, historic preservation, Seminole Indian reservations, fence laws, and highway beautification.

As conservation issues involving the natural world gained credence, women became politically adept in their activism and often were courted by industry groups. By the 1920s, AFA, reversing its stance of a decade earlier, sought women's clubs' cooperation in the movement to conserve forests and prevent fires; clubwomen were urged to present programs on the topic, work with forestry commissions about state needs, press for school instruction on the issue, and write new club literature.

Articles regularly featured in the FFWC publication *The Florida Bulletin* (later renamed *The Florida Clubwoman*) demonstrated a sensibility about the state's agriculture, forestry, and economics as well as an appeal to aesthetics. America's entry into World War II meant adding patriotism to that list. Susan Floyd Fort Jeffreys viewed the state's pinelands as supply weapons in the country's defense. "As I look at a Florida forest of planted slash pine I feel that here are trained soldiers, soldiers in God's own living green. These planted pines are great factors in our defense program. These trees are patriots and ready to aid us when needed," she wrote in 1948, noting that Florida had 38 million acres of land, of which 23 million acres was forested. She bemoaned forest fires that she reported caused $8 million in damage the previous year, of which 1 percent was caused by lightning—the rest, she said, were manmade. "Let us

give thought to the beauty and the healing balm of the forests. This would be a dreary and cheerless land without forests. While we are battling for economic stability let us with our minds and hearts and souls battle for beauty. Let's keep Florida green."[33] It was an argument appealing to patriotism, male and female alike, while also invoking the largely female aesthetic appeal.

Wartime did produce concerns about the toll it took on the nation's forests. Marjorie Kinnan Rawlings, the Pulitzer Prize–winning author of *The Yearling*, used her literary talents to publicize the value of and threats to timberlands. Rawlings had long been writing about the hardscrabble life of residents in rural north Florida, home to some of the state's largest forest stands. Rawlings was not a clubwoman or conservation-minded activist, but her works were filled with lush descriptions of the area's wildlife and landscapes. In 1942, at the behest of the Forest Service, Rawlings wrote "Trees for Tomorrow" for *Colliers*, a national magazine. In the article she objected to the clearcutting of longleaf forests, justified as needed for the war effort. Her response: "We are fighting today for many valuable things. We must fight also at this critical moment to preserve the God-given forests without which we should be helpless atoms on a sterile earth."[34]

STATE ARCHIVES OF FLORIDA, FLORIDA MEMORY, RC07662

In 1942, Marjorie Rawlings published "Trees for Tomorrow" in Colliers *magazine. The Forest Service asked her to write the anti-clearcutting piece because she often used Florida's forests for the setting of her short stories and novels.*

Rawlings declined to write additional articles about the timber industry but wrote to her husband Norton Baskin, then serving abroad, that "if I could be of help in such a critical matter perhaps I ought to. My literature is painfully likely not to be deathless, but I might go down in history as the gal who saved the nation's trees!" Historian Florence M. Turcotte notes that Rawlings signed the letter as "Maple-tree Maggie." Years later she again wrote to Baskin about Florida's disappearing forests: "I have been remotely aware of what was happening (even the floods are caused by the denuding of high forests), but I never thought of associating it with over-population, or the wars that follow." As Turcotte notes, Rawlings was "seeing the big picture."[35]

Forest fires that blackened wooded areas and destroyed wildlife habitat were another concern for the state's women. The fires were destructive and ugly, they proclaimed in their efforts to stem the blazes. They parroted the popular notion, promoted by the U.S. Forest Service and many foresters despite the growing body of research to the contrary, that fire should be excluded from longleaf forests.[36] Unknown to them was the fact that many of Florida's habitats, including longleaf pine, needed fire to be healthy—something Ellen Call Long had observed in the previous century. Thunderstorms and lightning are regular summer events in the state, and many native trees have adapted to the fires that clear the forest floor of debris and shrubs, allowing the growth of grasses and germination of pine seeds. With its thick bark, the longleaf easily survives fires. However, without regular burns, plant detritus builds up and fuels high-temperature fires that can be catastrophic to trees and their ecosystems. As Earley notes, "fire in longleaf pine forests is like rain in a rain forest." Although regular, low-intensity forest fires in Florida are positive events, before fire ecology became widely understood in the mid-twentieth century, women saw them as evil and unsightly. And as Jeffreys asserted, they believed humans were the primary cause of them.[37]

One mostly female group that involved itself in fire prevention was the Florida Federation of Garden Clubs (FFGC). Founded in 1924 with a mission of protecting the state's trees, shrubs, flowers, and birds, five years later it counted 2,180 members, many of whom were also women's club members and community activists. Like the FFWC, the garden club members supported the FFA, even giving the forestry group its membership list to help it raise funds. At its 1932 annual meeting, the FFGC adopted a resolution supporting the FFA's educational work in hopes "that the prevention of woods fire shall become State-wide." The resolution explains their reasons: "The wide-spread practice of woods burning in Florida is denuding our woodlands and killing baby trees by the millions, and…the shelter and food for wild game and bird life is being destroyed by wild-fire, resulting from the common practice of

COURTESY OF CLAY HENDERSON

A longleaf pine forest in Goethe State Forest in central Florida. Much of the land for the 53,587-acre forest was purchased from a private owner in 1992, and is managed for timber production, wildlife habitat, outdoor recreation, and ecological restoration.

light-burnings, and…wild flowers and plant life are being driven from our woods and fields thereby destroying the natural beauty of our state."[38]

Concern about wildfires became more urgent during the New Deal and the work of the Civilian Conservation Corps, which made a herculean though misplaced effort to remove fire from the land. In 1935 the FFGC adopted a new resolution that pledged a stronger focus on forestry conservation. It stated that Florida had an average of 15,000 fires annually, giving it the largest "burned over area" of any state and resulting in a destruction of scenic beauty and wasting our material resources to a ruinous extent." The group urged its member clubs to work for fire prevention and control while also stimulating public awareness through "schools, press, radio, speeches, exhibits, and all other ways possible."[39]

Public awareness also was a national concern. With statistics showing that 90 percent of forest fires were caused by people, the U.S. Forest Service and a group of advertising executives organized a national campaign in 1942 to increase understanding of the issue. Florida garden club members, already concerned about the effects of wildfires, embraced what became the Smokey Bear campaign in 1944, sponsoring annual poster contests for child artists who illustrated Smokey and his message about stopping human-caused fires. These contests continue today.[40]

The long-term effect of Smokey Bear was mixed. Early notes, "It was a spectacularly successful public relations program, but one that undermined public education about the necessity of prescribed fire for decades to come." The year before Smokey's debut, after a protracted debate lasting several decades, the Forest Service finally recognized the ecological role of fire in longleaf reproduction and health and approved allowing prescribed burns in longleaf forests. But for the general public, the confusion continued. Today the Florida Division of Forestry views fire as both a friend and a foe to the state's forests. Prescribed burns, carefully applied to clear dead wood and excess brush, are administered periodically to keep forests healthy; wildfires from lightning and arson that can threaten homes and large tracts of timber pose a different challenge to the state. It is a delicate balance for state officials and residents still.[41]

Attitudes about Florida forestry—and fire—evolved significantly during the past century in response to increasing scientific knowledge and better management practices. When Florida's women first began worrying about and advocating for better use of the state's trees, they were calling for conservation of resources to counter sheer exploitation of natural resources. With a greater understanding of ecology and the ongoing pressure of Florida's population growth, today the challenge for federal, state, and private entities is to protect and maintain healthy forests while meeting human needs. Women, through individual action and in clubs, have helped frame this debate for decades—first arguing for aesthetics and then for healthy ecosystems. Their work was critical in teaching a developing state to love and value its vast woodlands—of which only a remnant exists today. □

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How did a 1960 bill that raised taxes on cigars help lay the foundation for fundamental change in forestland ownership that will reverberate into the future? The world of timber REITs and TIMOs is better understood by tracing its history.

FROM CIGAR TAX TO TIMBERLAND TRUSTS

A SHORT HISTORY OF TIMBER REITS AND TIMOS

In September 1960, President Dwight D. Eisenhower signed Public Law 86-779, a collection of unrelated tax laws known as the Cigar Excise Tax Extension of 1960 simply because that was the first one listed. However, the second half of this thirteen-page bill, which included provisions dealing with income tax in the Virgin Islands and another allowing farmers to expense the cost of fertilizer, had the Real Estate Investment Trust Act of 1960, which ultimately changed how we view industrial timberland ownership today.[1] This act included a special provision in the IRS tax code that gave all investors—not just the wealthiest—the opportunity to invest in large, diversified portfolios of income-producing real estate. Though intended for traditional commercial real estate like office and apartment buildings, after additional changes years later, it transformed timberland-owning companies in the United States.

Meanwhile, the forest industry began its own change. In 1969, fourteen of the fifteen largest U.S. timberland owners were vertically integrated, mill-owning forest industry firms; today, only two of the top timberland owners from 1969 still hold places on the list (Table 1). Five decades ago, integrated forest industry firms dominated the industry; today, timberland specialists (in the form of real estate investment trusts) and asset managers control the largest industrial forest ownerships.

How and why have industrial ownerships restructured in the United States? What has been the role of legislative changes and real estate investment trusts?

BY BROOKS MENDELL

Table 1. Top 15 Industrial Timberland Owners and Managers, 1969 versus 2016

1969			2016	
Rank	Firm	Type	Firm	Type
1	International Paper	Forest Industry	Weyerhaeuser	Public REIT
2	Weyerhaeuser	Forest Industry	Hancock Timber Resource Group	TIMO
3	Georgia-Pacific	Forest Industry	The Forestland Group	TIMO
4	Great Northern Nekoosa	Forest Industry	Campbell Global	TIMO
5	St. Regis Paper	Forest Industry	Resource Management Services	TIMO
6	Boise Cascade	Forest Industry	BTG Pactual	TIMO
7	Scott Paper	Forest Industry	Forest Investment Associates	TIMO
8	Champion International	Forest Industry	Rayonier	Public REIT
9	Kimberly-Clark	Forest Industry	Molpus Woodlands Group	TIMO
10	Burlington Northern	Railroad	Sierra Pacific	Forest Industry
11	Union Camp	Forest Industry	The Nature Conservancy	Conservation
12	Continental Group	Forest Industry	Potlatch	Public REIT
13	Crown Zellerbach	Forest Industry	Green Diamond Resource Co	Forest Industry
14	Potlatch	Forest Industry	Wagner Forest Management	TIMO
15	Diamond International	Forest Industry	J. D. Irving	Forest Industry

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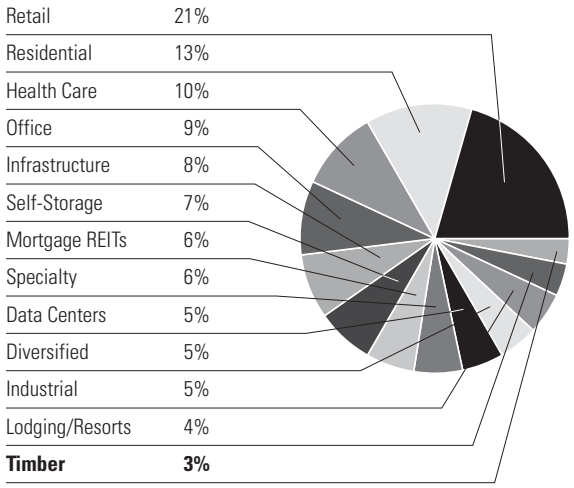
REITS: A BRIEF HISTORY

Real estate investment trusts, or REITs (pronounced "reets"), are companies that own and manage income-producing real estate of various types, such as office buildings, warehouses, and timberlands (Figure 1). To address "double taxation," whereby a firm would pay corporate income taxes, then make dividend payments from after-tax income to shareholders, who would have to pay taxes on those dividends, the law allows REITs to deduct the dividends they pay to shareholders from corporate taxable income. With REITs, shareholders pay taxes on dividends received, but firms do not pay taxes on the rental income generated from their real estate holdings.

The REIT arrangement comes with strict rules. To qualify under IRS rules, a firm must, among other criteria, distribute at least 90 percent of its taxable income as dividends. In the end, REITs, which were patterned after mutual funds, provided regular investors a way to buy shares in real estate businesses that distributed tax-efficient real estate income.

REITs are big business. As of May 2016, according to the National Association of Real Estate Investment Trusts, nearly 200 REITs with a combined market value of nearly $1 trillion trade on the New York Stock Exchange alone.[3] This does not include hundreds of privately managed REITs that do not trade on public exchanges.

Figure 1. Property Sectors for Listed U.S. REITs, Percentage of Market Capitalization, May 31, 2016



NAREIT "REITWATCH" JUNE 2016, WWW.REIT.COM

THE FOREST INDUSTRY RESTRUCTURES

As the real estate sector evolved in the 1960s and 1970s, forest products firms experienced their own shakeup. In 1978, analyst Thomas Clephane issued a report from investment bank Goldman Sachs dissecting the forest products industry. His report, "Timber Survey: Ownership, Valuation, and Consumption Analysis for 57 Forest Product and Paper Companies," indicated that the stock prices of most of the largest public forest products and paper companies were trading below the value of their timberland holdings. According to Clephane, firms such as Crown Zellerbach, Weyerhaeuser, International Paper, and Potlatch owned timberlands valued at two to three times their stock prices: their trees were worth more than their shares.[4]

For savvy and aggressive investors, this apparent gap in value between the timberlands and the shares of certain companies provided an investment opportunity. And for forest industry firms, REITs provided a means to generate cash in tough times. The forest industry began selling timberlands prior to the recession

of 1981 and 1982. At the time, firms were experiencing losses associated with timber-cutting contracts on U.S. Forest Service lands. In October 1984, President Reagan signed legislation giving dozens of forest products companies the right to cancel $2.5 billion in pre-1982 contracts to harvest timber in the Pacific Northwest on federal public lands.

In January 1985, the *New York Times* reported that major U.S. forest products companies, such as International Paper, Champion International, Boise Cascade, and Crown Zellerbach, continued to struggle "amid an oversupply of lumber and declining timberland values." Firms were closing mills, laying off workers, and writing off hundreds of millions of dollars. And analysts and executives questioned "the long-term benefits of owning vast acres of forests."[5] So the sale of timberlands accelerated.

TIMBERLAND INVESTMENTS GO INSTITUTIONAL

Sellers need buyers, and timberland owners found interest from institutions looking to diversify their pension plans. The Employee Retirement Income Security Act of 1974 (ERISA) triggered a major change in how pension funds invested. Congress designed ERISA to regulate private pension plans, requiring them to diversify beyond bonds and stocks. Timberlands, with their regular cash flows and inflation-hedging characteristics, became an attractive asset.

Timberland investment management organizations (TIMOs) stepped in to facilitate and advise institutions on these timberland transactions. TIMOs provide management services; they do not own any timberland themselves. Institutions placed funds with the TIMOs as their intermediaries, and the TIMOs, acting as middlemen, would acquire and manage timberland investments on their behalf.

Over the past thirty years, TIMOs have grown in number and size. As of February 2016, approximately twenty TIMOs managed nearly 25 million acres in the United States on behalf of institutional investors. Table 2 lists the top six that manage nearly 2 million acres or more each, for a total of 16.2 million acres.

Table 2. Largest TIMOs, by U.S. Acres under Management, 2016

Firm/Organization	Type	U.S. Acres
Hancock Timber Resource Group	TIMO	4,042,990
The Forestland Group	TIMO	3,055,015
Campbell Global	TIMO	2,597,683
Resource Management Service (RMS)	TIMO	2,286,541
Forest Investment Associates (FIA)	TIMO	2,252,001
Molpus Woodlands Group	TIMO	1,974,033

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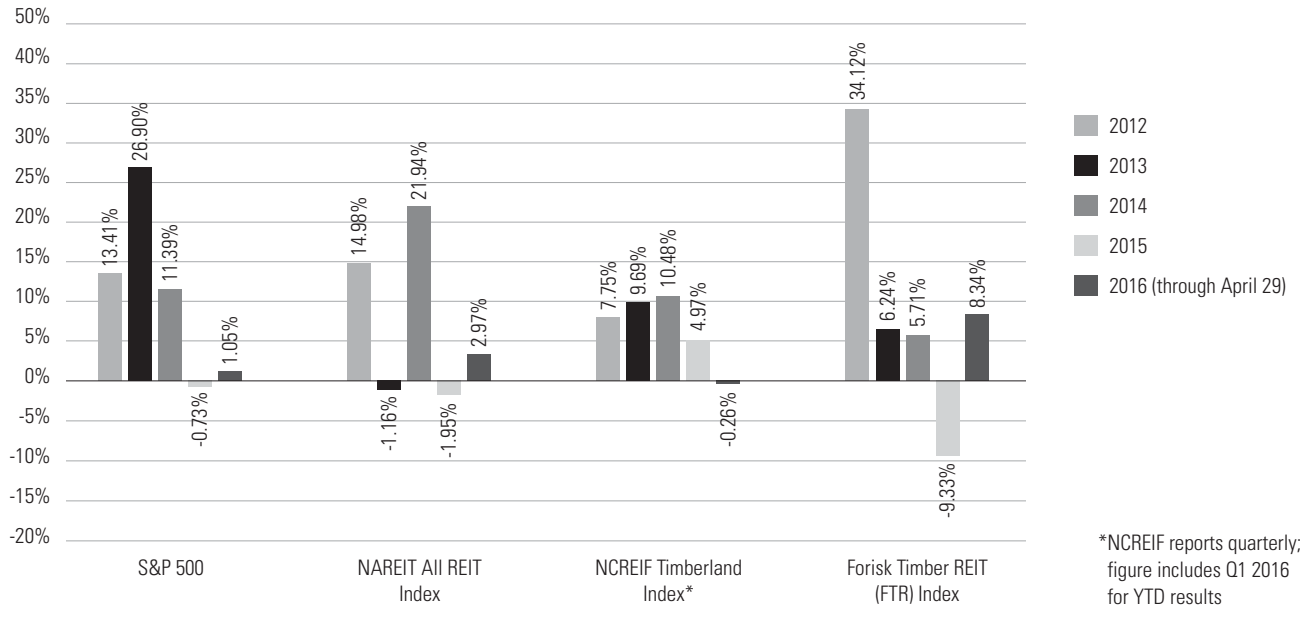
TIMBER REITS ARE BORN

The institutional timberland investment sector came of age in the 1980s, but timber REITs did not hit the market until 1999, beginning with the conversion of Plum Creek from a master limited partnership to a REIT. Between 1999 and 2006, four publicly traded forest products firms converted more than 12 million acres of industrial timberlands into these corporate structures. In addition to Plum Creek, the new REITs included Rayonier, Potlatch, and briefly, Longview Fiber.[6]

At the time, the direct effects on shareholder value of these timber REIT conversions remained unclear. In 2007, Forisk conducted the first peer-reviewed research evaluating timber REIT performance, asking how the equity markets responded to timberland restructurings."[7] The study analyzed stock market (shareholder) responses to announcements by forest industry firms of their decisions to restructure from traditional corporations to more tax efficient REITs. The analysis concluded that investors prefer holding industrial timberlands in a REIT structure, reinforcing the importance of tax policy on investor preferences.

Figure 2. Timber Investment Indices Relative to Other Assets, 2012–2016 (through April)



FORISK, NAREIT, NCREIF[8]

In 2009, Weyerhaeuser announced its board's approval for converting to a REIT. Weyerhaeuser made the conversion in 2010, becoming the fifth firm to convert. Finally, in December 2013, CatchMark Timber Trust, formerly the private REIT known as Wells Timber, became the sixth timber REIT to trade publicly. As of year-end 2015, there were five public timber REITs still on the market: CatchMark Timber (symbol CTT), Plum Creek Timber (PCL), Potlatch (PCH), Rayonier (RYN), and Weyerhaeuser (WY).

The Forisk Timber REIT (FTR) Index, commonly called the "footer index," is a market-weighted index of all publicly traded timberland-owning REITs. Initiated in 2008, it assigns a weight to each firm based on its individual market share. Figure 2 provides summary analysis of the timber REIT sector relative to other asset classes since 2012 through the first four months of 2016.[8]

AND THEN THERE WERE FOUR

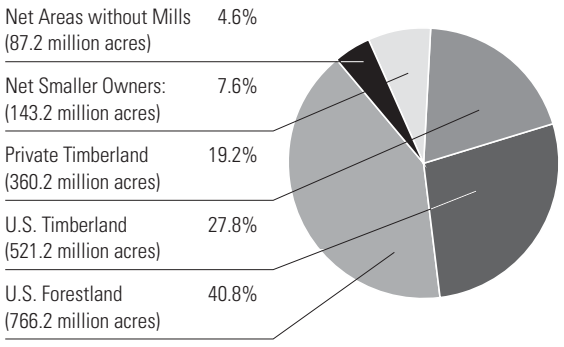
In February 2016, the completion of the merger of Plum Creek and Weyerhaeuser, the two largest timber REITs, reshaped the sector once more. The new firm held more than 13 million acres across 20 states (and Uruguay) and three dozen forest products manufacturing facilities. However, the merger requires historical and spatial context.

First, the merger of Plum Creek and Weyerhaeuser reminds us of the relative insignificance of timber firms to the REIT sector generally and the stock market overall. Timber REITs accounted for 6 percent of the REIT sector three years ago, but that share has shrunk to 3 percent today (see Figure 1).

Second, Weyerhaeuser still accounts for a small portion of private U.S. timberlands and only a fraction of the entire "investable universe" of industrial and institutional quality assets in the country (Figure 3). Clearly, 13 million acres represents a meaningful share of the industrial timberland universe. However, these acres are only part of a broader, actively managed space that includes millions of small and mid-sized private landowners.

Third, the merger reminds us of the limited growth options for REITs and TIMOs. Few opportunities remain to acquire timberlands from integrated forest industry firms. Increasingly, TIMOs and REITs are buying and selling timberlands from and to each other. Figure 4 summarizes the concentration and conversion among the fifteen largest timberland owners and managers over the past five decades.

Figure 3. Investable Universe for U.S. Timberlands

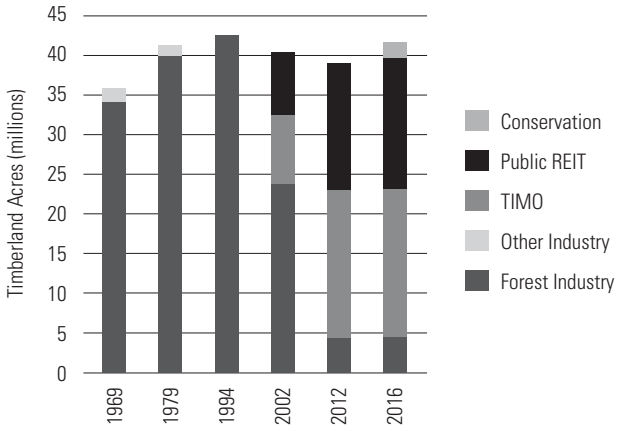


Total U.S. Land Area = 2,261.0 million acres

Note: Forisk screened out 75 percent of the private timberlands in the Intermountain and Pacific Southwest Regions and 50 percent in the North Central Region because of low mill densities.

FORISK 2015 TIMBERLAND OWNER LIST; BUTLER 2008 (U.S. FOREST SERVICE)

Figure 4. Top 15 U.S. Industrial Timberland Owners by Type, 1969–2016



FORISK, LAUGHLIN & ELLEFSON, OTHER

WHAT DOES THE FUTURE HOLD FOR TIMBER REITS?

Over the past fifty years, U.S. industrial timberland ownership has shifted from vertically integrated firms that owned sawmills and paper plants to forest management specialists such as REITs and TIMOs. The financing and history of timberland investments continues to teach us how alternative timber-related investments—though anchored to a common asset—provide distinct investment opportunities, market structures, and performance.

The critical events driving change in industrial timberland ownership relate to new legislation, tax policy, and mergers. ERISA's passage in 1974 essentially created a market and spurred demand for timberland by institutional investors. Plum Creek's successful reorganization from a master limited partnership to a REIT in 1999 demonstrated how other firms could become IRS-qualifying, timberland-owning REITs. And Weyerhaeuser's REIT-conversion provided the path for its ultimate merger with Plum Creek.[10]

The world of timberland investing will continue to struggle with within-industry maturity and outside-of-industry demand for financial returns. Public REITs purchased and divested more acres in 2015 and early 2016 than any other type of owner. The presence of TIMOs and REITs as both buyers and sellers continues to speak to the relative maturity of the sector, as investors continue to grapple with the reality of a constrained "solution set" of investment opportunities. And global investors dissatisfied with "negative yields" in Europe and falling yields for U.S. Treasury instruments seek more attractive alternatives. Timber REITs offer one option, along with other real estate investments, for those seeking tax-efficient cash flows and protection from inflationary uncertainties. □

Brooks Mendell is president of Forisk Consulting. He is the author of the forthcoming book Liquid Trees: Forests as Financial Assets, *from which portions of this article are drawn. With Amanda H. Lang, he is the coauthor of the Forest History Society Issue Series book* Wood for

Bioenergy: Forests as a Resource for Biomass and Biofuels *(Forest History Society, 2012)*.

ADDITIONAL READINGS

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NOTES

1. The entire act is available at https://www.gpo.gov/fdsys/pkg/STATUTE-74/pdf/STATUTE-74-Pg998.pdf
2. Forisk Consulting, "North American Timberland Owner & Manager List, 2016," available at: http://forisk.com/product/forisk-timberland-owner-list; and Gordon A. Enk, "A Description and Analysis of Strategic and Land-Use Decision Making by Large Corporations in the Forest Products Industry," PhD dissertation, Yale University, 1975.
3. NAREIT updates statistics monthly at https://www.reit.com/data-research/data/industry-snapshot.
4. Thomas Clephane wrote a series of articles and reports on this theme, including *Timber Survey: Ownership, Valuation, and Consumption Analysis for 57 Companies* (New York: Goldman Sachs Research, Investment Research Publication, 1978), and "Timberland Investment Increasing as Means of Improving Profitability," *Pulp & Paper* (November 1980): 72–73.
5. Thomas C. Hayes, "The Timber Glut's Legacy," *New York Times*, January 19, 1985.
6. Longview Fiber (LFB) traded publicly as a timber REIT temporarily in 2006 prior to its acquisition by Brookfield Asset Management in 2007.
7. B. C. Mendell, N. Mishra, and T. Sydor, "Investor Responses to Timberlands Structured as Real Estate Investment Trusts (REITs)," *Journal of Forestry* 106, no. 5 (2008): 277–80.
8. The FTR Index methodology is explained at http://forisk.com/wordpress//wp-content/assets/FTR-Indices-Calculation-Methodology-2016.pdf.
9. The National Council of Real Estate Investment Fiduciaries (NCREIF) publishes the most widely referenced indices for private timberland investment performance in the United States. The quarterly indices measure the performance of timberland properties acquired in the United States for investment purposes. For the most part, TIMOs acquired these properties for tax-exempt institutional clients such as pension funds and endowments. NCREIF has published the Timberland Index since 1994, with returns dating back to 1987.
10. As of 2016, Weyerhaeuser is the largest nongovernmental owner of U.S. timberland and the highest-ranking REIT in *Fortune Magazine*'s list of the 500 largest corporations as ranked by revenue. Weyerhaeuser is 373. Only two other (nontimber) REITs appear in the Fortune 500.

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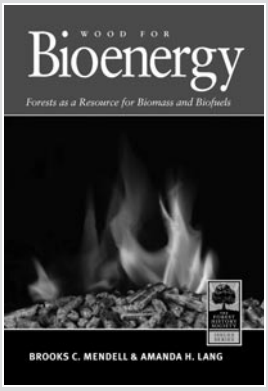

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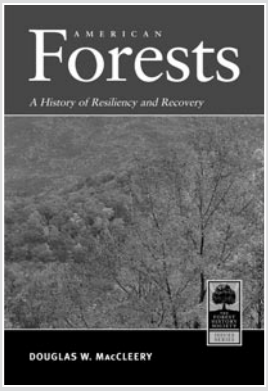

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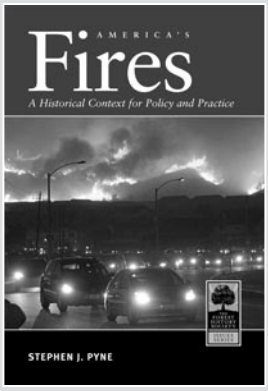

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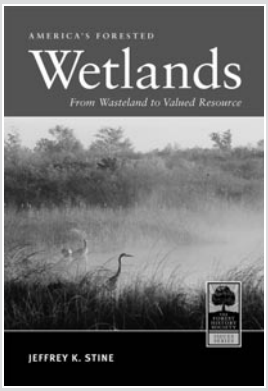

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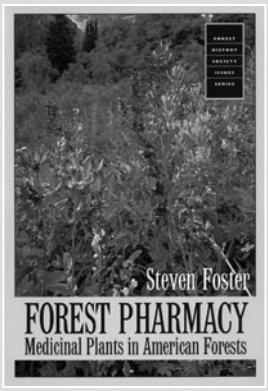

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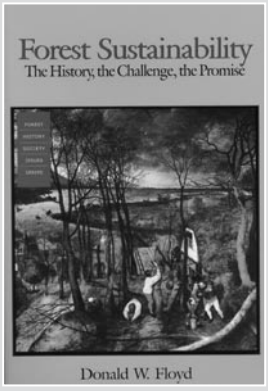

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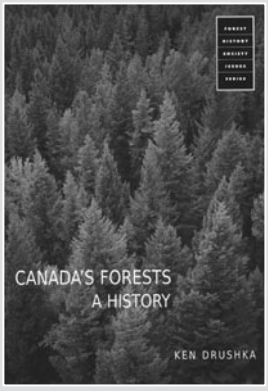


Canada's Forests
by Ken Drushka
105 pp; 17 photos; 14 figures

In 2015 the Texas A&M Forest Service marked one hundred years of forestry in the Lone Star State. This article focuses on the agency's first quarter-century (1915–1940), its visionary founder W. Goodrich Jones, and the first two state foresters—John H. Foster and Eric O. Siecke—who were responsible for laying a solid foundation.

BRINGING FORESTRY TO TEXAS

THE FIRST QUARTER-CENTURY OF THE TEXAS A&M FOREST SERVICE

As the nineteenth century was coming to a close, the virgin forests of longleaf pine in East Texas were rapidly disappearing. Most had been felled in fifty-plus years of cut-out-and-get-out lumbering. Extensive acreages of stumps, burned-over landscapes, and streams filled with silt provided testimony to careless logging practices, frequent unsuppressed wildfires, and lack of reforestation. It was the story of America's forests, this time playing out in the Lone Star State.

W. Goodrich Jones, a banker from Temple, Texas, followed in the footsteps of many other pioneering conservationists. He was not a trained forester, but his life experiences had created a deep passion for trees and a deeper concern for the future of forests. As a child, he had visited Germany's Black Forest and its forestry schools, which had left a lasting impression. After graduating from college in 1883, he returned to Texas and in 1888 settled in Temple, a small railroad town without a tree in sight. He encouraged his fellow citizens in Temple and elsewhere in central Texas to plant trees. Soon he began campaigning for conservation, helping to establish a state arbor day seven years later.

Getting Arbor Day on the calendar was a relatively easy job. Bringing forestry to Texas proved more difficult for Jones. In 1899, at the urging of Bernhard E. Fernow, head of the United States Division of Forestry (which became the U.S. Forest Service), Jones surveyed the pine forests of East Texas by horse, buggy, and train. In his 1900 report, the man later recognized as the Father of Forestry in Texas wrote, "Like the buffaloes, the timber is going fast: what escapes the big mill is caught by the little mill, and what the little mill does not get, the tie cutters and rail splitters have soon cut down."

For the next decade and a half, Jones worked tirelessly to convince his fellow citizens of the need for forest management in Texas. Undeterred by the widespread indifference, he created one organization after another to generate interest and help get

BY RONALD F. BILLINGS

legislation on the books. Meanwhile, the pace of logging and milling accelerated. By 1912, estimates of remaining pine timber in East Texas had dropped from 67.5 billion board feet in 1890 to 25 billion board feet, and volumes continued to dwindle rapidly. By 1914, Jones realized he could not accomplish his goal of creating a state forestry agency, so as an interim measure, to help push for such an agency, in 1914 he set up the Texas Forestry Association (TFA). At the organizational meeting that November, participants agreed with Jones that TFA should be nonpartisan and nonprofit, with the primary goals of forming a state forestry agency and developing a statewide plan for forest conservation.

To help achieve those two aims, TFA raised $350 from its members to bring J. Girvin Peters of the U.S. Forest Service's State Cooperation Division to Texas. Peters went on a month-long tour of East Texas to visit prominent lumbermen and view for himself the condition of the state's once magnificent forests. Returning to Temple, Peters worked with Jones to write a bill calling for a department of forestry in Texas (later labeled House Bill No. 9, An Act to Promote Forest Interests in the State). To gather further support for the measure, Peters wrote a leaflet entitled "A Forest Policy for Texas." Where similar bills had failed twice before, House Bill No. 9 succeeded in 1915 because of the strong support of state Representative Richard F. Burgess of El Paso and William B. Bizzell, president of the Agricultural and Mechanical College of Texas (now Texas A&M University), among others. Jones, gathering support from a handful of conservation-minded forest industry leaders such as John Henry Kirby and J. Lewis Thompson, entrusted Burgess to guide the law to Governor James Ferguson, who signed it on March 31, 1915, creating a state forestry agency.

TEXAS A&M FOREST SERVICE AND TEXAS FORESTRY ASSOCIATION

W. Goodrich Jones, a banker and pioneering conservationist, was largely responsible for creating both the Texas Forestry Association and the Department of Forestry (now Texas A&M Forest Service) in Texas.

ORGANIZING THE DEPARTMENT OF FORESTRY

Texas became the thirty-fifth state in the nation and the seventh in the South to establish a state forestry agency, but it was the first in the nation to establish its forestry agency as part of a land-grant college, in this case Texas A&M. (Four other states—Colorado, Kansas, Nebraska, and North Dakota—later did the same.) The agency's headquarters was established and has remained in College Station. Originally known as the Department of Forestry, it changed its name to the Texas Forest Service in 1926, and then to the Texas A&M Forest Service in 2012; it still goes by the initials TFS, however.

With the Department of Forestry finally created, Goodrich Jones placed a help-wanted ad in the June 1915 issue of the *Gulf Coast Lumberman* seeking "an orator, a lecturer, a mixer," and "a highly trained specialist" willing to work for $3,000 annually. The last requirement set Texas apart—it was the first state in the Deep South to hire an experienced, technical forester. The top applicant was John H. Foster, a native of Vermont who had graduated from the Yale Forestry School in 1907 and then joined the U.S. Forest Service. Foster worked in the Rocky Mountains, the South, and in the Northeast, turning out reports on numerous topics, and became assistant chief of state cooperation within four years. He gained valuable experience in the Forest Service as a national Weeks Act inspector, knowledge he would later put to immediate use as a state forester in Texas. In 1911, he left the Forest Service to become head of the forestry department at New Hampshire State College and forester with the New Hampshire Agricultural Experiment Station.

His extensive experience in both academia and federal administration prepared him for his work as the first state forester in Texas, where he held two other titles. As chief of the Division of Forestry in the Texas Agricultural Experiment Station, he was expected to conduct research. As professor of forestry, he taught five forestry courses at the college and ran the forestry department. And in March 1916, he assumed the responsibilities of secretary-treasurer of TFA and worked closely with Goodrich Jones to coordinate activities between the Department of Forestry and the association.

To supplement the $10,000 annual budget the Texas state legislature had appropriated for the fledgling agency, Foster promptly applied to the federal government for matching funds for fire protection under Section 2 of the Weeks Act. With the $2,500 of supplemental federal funds in hand, Foster organized the first system of forest fire protection in Texas, covering more than 7.5 million acres of the "Pineywoods" of East Texas. But in this, Texas was no different than any other state in declaring fire as the enemy. It was not until much later that scientists and forest ecologist realized that fire was essential for longleaf pine to thrive, and not until 2009 that the state, working with officials in Louisiana, formed a longleaf restoration task force.

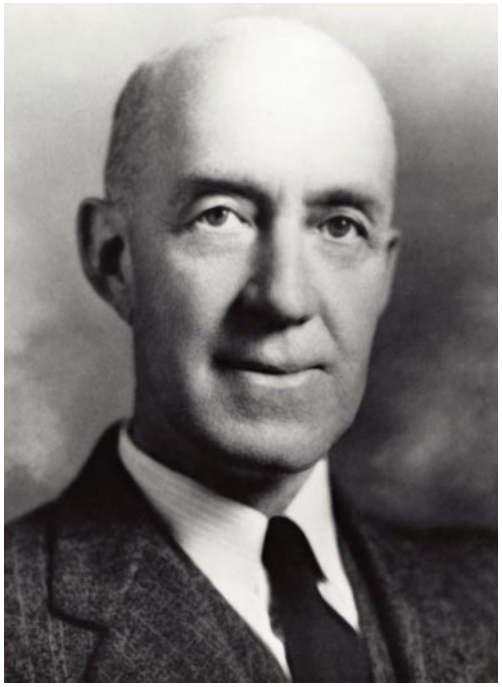
On September 1, 1916, he hired six local men to serve as seasonal fire patrolmen, stationing them initially in Linden (Cass County), Longview (Gregg County), Tenaha (Shelby County), Lufkin (Angelina County), Livingston (Polk County), and Jasper (Jasper County). Each patrolman was given a radius of about 25 miles surrounding his headquarters, or 1,256,640 acres, and instructed to ride 15 to 25 miles per day, meet all citizens and

TEXAS A&M FOREST SERVICE AND TEXAS FORESTRY ASSOCIATION

In 1916, W. E. Wells and five other forest patrolmen were hired to fight small fires and educate the public about fire prevention. Each patrolman cover 1.25 million acres of land on horseback.

residents, acquaint them with the importance of fire prevention, and urge them to cooperate with the state and federal governments to this end. With help from locals and available hand tools, putting out small fires a patrolman encountered in his travels was another of his duties.

Being part of a land-grant institution, the agency has always considered research and education important aspects of its mandate. The Department of Forestry's Bulletin 3, *General Survey of Texas Woodlands, Including a Study on the Commercial Properties of Mesquite*, resulted from an early research project carried out under Foster's leadership. This pioneering study pointed out that the state's valuable wood resources were not limited to just East Texas. The administrative and financial support allocated to applied research, coupled with employment of knowledgeable scientists, distinguished Texas from most other state forestry agencies, few of which conducted research.



TEXAS A&M FOREST SERVICE AND TEXAS FORESTRY ASSOCIATION

John H. Foster, a New England native, served as the first state forester in Texas (1915–1918). Eric O. Siecke (right) moved from Oregon to become the second state forester in Texas and served until he retired in 1942.

Foster himself wrote and edited as many as eight bulletins, including Bulletin 1, *Grass and Woodland Fires in Texas*; Bulletin 2, *Tree Planting Needed in Texas*; Bulletin 5, *Forest Resources of Eastern Texas*; Bulletin 6, *Forest Fire Prevention in Co-operation with the Federal Government*; and an extension bulletin, *Farm Forestry*. He remains the most prolific writer of any state forester to date. He accomplished this in less than three years with support from forestry assistant Harry B. Krausz and East Texas agents George W. Johnson and F. H. Millen. The bulletins served to identify problems facing forestry in Texas and established recommendations for addressing them. Indeed, the tax policy projections and future TFS needs he described to the state legislature (including the need for increased agency funding, decentralization of staff, more personnel at the field level, and a revised tax code for forest lands) were prophetic. Nearly every aspect of what Foster envisioned or set in motion eventually came to pass, and he launched the Department of Forestry in Texas on a successful and productive trajectory.

CHANGING OF THE GUARD

Frustrated by his unsuccessful struggles with the Texas state legislature to increase funding for the forestry service, Foster resigned in February 1918; he eventually became the second state forester of New Hampshire. He was replaced by Eric O. Siecke, former deputy state forester of Oregon, who led the agency for the next 24 years. Siecke's knowledge of forestry and his strong leadership skills provided a solid foundation for the young forestry agency. Under his direction, TFS developed rapidly in forestry education, wildfire prevention and suppression, forest management, and research.

In a 1980 interview, D. A. "Andy" Anderson, interim TFS director in 1948 and head of the TFS Information and Education Department in the late 1960s, characterized Director Siecke as "a straight-shooter. He was German, a strict disciplinarian, and demanded work from his people. He received it. He had, however, respect from all. He would do anything for anybody who worked for him. He had a heart. And, above all, he knew politics and how to get things done."

Unlike his predecessor, Siecke was successful with the state legislature. In the 1919 legislative session, the trio of Siecke, Texas A&M President Bizzell, and Goodrich Jones, in his role as president of the TFA, orchestrated a substantial increase in state appropriations for the Department of Forestry. As Jones related in a 1944 memoir: "Old King Sisyphus of Greece was condemned to roll in perpetuity an enormous boulder uphill, which always rolled back to the bottom. When Dr. Bizzell and Mr. Siecke began to roll their $10,000 a year appropriation, as it went uphill, it became $20,000 and then $30,000, getting heavier the further up it went, and it never fell back on those valiant pushers." The expanded budget allowed Siecke to increase his headquarters staff in 1919 to include two assistant state foresters, Gordon D. Markworth and Lenthall Wyman, plus an office secretary. (Today, with the recent addition of 75 wildland firefighters, TFS employs 545 people and has an annual budget of about $82.4 million.)

In addition to significantly increasing the financial support for the agency, Siecke was the shepherd for a timber supply study and subsequent recommendations for a forest policy in Texas. He succeeded in having a rider attached to the 1921 appropriations bill to relieve the state forester of his time-consuming teaching responsibilities. This allowed him to focus efforts on the primary objective for which the agency had been established—creating public awareness and a positive attitude about forests and encouraging landowners to practice forest protection and forestry.

To help meet those objectives, the Department of Forestry, jointly with Texas Forestry Association, began publishing *Texas Forest News* in August 1919. This was the first forestry newsletter issued by a state forestry agency in the nation. As described in the

TEXAS A&M FOREST SERVICE AND TEXAS FORESTRY ASSOCIATION

Eric Siecke (back left), assistant state foresters Gordon D. Marckworth (left) and Lenthall Wyman, and a secretary in the TFS headquarters office, 1921.

first issue, the purpose was "to create an interest in forestry within the state, to bring up forestry points of interest from time to time, and to keep our readers informed of the progress of forestry in Texas." After 1932, *Texas Forest News* was prepared, published, and distributed solely by TFS. The publication's name was shortened to *TFNews* in 1970, then changed to *Texas Trees* in 1989; publication ceased two years later because of high costs.

In the early 1920s, Siecke argued for a fair and equitable taxation system for forestland to replace a tax regime that encouraged liquidation of timber and discouraged reforestation. This situation attracted much attention across much of the nation, but remained unresolved until a change in the federal tax code in 1944. He also advocated that forests and forestry remain in the hands of private citizens and not with federal or state government, stating in the 1924 annual report: "Public ownership should be minimized and private ownership and initiative should be encouraged in the great task relating to the renewal and proper management of forests." (This has been the sentiment of most Texans ever since; today, 95 percent of Texas land remains privately owned.) Between 1924 and 1928, four state forests totaling just under 6,300 acres were established from cutover lands primarily for education and demonstration purposes.

TEXAS FORESTRY COMES OF AGE

Forestry in Texas came of age in 1926, when the college's board of directors officially recognized the Department of Forestry as one of the four major administrative divisions of the college, thus giving it a rank equivalent to that of the Texas Agricultural Experiment Station and the Texas Agricultural Extension Service. The state forester was given the title of director, and annual salary for the position was increased to $4,500. The department's name was changed to Texas Forest Service. Statutory recognition for the agency would not come until 1951.

From its inception as a small state agency consisting of six fire patrolmen on horseback to address wildfires across 7.5 million acres in the Pineywoods, TFS made great strides in wildfire

Texas has had eight state foresters, plus two interim directors:

John H. Foster (1915–18)
E. O. Siecke (1918–42)
William E. White (1942–48)
Sherman L. Frost (Interim, April 1–June 30, 1948)
David A. Anderson (Interim, July 1–December 31, 1948)
A. D. Folweiler (1949–67)
Paul R. Kramer (1967–81)
Bruce R. Miles (1980–96)
James B. Hull (1996–2008)
Thomas G. Boggus (2008–present)

management in the 1920s and 1930s under Siecke's leadership. To deal with the continuing threat of wildfires, Siecke established the Forest Protection Division in 1922, the first division in the Department of Forestry and a clear indication of the importance of combating forest fires. In subsequent years, separate divisions would be created to expand the department's other activities in forest management, reforestation, research, and education. The following year, after intensive lobbying by the TFA Legislative Committee, the state legislature passed several laws addressing various wildland fire issues, including ones requiring spark arrestors on locomotives in forested areas and regarding the setting of fires.

Observers perched in tall trees were the agency's first fire spotters. During a 30-year career with TFS, Knox Ivie worked his way up from smoke chaser to patrolman, then to a construction engineer whose first assignment was to build more than two dozen tree cabs, or "crow's nests," and equip them with telephone lines, tables, and maps. He sited each one in the tallest tree on a hilltop or in high country. Ivie recalled, "Sometimes three or four of us boys would camp out until our work was done. We would work hardest to get a platform built at the top of the tree where we could make our beds. Many times at night, the wolves would wake us up with their howling. Then after the mosquitoes and ticks got through with us, we might manage to get a few hours' sleep. Our main meal was pork-and-beans, cheese and crackers, sardines, and peanut butter." This was what the men could afford with their expense account of fifty cents per day.

Fire spotters soon traded one precarious worksite for another. The first wooden fire detection towers went up in East Texas in the early 1920s, replacing Ivie's tree cabs. Because a wooden tower cost six times as much as a tree cab to construct but would not last any longer, in 1926 the division used funding from the U.S. Forest Service to build its first steel fire tower on State Forest No. 1 (later named E. O. Siecke State Forest, in honor of the second state forester). By 1930, the division included four protection inspectors, forty-two fire patrolmen, and an assistant division chief. In the mid-1920s, automobiles replaced horses as the chief means of transportation for forest patrolmen and expanded their firefighting equipment to include fire rakes, shovels, flappers, and backpack pumps.

Early leaders in the Department of Forestry recognized that state forests needed to demonstrate successful methods for establishing and growing trees and forests. Five state forests, comprising about 100,000 acres total, were established under Siecke's administration: Siecke State Forest (in Newton County), I. D. Fairchild (Cherokee County), W. Goodrich Jones (Montgomery County), John Henry Kirby (Tyler County), and Mission Tejas State Forest (Houston County), which later became a state park. The first tree nursery and first plantation of slash pine (a nonnative species in Texas) were established on Siecke State Forest in 1926. Indeed, it was the impressive growth of this slash pine plantation (Plantation 26-C) that would encourage the construction of a kraft pulp mill in Lufkin, the first mill to produce paper from southern yellow pine in the South. The TFS Forest Products Laboratory, created in 1939 by the state legislature, conducted some of the early research that supported the pulp mill operation.

During the Great Depression, President Franklin Roosevelt's Civilian Conservation Corps (CCC) established several camps in East Texas. Under the leadership of TFS Fire Chief William "Bill" White, the first four CCC camps were set up in May 1933, with eight additional camps established the following month throughout East Texas. Between October 1933 and October 1935, TFS was responsible for planning and supervising the fieldwork of 2,400 to 4,000 enrollees at seventeen CCC camps across East Texas. Crewmen constructed roads, bridges, and small dams, and fought forest fires. Bill Hartman, a former TFS employee, recalled, "At one time we found out that young girls were setting fires so they could meet the CCC boys when they came out to fight them."

FOREST HISTORY SOCIETY PHOTOGRAPHIC COLLECTION, FHS3634

Tree cabs, sometimes called "crow's nests," were forerunners of wood and steel fire towers.

When the four national forests (Davy Crockett, Sabine, Angelina, and Sam Houston) were established in East Texas in 1934, CCC crews planted trees on the cutover and burned landscapes. They also built the many stone buildings and shelters still present today in these federal forests and in many Texas state parks.

As early as 1936, TFS Director Siecke created the position of district forester and placed these deputies throughout East Texas.

TEXAS A&M FOREST SERVICE AND TEXAS FORESTRY ASSOCIATION

A fire plow attached to a World War II surplus military jeep was used by TFS crews to build fire breaks in the 1940s.

Then and now, each district forester supervised a staff responsible for providing technical assistance and increasing public awareness about forestry, fire prevention and control, forest management, and other forestry activities to private landowners within an assigned number of counties. Decentralization, with a district forester overseeing several counties, was not fully implemented until the 1950s, at the direction of State Forester A. D. Folweiler.

By 1940, when TFS celebrated its twenty-fifth anniversary, the agency had added four divisions—Forest Products, Information, Silvicultural Research, and Industrial Forestry—bringing the number of divisions to six (including Forest Protection and Forest Management). The Forest Products Laboratory (later called the Forest Products Department), the first in the nation for a state forestry agency, operated for sixty years, helping to grow the state's fledgling forest products industry. The department was disbanded in 2000, a victim of budget cuts and a dwindling staff; the research work is now carried out by the research staffs of the forest products industry once aided by the lab.

Near the end of Siecke's administration and under Anderson's direct supervision, the seventy-three-acre Indian Mound Nursery was established in Cherokee County in 1940. This nursery initially produced some 22 million pine seedlings per year. In operation until 2008, when it was shut down because of high operating costs and competition from forest industry seedling nurseries, Indian Mound produced 1.2 billion pine and hardwood seedlings, enough to reforest some 2 million acres in East Texas.

By the time Siecke retired in 1942, forest fire fighting had progressed from men using hand tools and green pine branches to the deployment of mechanized crawler tractors for plowing firebreaks. A fleet of small fixed-wing aircraft for fire detection and surplus military jeeps mounted with fire plows (introduced in the 1940s) and tilt-bed trucks carrying massive bulldozers (1950s) would soon follow. Today, the TFS Forest Resource Protection Division and its numerous partners have expanded statewide and address fire prevention and suppression with the latest technology and equipment, as well as the latest research that shows the essential role of fire in forest ecosystems. Balancing public expectations of protection from fire with the need for allowing fire in certain landscapes will be just one of several issues like urban forestry and water resource protection that will continue to challenge the service in its second century. But these challenges are ones TFS is well equipped to meet in no small part because of the strong foundation built by its first leaders, John Foster and E. O. Siecke. □

Ronald F. Billings worked for the Texas A&M Forest Service for more than forty years as principal entomologist and head of the agency's Forest Pest Control Section (now Forest Health Department). He currently is coordinator of the TFS Forest Pest Management Cooperative. This article is adapted from the book A Century of Forestry, 1914–2014: Texas Forestry Association and Texas A&M Forest Service *(The Donning Company Publishers, 2014).*

If a picture is worth a thousand words, then what's the value of two photographs to forest history?

Repeat photography—the art of taking photographs of a specific location at two or more different times—is a powerful visual resource for scientific study and education in forest and landscape management. From working forests to wilderness areas, such photographic pairs can help us understand ecosystem processes, document the effects of human and non-human disturbances, and assess the results of management and policy decisions, to name a few benefits.

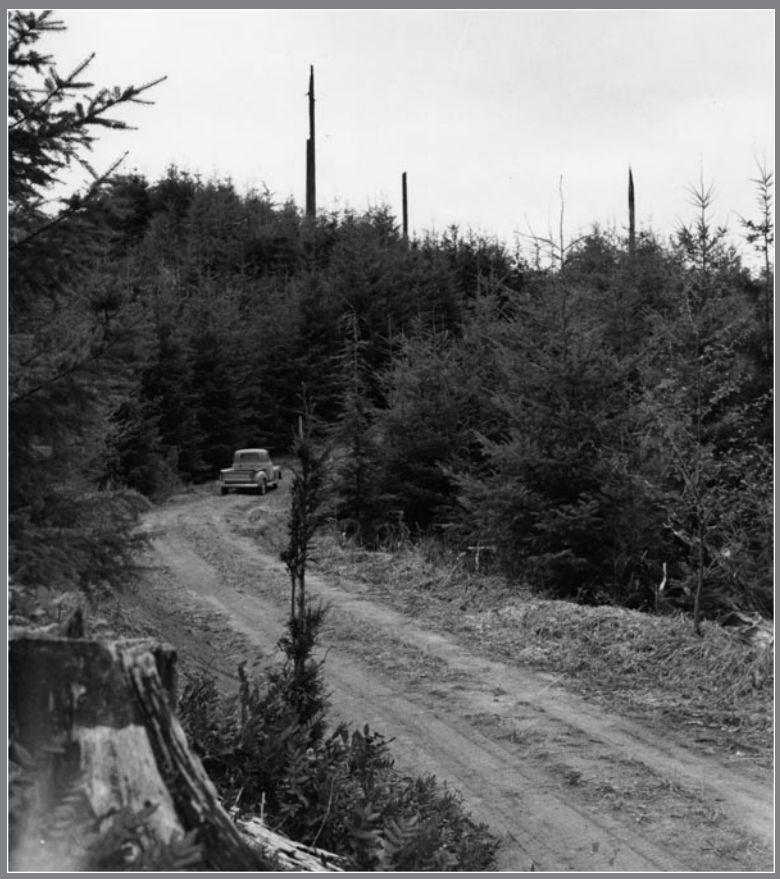
The FHS Repeat Photography Project showcases forestry-related "before-and-after" photographs by collecting sets of repeat photographs and providing a centralized location on the web for users to access, compare, and interpret them.

Explore the Repeat Photography Project and learn how you can contribute images at:
www.repeatphotography.org

THE FOREST HISTORY SOCIETY

This project is a collaboration between The Forest History Society and several other organizations. For a list of all supporters, please visit the website.

Reforestation at Clemons Tree Farm, Rock Creek, 1941



Reforestation at Clemons Tree Farm, Rock Creek, 1951

GREAT SMOKY MOUNTAINS NATIONAL PARK

PHOTOS FROM THE AMERICAN FORESTS PHOTOGRAPH COLLECTION

This year marks the centennial of the establishment of the National Park Service. What few nonhistorians realize is how closely the history of the agency is intertwined with that of the U.S. Forest Service. The ups and downs of that relationship in the first half of the twentieth century are encapsulated in the history of the creation of the Great Smoky Mountains National Park, long the country's most-visited national park. That relationship began before either agency existed as we know them today.

In 1899 forest preservationists organized the Appalachian National Park Association in Asheville, North Carolina, and began demanding that Congress establish the Appalachian National Park, which would include land on both sides of the Tennessee–North Carolina border and in Virginia. Gifford Pinchot, chief of the U.S. Division of Forestry—the predecessor of the Forest Service—initially backed the idea. But many local residents and lumber companies argued for a national forest, largely because it would allow logging, which was a big business in the region, to continue. By 1901 Pinchot had switched his support to a national forest. To him, a national forest meant "conservation by use"; a national park "is conservation, not use."[1] The Appalachian National Park Association switched as well, changing its name in 1903 to the Appalachian National Forest Association. After nearly a dozen years of debates and failed bills, Congress passed the Weeks Act of 1911, which allowed the purchase of private lands for creating a national forest if it protected the headwaters of navigable streams. This legislative remedy enabled establishment of national forests in the eastern United States for the first time.

But the Weeks Act also provided a new model for establishing national parks. Whereas Yellowstone and other western parks had been carved from public lands, and Acadia National Park in Maine had been converted from a national monument, an Appalachian national park could be created by buying private land and bringing it under federal management. In fact, some land purchased under the Weeks Act for a Smoky Mountains national forest in Tennessee eventually was incorporated into the Great Smoky Mountains National Park.

Despite establishment of three eastern national forests—the Pisgah in western North Carolina in 1916, the Nantahala in southwestern North Carolina in 1920, and the Cherokee in Tennessee in 1920—the Appalachian national park idea remained very much alive. Proponents argued that a park would bring economic

BY JAMES G. LEWIS

prosperity through tourism, and that even though much of the land had been logged, plenty of "primeval" forest remained—forest worth saving because of its biological diversity. Park boosters in Tennessee and North Carolina, rivals for a time, found common enemy in the Forest Service, which offered opposition at every administrative level along the way before getting Congress in 1926 to clear the way for the park, provided it was funded without federal dollars. On June 15, 1934, Congress passed another bill that allowed a combination of federal, state, and private funds to go toward purchasing land for the park, thus chartering the park. That date is recognized as the official birthday of the park; President Franklin Roosevelt dedicated the park on September 2, 1940.[2]

Working with both the Park Service and the Forest Service was one of the biggest advocates for both national forests and national parks, and an occasional critic of the agencies: the American Forestry Association. The oldest citizens group in North America organized to promote forest conservation, AFA formed in 1876. The Forest Service and the Appalachian National Forest Association both turned to AFA for support to get the Weeks Act passed. Boosters of the Great Smoky Mountains National Park did the same.

American Forests—in 1992 it changed its name—has a rich history and has been involved in many projects, efforts, and policy issues during its 140 years. Its photo collection, with a wide array of significant images pertaining to forestry and conservation history in the twentieth century, was created and maintained by *American Forests* magazine, which AFA launched in 1895. Not long thereafter the editors began illustrating articles with photographs to provide visual evidence for policies and ideas the organization supported, whether it was showing how forests in the East would benefit from Forest Service care or showcasing the beauty of an area under consideration for federal protection under the National Park Service. Later, editors made use of photos when criticizing an agency for a policy they opposed, such as clearcutting on national forests.

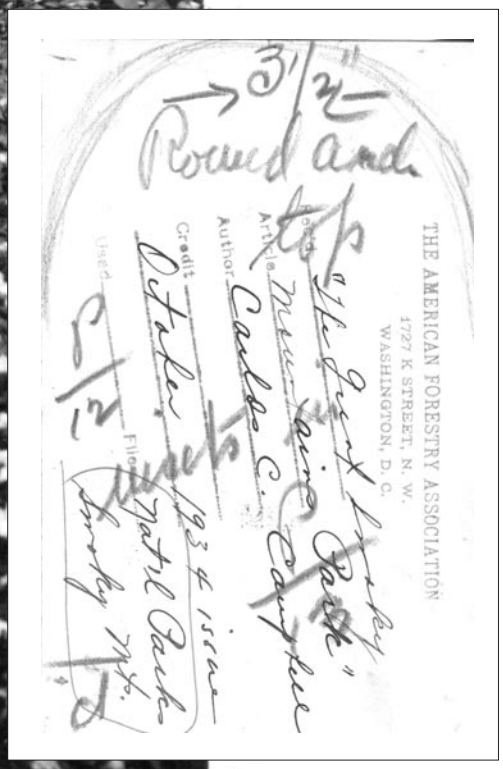
Sometimes the organization would use the site of its annual meeting to highlight a cause, which it would then promote in the magazine. Such was the case with the proposed park in the Smoky Mountains in 1934. AFA leaders scheduled its fifty-ninth annual meeting in Knoxville to introduce members to the Tennessee Valley and the work of the Tennessee Valley Authority (TVA), and to draw attention to the Great Smoky Mountains National Park, for which it had long been advocating. The featured speakers at the four-day meeting represent an extraordinary gathering of figures in conservation history: in addition to Forest Service chief F. A. Silcox and Park Service director Arno B. Cammerer, there was Jay "Ding" Darling, the Pulitzer Prize–winning editorial cartoonist, who had recently been named chief of the U.S. Biological Survey; AFA president Henry Graves, founding dean of the Yale Forestry School and Gifford Pinchot's successor as Forest Service chief; and Robert Marshall, who was gaining notice as an advocate for preserving wilderness, then serving as chief forester of the U.S. Indian Service. Organizers scheduled tours to TVA dam and soil control projects, then capped off the meeting with an all-day trip to Newfound Gap in the new national park. The program was set before Congress established the park in June. Most likely the magazine's October issue was too.

To gin up interest in the meeting, the October 1934 issue of the then-monthly magazine (it is now published quarterly) was all about the Tennessee Valley. Aimed at a general readership, the issue had a mix of informative articles about current forest conservation practices and projects. One article urged farmers to plant fruit- and seed-bearing trees as an alternative to crop farming on hillsides; Hugh Hammond Bennett, director of the Soil Erosion Service, discussed the poor soil conditions and soil erosion in the region; the state's national forests were described; forest management by the TVA was explained; and a "pictorial" essay illustrated the Civilian Conservation Corps' efforts to combat soil erosion in the Tennessee Valley.

To balance such serious topics were poems in praise of trees and forests, plus illustrated essays, including one on the trees at President Andrew Jackson's home in Nashville. Another essay was by Carlos C. Campbell, a member of the board of directors for the Smoky Mountains Conservation Association, one of several organizations leading the effort to create the national park. Campbell's six-page "The Great Smoky Mountains National Park" summarized the history of the fight to create the park and its many highlights for tourists. He illustrated it with his own carefully curated black-and-white photographs: five photos show mountain views, two show waterfalls, two show hiking trails, and one, of the Little Pigeon River, touts fishing. Because one of the arguments put forth by boosters for the park from the outset was that the government would construct good roads in the rugged, remote region,[3] Campbell included a photograph of one car passing another on the Newfound Gap Highway probably to show it was accessible. That it is clearly a dirt road, though one in good condition, would not have mattered to drivers in the 1930s.

Campbell lived in Knoxville and served for more than twenty years as secretary of the Great Smoky Mountains Conservation Association, the group largely credited with making the park a reality. It appears that in June 1934, the same month Congress established the park, he traversed it to take photographs for his *American Forests* article. (One photo in the collection is dated June 24; the rest have the issue date of October 1934.) He later used some of the images in his history of the park, *Birth of a National Park in the Great Smoky Mountains*, published in 1960 and still in print.[4] He supplemented the photos in his book with ones by Jim Thompson, whom the association hired as its official photographer in 1924 to provide images to help promote the cause. What follows is a sampling of images used in Campbell's article and others he took on that 1934 trip. Many of the photos from the collection used in the article still have the grease pencil crop marks or have instructions on the back about what size they should be.

When trying to identify the photos from the collection that appeared in the article, I initially had some trouble matching them. Upon closer examination, I realized that the magazine editors had flipped some of them to make them better fit the layout. I have indicated which ones those are in the captions, which are as they appeared in the magazine. The reader is invited to contemplate what impact this may or may not have had on Campbell's readers. The other thing I realized was that despite Campbell having taken dozens of photos to consider for the article, two of them are not in the folder. The first is a distance shot of the Greenbrier section of the park showing Old Black, Mt. Guyot, Mt. Chapman, and Wooly Tops. The other showed the two cars passing, and so I have substituted one that illustrates the general idea he wanted to convey.



An example of how the magazine editors marked up Carlos Campbell's photos for layout. The crop marks on the front of the photo indicate what portion of the image to include. On the back (below) it indicates it should be rounded off at the top like a Palladian window. This photo and one other were altered in this fashion.

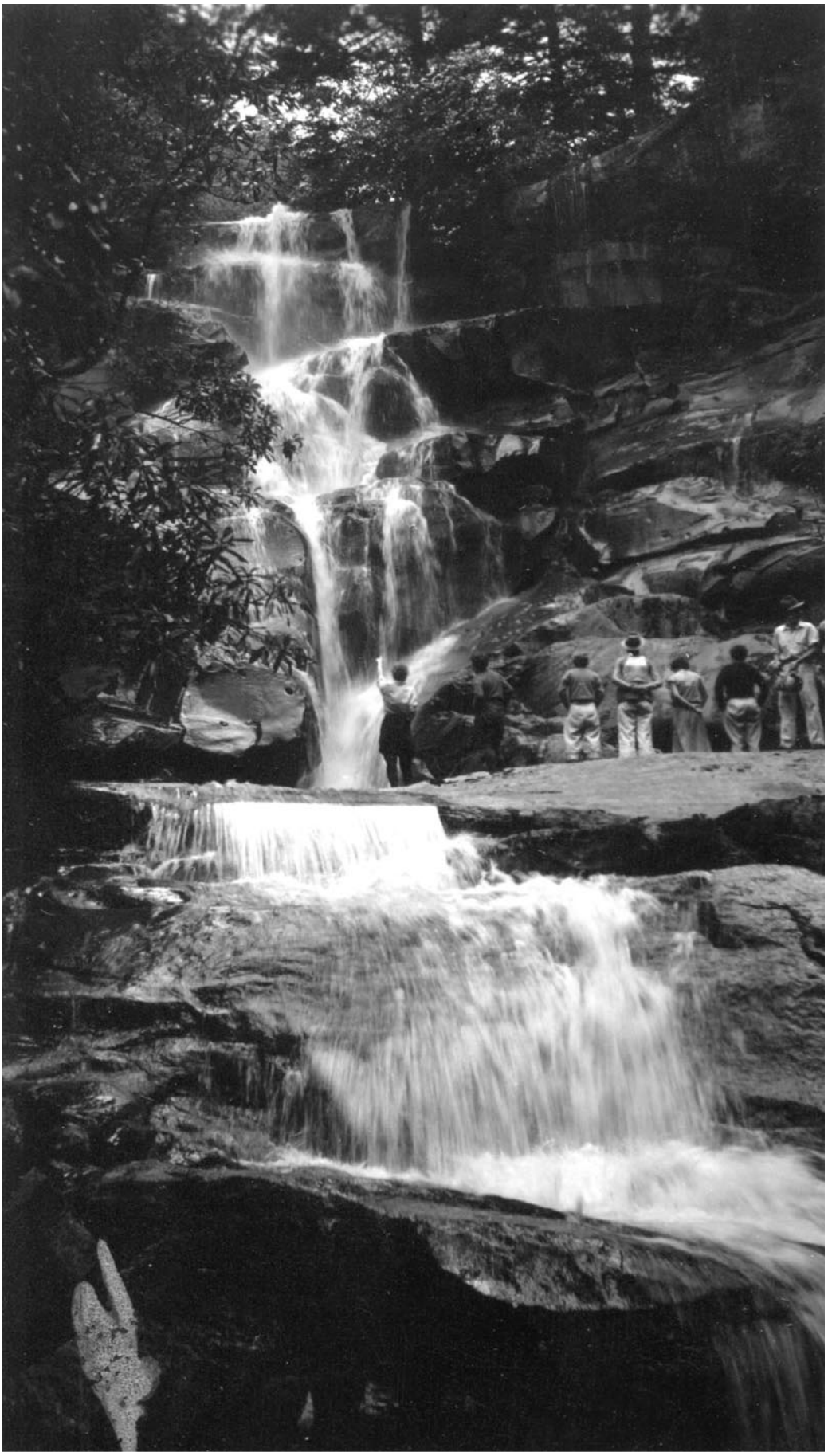
Outstanding images of the Smoky Mountains in the 1920s and 1930s, including those reproduced here, may be found in AFA's folder "National Parks—Great Smoky Mountains," along with images from the 1940s and 1950s. The Forest History Society is the national repository for AFA papers and photographs. Shots of national parks and national forests, trees nominated for the National Register of Big Trees, activities in forests in the United States and other countries like logging and outdoor recreation, and important people from forest history are among the images listed online in the American Forestry Association's electronic finding aid on the Forest History Society's website at http://bit.ly/2cux4uq. □

James G. Lewis is the editor of Forest History Today *and an executive producer of the Forest History Society's new film* America's First Forest: Carl Schenck and the Asheville Experiment.

NOTES

1. Michael Frome, *Strangers in High Places: The Story of the Great Smoky Mountains* (Garden City, NY: Doubleday, 1966), 176.
2. Daniel S. Pierce, *The Great Smokies: From Natural Habitat to National Park* (Knoxville: University of Tennessee Press, 2000), 148.
3. Ibid., 62–63.
4. Campbell's book included a preface by Horace Albright, director of the National Park Service from 1929 to 1933. The most recent edition was published in 2009 by the University of Tennessee Press with a new introduction in celebration of the park's seventy-fifth anniversary.

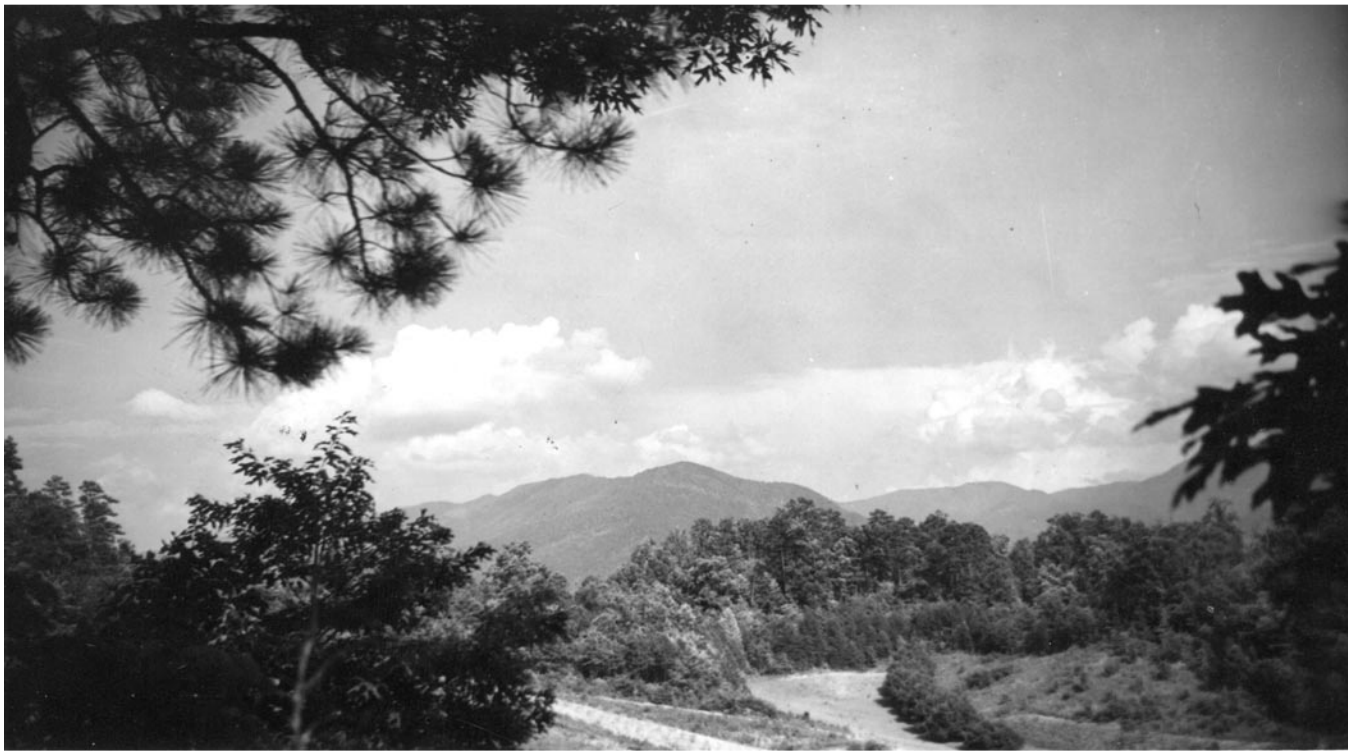
"Clingman's Dome—highest peak of all—and Mt. Kephart, in the heart of the Great Smoky Mountains National Park." This image is reversed in the magazine. The line in the lower third shows where the photo was cropped for the magazine.



"Deep in the untouched reaches of the Park lie places of wild beauty—crystal cascades and waterfalls—numberless, and often nameless."

"Fishing is not only permitted but encouraged in the National Parks—and there are more than six hundred miles of fishing streams in Smoky Mountains Park! An open invitation and compelling lure to the nimrod. This is the West Prong of the Little Pigeon River."

"An inspiring panoramic view from the winding road leading from Gatlinburg into the wilderness. There is a fire tower on the summit of Greenbrier Pinnacle." This one is reversed in the magazine and is on a page facing opposite of the Clingman's Dome photo. It is not evident why the editors did not simply switch the two photos.

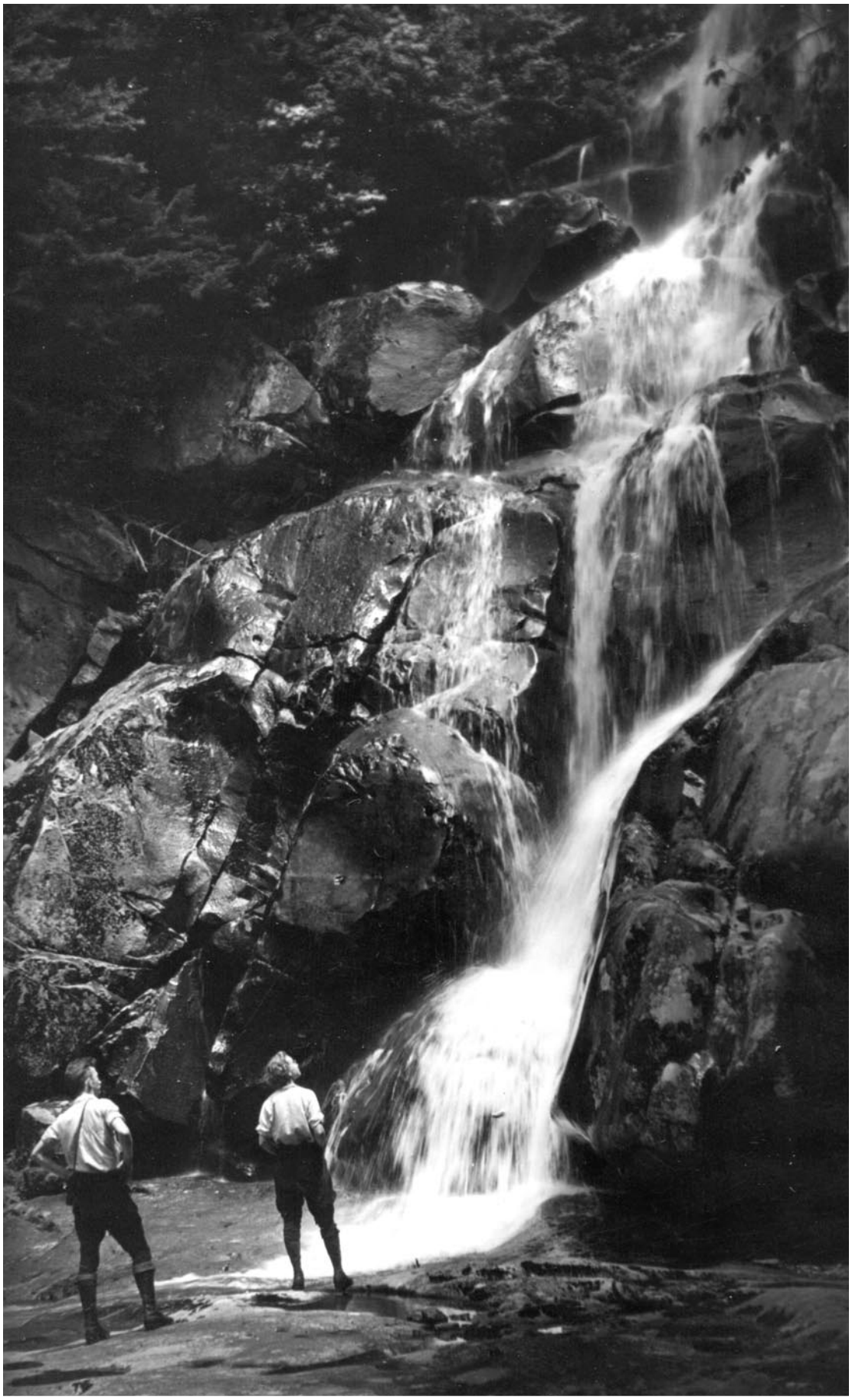


"Hundreds of miles of trails lure the hiker. This one, along the state line range, is a part of the Appalachian Trail—a 2,000-mile stretch from Maine to Georgia."

"No matter how often one climbs LeConte, the spectacle below is always different. This time Cove Mountain peeps above the rolling, smoke-like clouds in the center background."

"A Game of Peek-a-Boo in Cloudland, from the Rocky Spur Trail."

"Yellow Poplar—Giant Trees of the Smokies." This one is reversed, and on a page facing opposite of the photo of the two people looking at the waterfall. In both images, the people are facing towards the outer edge of the magazine rather than towards the middle of it, probably to give the appearance of looking off into the distance.



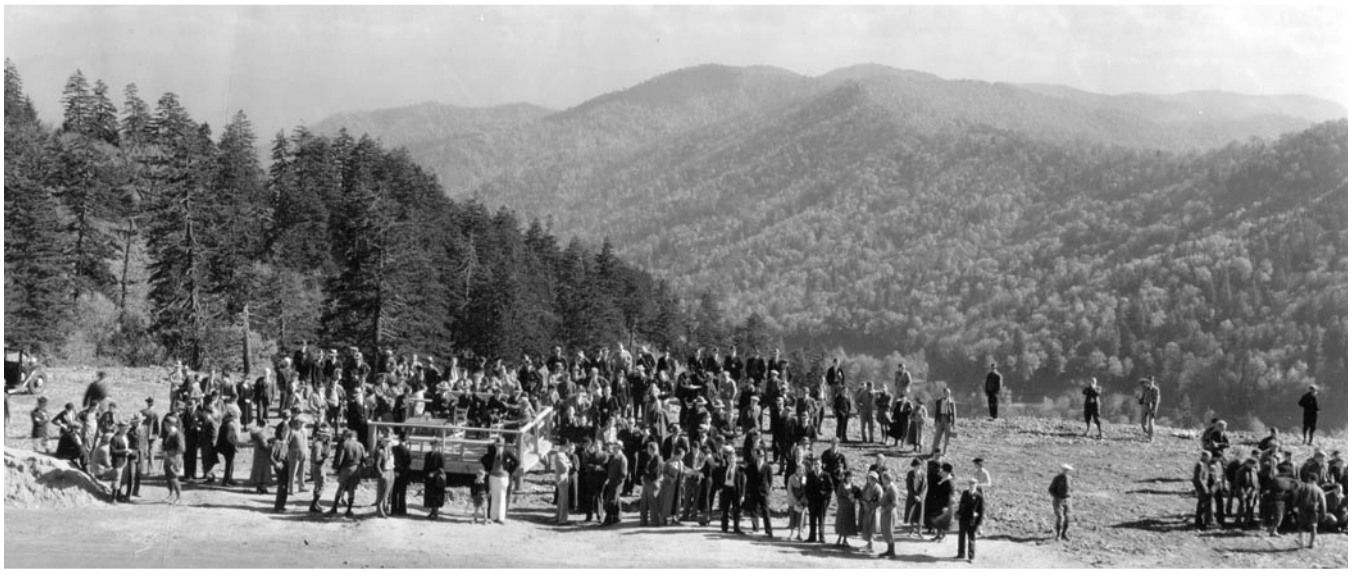
"A Lacy, Dreamy Waterfall in the Mecca for Nature Lovers."

"A Flower-strewn Aisle through the Rhododendrons."

"Horseshoe Bend of the Little Tennessee River, on the Border of the Park."

"Driving through a Virgin Forest on Newfound Gap Highway." The original photo has not yet been located. The caption information with this one indicates it was taken to show the tulip poplar tree that marked the boundary between the new park and the Cherokee Indian reservation. According to the caption, the diameter was 48 inches and estimated to be not less than 500 years old.

Carlos Campbell photographed the AFA gathering at Newfound Gap on October 20, 1934. This photo did not appear in the issue. The caption indicates that Park Service director Arno B. Cammerer was speaking at the time he snapped this.



Biographical Portrait

FUJIKAZU NAKAGAWA

JAPANESE LUMBERMAN (1920–1988)

By World Forestry Center

As a lumberman and a leader of the Japanese lumber business, throughout his lifetime Fujikazu Nakagawa disseminated the virtues of lumber, its necessity, as well as the form the distribution system should take. A pioneer in such important areas as the development of the lumber market, to which he addressed his considerable planning and executive powers, he also took upon himself the task of acting as liaison between government organizations and private businesses to realize measures by which to revitalize the lumber business as well as maintain and improve forestland.

He was born on January 30, 1920, the eldest son of Sue and Keizaburo Nakagawa, in Gobo City, Wakayama Prefecture. Following his graduation in March 1940 from the forestry program at National Mie High School of Agriculture and Forestry, he enrolled in April of the same year in the Economics and Business Department at Kansai University, Osaka. With the approach of World War II, however, the graduation of all juniors was forwarded a year and Nakagawa joined the field artillery corps of the Japanese army. Assigned to domestic duty, he held the rank of first lieutenant when the war came to an end.

After the war, he was unable to resume his family business, as the supply and use of lumber, which had been under government control during the war, had not yet been deregulated. Instead, he worked as supervisor of a horse breeding association for a year. In January 1947, when the supply of lumber was at last deregulated and private individuals could procure it, he established the Nakagawa Lumber Company in Osaka.

The present branch of the Nakagawa family dates back to 1661, when Zengoro (born 1637) moved to Wakayama Prefecture from Togawa, Chiba Prefecture. The family's business name of "Togawaya" dates back more than 300 years. Until the time of Fujikura, the sixth descendant, the Nakagawa family acted as guild master of the wax business under special orders from the feudal lord of the area. However, with the introduction of electrical lighting, the family turned from wax to lumber and forestry. Nakagawa was the eighth descendant of this distinguished line.

WORLD FORESTRY CENTER

In January 1953, the company was reorganized to become Nakagawa Lumber Company, with Nakagawa as its president. Under his management, the company expanded to become a comprehensive wholesale dealer of both domestic and imported lumber. In 1970, Aoikenso Company, a firm dealing in the processing and sales of lumber for interior use as well as functioning as a design and construction contractor, was established. In 1981, Nakagawa Inc. was established to undertake the wholesale of lumber, plywood, and new construction materials. The following year, Nakagawa Silver Service, a company dealing in the manufacture and sales of wooden interior and exterior merchandise, was established. Nakagawa was named chairperson of these respective companies, and under his directorship the companies were enlarged and expanded.

In 1946, Fujikazu Nakagawa married Teruko Hinomoto of Osaka. Their eldest son, Katsuhiro (born 1948), is

president of Nakagawa Lumber Company; his second son, Hiroshi (born 1950), is the vice president; his third son, Akisaburo (born 1952), is an independent designer of furniture. All are actively involved in the lumber business.

Nakagawa's contributions to society and the lumber industry were as diverse as they were far-ranging. One of his major contributions to the local lumber business world was with Osaka Young Managers' Lumber Council, which was established in 1958; Nakagawa was nominated as its first acting vice president. From 1960 to 1962, in the capacity of chairman, he promoted seminars and field trips, and at the Lumber Festival, he demonstrated his creativity and executive talents by organizing a fleet of 150 trucks in a grand promotional demonstration of lumber. Furthermore, he produced an 8mm film entitled *The History of Lumber in Osaka*, as well as organized and taught for a year the first seminar to be held for newly hired employees. That the lumber council holds a central position in the Japan Lumber Federation and is regarded as a leader within this nationwide organization is due largely to the enthusiasm with which Nakagawa fulfilled his responsibilities in guiding the council.

Following his retirement from the council, he was instrumental in establishing the Japan Alumni Association of Lumber Men, and as permanent manager, he assisted in the streamlining of information exchange and formulation of the industry's guiding principles.

Nakagawa was also known for his many contributions to the Osaka Lumber Industry Complex Cooperative Organization, "the Complex." Established in 1962, its purpose was to consolidate the secondary and tertiary lumber-processing industries, which deal in items such as plywood, construction materials, and lumber, to cope with the rapidly developing lumber industry in Osaka.

As its vice executive director, he worked energetically to procure land for the relocation and construction of industries. At the same time, his civic-mindedness led to his involvement in various activities geared toward the welfare of employees and residents of the Complex. They included the dissemination of a system whereby employees could purchase their own homes. For this purpose, he championed the construction of residential areas and established the Soeikai, a mutual help organization for residents.

In the Complex, he also proved to be a tireless contributor. Not only was he instrumental in constructing a cooperative storage house and a cooperative factory for independent businesses, but he also organized a volunteer corps of firefighters as well as a busing system for organization members.

In recognition of his many contributions, he was named executive director of the Complex in 1981. Here, too, he demonstrated his far-sighted and progressive outlook by establishing new areas of businesses, such as a forklift repair cooperative.

In 1985, a friendship agreement was signed between the Complex and the World Forestry Center in Portland, Oregon, and in commemoration of the event, he established "Woodream Osaka" at the Complex. Modeled after the World Forestry Center, it was the first center of its kind in Japan, geared toward the dissemination of information regarding lumber and its uses; it demonstrates Nakagawa's open-minded and cosmopolitan outlook.

Nakagawa was also a leading figure in a nationwide organization whose central function was the development of a market for timber derived from the thinning of forestland. Beginning in 1970, Nakagawa was involved in the merchandising of such timber. Following postwar maturation of woods and forests in Japan, the need to find a use for such kinds of timber was an important issue that needed to be addressed by the nation's lumber industry. In the firm belief that there was a very real need to develop technologies to convert such timber into merchandise as well as to provide information regarding supply and demand, he called on individuals in the forestry business and lumbermen around the nation to assist in establishing the National Small Circumference Timber Supply and Demand Development Council. In April 1982, the council was established and Nakagawa was nominated to be its chairman.

The council has as its main function the organization of seminars and field trips to promote the development and supply and demand for such timber, and the procurement of materials, as well as to make available various related information. Since 1983, with the cooperation of the Forestry Agency, a nationwide symposium has been held annually. Meanwhile, in 1982, at the Total Housing Fair held at the Osaka International Trade Fair, he pioneered the use of merchandise made from small-diameter wood with exhibits that included gates, doors, fences, and tables.

His activities in this area led to the establishment of the National Loghouse Promotion Association in 1986, of which he was named chairman. In parallel with his activities at the National Small Circumference Timber Supply and Demand Development Council, he organized a study group of people interested in loghouses from around the nation. Armed with the knowledge and expertise derived from this activity, he then organized a nationwide association to further expand the use of domestic small- and medium-diameter timber. Additionally, to supply loghouses that would satisfy customers' expectations, he was instrumental in ensuring thorough seasoning of timber and establishing loghouse design contests.

Meanwhile, as a private individual, he was a committee member of the Osaka West Rotary Club. He functioned with distinction as chairman of this club from 1984 to 1985. As committee chairman of the International Rotary Area Number 266 Yoneyama Scholarship Committee, he worked assiduously toward improving the lifestyle of overseas students in Japan. In this and many other ways, he demonstrated his commitment to community.

A keen researcher, Nakagawa had up-to-the minute information regarding the domestic and overseas lumber situation. In April 1955, he gave the first of many lectures on his lumber distribution theory at Mie University's Agriculture Department, his alma mater. This led to his becoming a lecturer at the university in May 1961. He continued in this position until September 1978, lecturing on his theories regarding lumber distribution and the lumber business.

A strong believer that the individual is the key figure in business management, he addressed himself to the grooming of future leaders. As his work prevented him from holding lectures during normal school hours, he gave intensive two-day courses, with the venue generally being at the university's experimental farm. He never missed a class; once, when the trains were halted during a strike, he drove the 100 kilometers to meet with his students.

He was also invited on several occasions to speak on the relationship between design and lumber by design specialist

COURTESY OF THE NAKAGAWA LUMBER COMPANY WEBSITE: WWW.WOOD.CO.JP/NAKAGAWA/OLD/OLD.HTM

The Nakagawa Lumber Company's lumberyard in action, circa 1955.

schools, and by the Osaka Regional Forestry Office to speak to officers undergoing training seminars on the current lumber market and its future. He also lectured on forestry and the lumber business and its future at agriculture and forestry departments, forestry unions, and forestry promotion conferences of prefectures around the nation.

In 1984, he compiled the essence of his lectures given at Mie University into a book entitled *What Is Lumber Distribution: Strategies for the Era of Domestic Lumber*. The book was highly acclaimed as being a practical guide for the future of lumber distribution in a changing Japan. In 1986, his second book, *Mokuhen Hyakuju (Hundred Trees with the "Tree" Radical)*, was published. The following year, he coauthored *Changes in Lumber Distribution,* and in 1990, his last publication, *How to Deepen Your Understanding of Lumber*, a book compiled with four other writers, was published.

Despite his busy schedule, Nakagawa was a man of culture, with an in-depth appreciation of painting and sculpture, and adept at the traditional Japanese tea ceremony and Japanese dance. He was also musically talented; when a student in junior high, he had seriously contemplated a career in music and even undertook to study for the entrance examinations of a music school. The tone and range of his magnificent voice were a source of pleasure to many, while the songs he wrote were highly appreciated. "The Daiseikyo Song" was chosen as the official song of the Osaka Young Manager's Lumber Council.

As a second-year university student, Nakagawa was an excellent equestrian, winning the Governor's Award in the Jumping Contest at the Osaka Equestrian Meet and coming in first at the Modern Japan Pentathlon. He established the Osaka Equestrian Study Group in 1950, the forerunner of the Osaka Equestrian Association Foundation.

In recognition of Nakagawa's civic contributions, he was presented with the following:

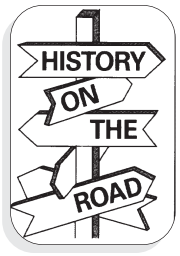
- Industrial Medal of Merit, Osaka Prefectural Government, 1979
- Yellow Ribbon Medal, Government of Japan, 1983
- Medal of Merit, Japan Equestrian Federation, 1983
- Fifth Class Order of the Rising Sun (Sixth Rank), Government of Japan, 1988
- Medal of Merit, International Rotary Area No. 266 Conference, 1989 (a medal created solely in honor of Fujikatsu Nakagawa, and the only such medal to be awarded)

Fujikazu Nakagawa died on September 5, 1988, thus ending his 68 years of promoting the nation's forestry and lumber business. He was a devout Christian, and his tomb is inscribed with words from Job 14:7, "For there is hope of a tree." He was interred on a hill overlooking Woodream Osaka and his Gobo City hometown. □

HISTORY ON THE ROAD

EL YUNQUE NATIONAL FOREST

By Char Miller | Photographs by Tim Palmer



Government reports are not known for their vivid prose, especially not an early-twentieth-century technical paper crammed with scientific data and close observations. For the most part, John Clayton Gifford's on-the-ground survey in Puerto Rico of what is now known as El Yunque National Forest but then was named the Luquillo Forest Reserve after the dominant mountain range, remains true to form. A dense field report submitted to his Washington-based supervisors in 1905, Gifford's text offered the first overview of the 5,000-acre reserve that the United States claimed in the aftermath of the Spanish-American War. It is chockablock with details about the site's geology, soils, and hydrology, its forest types, grasslands, and riparian systems—comprehensive but not exactly a compelling read.

Except for that moment when Gifford let his scientific guard down. "Seen from a distance, the Sierra de Luquillo is strikingly serrated," he wrote. "These high mountains are flanked by numerous lateral ridges which extend in every direction. These ridges are very sharp and are called 'cuchillas.' The word cuchilla means blade; and nowhere in the world could it be more aptly applied. The crest line is often so sharp and the sides so steep that traveling, even by foot, is exceedingly difficult."[1]

El Yunque's terrain is not the only thing that sets it apart from its mainland peers. It is one of the first forest reserves set aside in the entire Western Hemisphere and is thus the oldest national forest in the U.S. National Forest System. El Yunque is also the only one not established by a president. In 1876, King Alfonso XII designated the remote mountainous region as a crown reserve that the Spanish Forest Service would manage for the conservation of its soils, timber, and water. Twenty-two years later, after Spain ceded Puerto Rico to the United States, the U.S. Bureau of Forestry (predecessor to the U.S. Forest Service) took over supervisory authority. Under its aegis, Gifford inspected the forest and wrote of its razor-sharp topography.

This brief history of the forest—which now contains 28,000 acres—reflects the global character of forestry in the late nineteenth century. The profession's origins are in Europe, and that continent's land management concepts and practices were quickly transplanted to its far-flung colonies. The U.S. experience mirrored this trend. The Forest Service's first two chiefs studied forestry in Europe, as did John Gifford. He is credited with being the first American to earn a PhD in the field, receiving the degree

Mount Britton, which has two peaks, is in the center of the national forest.

from the University of Munich in 1899. One year earlier, as empires old and new clashed for control of Puerto Rico, what was not in dispute was the value of forest management—the Americans simply picked up where the Spanish had left off.

That said, the land itself was unlike anything U.S. foresters had encountered on the mainland. Instead of oaks, pines, and firs, they now worked with ausubo (*Manilkara bidentate*), tabonuco (*Dacryodes excelsa*), and palo colorado (*Ternstroemia luquillensis*) trees, the last of which is now endangered, and did so in a terrain drenched with more than 200 inches of rain annually. In this tropical rainforest (the only one the Forest Service stewards), the "most prominent feature is its diversity and the great number of little-known species in mixture," Gifford observed. Its composition "makes it extremely difficult to divide into sylvicultural types and to estimate the amount of timber, and would make it still more difficult, if not impossible, to determine annual accretion." In other words, this tropical woodland did not function like those in the United States and could not be managed in the same way, so Gifford's professional peers would need to adapt to this new and confounding set of conditions.[2]

Understanding the Luquillo forest's dynamics would require research, but it was not until 1939 that Congress provided the necessary funding to launch the Tropical Forest Experimental Station (now the Institute of Tropical Forestry). Its mission ever since has been, among other things, to study the 225 species of trees growing in the forest, virtually every one of them different from any found in North America, a variety emblematic of tropical rainforests worldwide.

El Yunque supports as well a bewildering array of flora and fauna endemic to the island, and in some cases is the last known home of particular species. The most celebrated of these is the Puerto Rican parrot (*Amazona vittata*), the sole parrot extant on the island. This beautiful bird—its vivid green plumage is offset by white eye-rings and a bright red forehead—is now endangered, though that was not always the case. In the mid-nineteenth century, it could be found in great squawking numbers, feeding on the fruit of the abundant Sierra palm tree (*Prestoea montana*), which John Gifford had dismissed as having no commercial value. The bird's numbers began to shrink,

La Coca Falls is one of several easily accessible waterfalls in El Yunque.

An ausubo tree along Big Tree Trail.

however, with the spread of large-scale agriculture—coffee and tobacco, primarily—into its cooler, higher habitat. Its life chances were further compromised in the mid-twentieth century as the swiftly growing human population penetrated the forest's perimeter. Hunters also bagged the bird for sport, and others captured immature parrots to feed the American pet industry's hunger for exotica. When simultaneously the pearly-eyed thrasher invaded its niche through aggressive nest predation, the Puerto Rican parrot population crashed.

TOM MACKENZIE, USFWS

An endangered Puerto Rican parrot.

Surprisingly, the work of the Civilian Conservation Corps in the 1930s and heavy logging in the forest during World War II had limited effect on the parrot's habitat.[3] Nonetheless, by the late 1940s, scientists had begun calling for the establishment of parrot reserves in the national forest. These and other conservation efforts, including the construction of thrasher-resistant nest boxes to stabilize the number of breeding pairs, have shown some success. From a low of roughly 20 adults in the early 1970s, by 2013 an estimated 100 adults lived in the wild, with another 400 bred and living in captivity.

Whether these numbers signal that conservationists have managed to pull the parrot back from the "edge of oblivion," as a 1987 report described its then-precarious position, is unclear. The authors of that study recognized the difficulty of the task ahead. The "preservation of biotic diversity on earth surely ranks as one of the most difficult challenges facing our generation and the generations to come." Nowhere is this more true than in Puerto Rico, given its dense population and deeply modified environment. Here, as elsewhere, battles "to save endangered species have to be won over and over again, but once lost there are no second chances."[4] □

To learn more about El Yunque National Forest, visit www.fs.usda.gov/main/elyunque/learning/history-culture.

Char Miller, a Fellow of the Forest History Society, is the W. M. Keck Professor of Environmental Analysis at Pomona College. This article is excerpted from the book America's Great National Forests, Wildernesses, and Grasslands *(Rizzoli, 2016), with photographs by Tim Palmer, with the publisher's kind permission.*

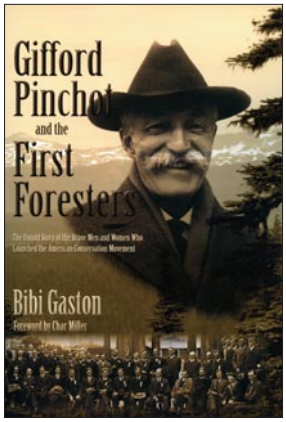
NOTES

1. John C. Gifford, "The Luquillo Forest Reserve, Porto Rico," *U.S. Department of Agriculture Forestry Bulletin* 54, (Washington, DC: Government Printing Office, 1905), 8.
2. Ibid., 17.
3. Harold K. Steen, *Evolution of Tropical Forestry: Puerto Rico and Beyond. An Interview with Frank Wadsworth* (Durham, NC: Forest History Society, 1996), 42.
4. Noel F. R. Synder et al., *The Parrots of Luquillo: Natural History and Conservation of the Puerto Rican Parrot* (Los Angeles: Western Foundation of Vertebrate Zoology, 1987), 273.

BOOKS AND FILMS OF INTEREST

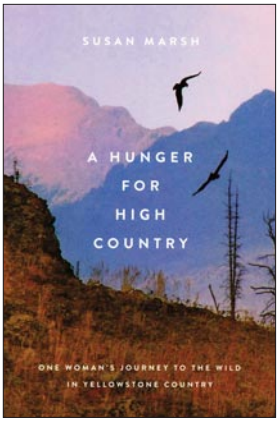
by James G. Lewis, Eben Lehman, and Jason Howard

As former U.S. Forest Service chief Gifford Pinchot began gathering materials for his memoir in the 1930s, he sent a letter to as many of his early employees as he could find, requesting that they send to him their recollections of the early days of the agency. He wanted them "to write down their memories of the time they spent in the Service, what obstacles they encountered, what battles won and lost, and why they had chosen forestry as a profession," says author Bibi Gaston. In all, 226 men



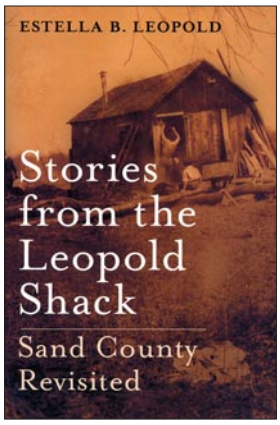
and women responded, humbled and surprised that their "Old Chief" even cared to hear their stories. Pinchot later did as promised and included their writings with his personal papers when he handed them over to the Library of Congress for safekeeping. Gaston, Pinchot's great-grandniece, came across them while conducting research for another project and knew she had found a treasure trove. She read through the five thousand pages of letters from this group he affectionately called the Old Timers and compiled and edited the more striking ones in her new book, ***Gifford Pinchot and the First Foresters: The Untold Story of the Brave Men and Women Who Launched the American Conservation Movement*** (Baked Apple Club Productions, LLC, 2016). After a first chapter explaining who the Old Timers were and how the project came about, Gaston introduces each of the twenty-seven former employees' recollections with a mix of personal commentary about how the challenges they faced inspire her (or can inspire Americans today) with topics like the history of the Forest Service or biography of Pinchot before giving a description of each contributor. Then the reader is treated to adventures, mishaps, or the mundane—there is nothing terribly exciting about being the stenographer who recorded land transactions. Yet in response to the contributor, Pinchot praised that person as recording history. All of the responders expressed pride in their work and their contributions to something greater than themselves—the cause of conservation. The book offers today's readers a view into the Forest Service's difficult beginnings, reminding us all of the debt of gratitude we owe both them and our current land managers. (JL)

It is not surprising how few women are counted among Pinchot's Old Timers, as the agency employed relatively few of them overall in his time and none for field positions. So it is revealing to read Susan Marsh's memoir ***A Hunger for High Country: One Woman's Journey to the Wild in Yellowstone Country*** (Oregon State University Press, 2014) along with Gaston's book. Marsh's Forest Service career started with a seasonal job in 1974 and concluded in 2005. She left the Fremont National Forest in 1982 and moved to the Gallatin National Forest in Bozeman, Montana, where her story picks up. It was a tumultuous time in the agency. The Forest Service was still reeling from the recently passed environmental laws such as the National Environmental Policy Act and the National Forest Management Act, which were forcing it to change its mission and hire nontraditional employees. When she arrived in Bozeman, Marsh writes, "I was warned of the three preordained strikes against me: I was female, first of all." Having served as Federal Women's Program Manager on the Fremont, she was thus branded a feminist for helping promote the hiring and advancement of women in federal employment. Second, because she had trained as a landscape architect, she was "a resource specialist, or *Ologist*, the category into which professionals other than engineers and foresters were lumped," and a group reluctantly hired to help implement those "pesky laws." The third strike was that she held "an ardent love of wild land and a tendency to share my perspective on how it should be treated …" Challenging the timber staff and the timber-first mentality in this era got one branded The Enemy. She spent six demoralizing years on the Gallatin fighting sexist, traditional, hide-bound thinking before



moving to the Bridger-Teton in Wyoming, a national forest more oriented toward wilderness preservation than timber and staffed with more progressive thinkers. There Marsh conducted inventories of rivers considered for protection under the Wild and Scenic Rivers Act, assisted in range management work, and contributed to draft forest management plans, among other tasks. Her career coincided with the budget slashing of the mid-1990s, the shift to ecosystem management, and attempts to outsource Forest Service work—a time of eroding morale across the agency as employees were increasingly asked to do more with less. Woven throughout her professional tale is her personal one, and both are told extremely well. It is as much one woman's journey as it is that of the agency she by turns loved and loathed. (JL)

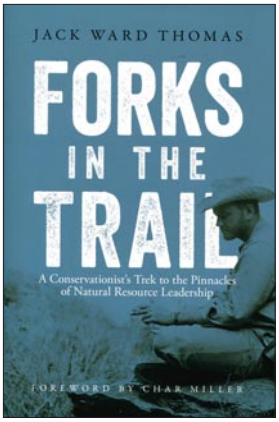
Estella Leopold gives readers a great gift in her memoir, ***Stories from the Leopold Shack: Sand County Revisited*** (Oxford



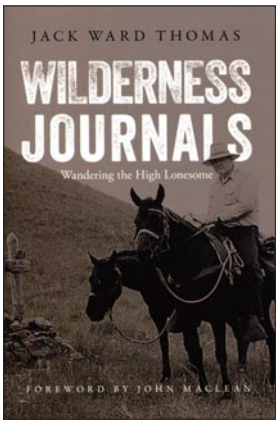
University Press, 2016). She is the youngest and last surviving child of Aldo Leopold, the forester, environmental writer, and author of *A Sand County Almanac*. In the 1930s he purchased 80 acres of exhausted farmland outside Baraboo, Wisconsin, where he could experiment with land restoration and put into practice his land ethic. Her father's classic work includes essays formed and shaped from the numerous activities at the family's cabin, known as the Shack. Estella, a widely respected professor of botany and forest sciences, offers us her recollections of her family's time at the Shack: the labor it took to turn a chicken coop into the family cabin, the planting of white pines and other trees to bring back the land, how the Leopold Bench came into being, the story behind one of her father's most famous essays "The Good Oak." Projects there "were daunting but fun" and brought the family together for common cause. By sharing these stories, she breathes life into this celebrated family (all five children became internationally renowned scientists in varied fields) that no biography has been able to fully capture. It is a biography of a place, of a family, and of the efforts to restore a piece of land. Readers will appreciate that Estella Leopold gives us such wonderful insight into the family and her father in particular, but her decision to include a chapter on the land after 1948, the year her father died, and another on how each child carried "The Shack Idea" to other locations around the world helps us better understand how central the Shack and the lessons learned there remained in each of their lives. The text is supplemented with photographs by her brother A. Carl Leopold. (JL)

Like many forest rangers of old, former U.S. Forest Service chief Jack Ward Thomas kept a journal while working as a wildlife biologist for the agency. In retirement he had the time to go back through them and edit them for publication. His first one, *Journals of a Forest Service Chief*, published in 2004, offered an unvarnished look at his three-year tenure (1993–96) at the helm of the agency he loved and was asked to lead during its rough transition from its emphasis on timber management to ecosystem management. That he had a hand in that transition as a result of his involvement in the northern spotted owl controversy starting in 1990 is also covered in it. But that book focused solely on his work, giving a narrow view of him. Now comes a three-volume set that rounds out his life and career: ***Forks in the Trail: A Conservationist's Trek to the Pinnacles of Natural Resource Leadership***; ***Wilderness Journals: Wandering the High Lonesome***; and ***Hunting Around the World: Fair Chase Pursuits from Backcountry Wilderness to the Scottish Highlands*** (Boone and Crockett Club, 2015). Each one is designed to stand alone, but *Forks in the Trail* should be read first because it provides the framework and background to better understand events in the other books. *Forks* will deepen the reader's understanding of why his packhorse trips with his friend and mentor Bill Brown into "the High Lonesome" backcountry area—the Eagle Cap and Hells Canyon wilderness areas in eastern Oregon—brought him such joy and unleashed the naturalist-poet inside.

Forks in the Trail—Thomas's phrase for turning points in his life—takes readers from his rise from a hard-scrabble child-

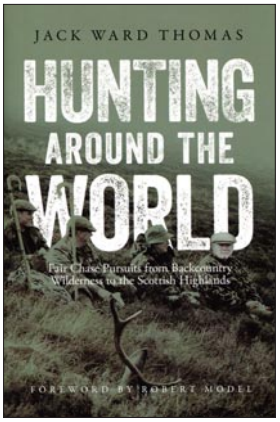


hood in Texas during the Great Depression to his appointment as Forest Service chief, then after retiring from the agency after thirty years in 1996, his time as the Boone and Crockett Professor of Wildlife Conservation at the University of Montana—the "pinnacles of natural resource leadership"



in the book's subtitle. This one is for all intents and purposes his memoir (which can be rounded out with *Journals of a Forest Service Chief*), and the one that can be used in a variety of classes, from history to wildlife management. Thomas helpfully explains and discusses the historical background or significance of a fork in the trail when necessary.

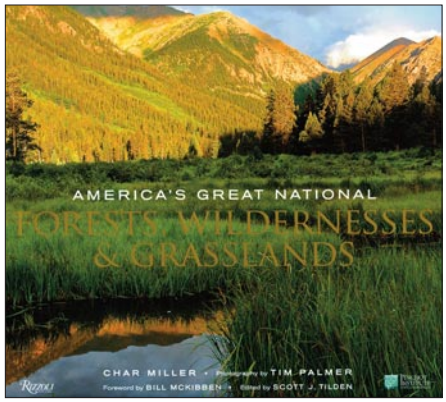
The other two volumes supplement and complement *Forks in the Trail*. *Wilderness Journals* covers a narrow but pivotal time in Thomas's life, from 1986 to 1999, when he found himself in the thick of the northern spotted owl controversy and then reluctantly serving as Forest Service chief. This book helps round out that period and is a nice complement to the earlier *Journals of a Forest Service Chief*. The High Lonesome area became a refuge from the pressures of work, a place to recreate and re-create himself. *Hunting* follows this lifelong outdoorsman from 1986 to his last hunting trip in 2004 in Scotland; the entries on Scotland



are the highlight of this book, but his entries about hunting on game farms versus a fair-chase pursuit offer much to think about. In each some entries are several pages long, though they never feel like they are dragging. Each book, in its own way, is an elegy to an outdoorsman's life well lived and an

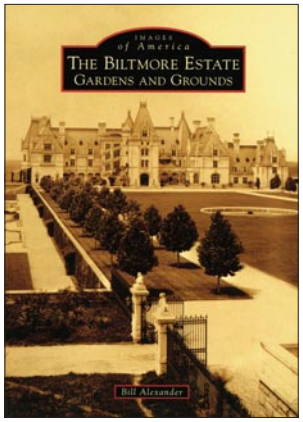
ode to some beautiful places. Thomas had no regrets that he hung up his gun because of age and infirmities. He had his memories to look back upon, and now so have we. (For a complete review of all three books by FHS historian James Lewis, visit http://bit.ly/1RcDpYc.) (JL)

Char Miller, the foremost historian writing today about the U.S. Forest Service, pairs his engaging, insightful writing with the outstanding color photography of Tim Palmer in ***America's Great National Forests, Wildernesses & Grasslands*** (Rizzoli; Pinchot Institute for Conservation, 2016). At 10.5 by 10.5 inches, it is sized to be a



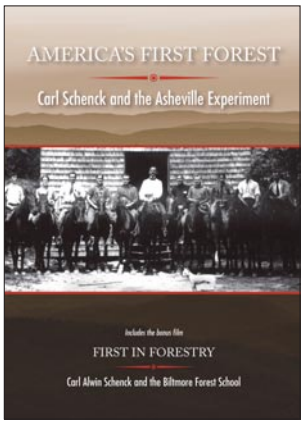
coffee-table book, and the large format gives Palmer's photos of lush forests and waterfalls the space they deserve. But Miller's text and Palmer's informative captions are clear indicators that this work is not your typical coffee-table book fare: Miller's writing could easily stand on its own as a solid contribution to Forest Service historiography. But instead of being two solo artists thrown together, Miller and Palmer complement each other like a folk duo, joining together in harmony to bring us both joyful, upbeat tunes about our national forests and grasslands but mixing in the right amount of truth and pathos so that when their show ends, we feel satisfied by the entertainment yet smarter and better citizens for having seen it. The book is divided into seven sections (it does not follow the Forest Service's division of the United States into nine regions), with four or five forests or grasslands highlighted in each. Each section opens with Palmer summarizing in about three paragraphs the regions' diverse topography and geography and the challenges he faced in photographing in wildly diverse conditions, followed by a few pages of Miller's own overview of the region's history and its challenges and issues, like pollution, climate change, overuse, and invasive species, interspersed with Palmer's gorgeous photos and captions. Those are followed by chapters on selected national forests and grasslands. In each chapter, Miller delves into the history as a prelude to discussion of current and future challenges to the Forest Service in managing each of these places, effectively making the specific details of one forest help illuminate universal truths about all of them. As a result, readers get good, thoughtful prose to ponder while enjoying the images. (JL)

Long-time Biltmore Estate forest and landscape historian Bill Alexander brings his considerable knowledge of the famed estate's history to bear in his new book ***The Biltmore Estate: Gardens and Grounds*** (2015), an entry in the *Images of America* photobook series from Arcadia Publishing. What immediately separates this from most books in the series is Alexander's command of the subject matter and his ability to convey a great deal of information in the short descriptive captions. The Biltmore Estate began almost as a whim of George Washington Vanderbilt's when he visited Asheville, North Carolina, in the late 1880s. He fell in love with the mountainous area and set about buying thousands of acres of farmland and woodlands in need of rehabilitation. He engaged Richard Morris Hunt to design the house, still the largest private home in the United States, and Frederick Law Olmsted, the father of American landscape architecture, to design



and develop the estate grounds. For Olmsted, the project became the capstone to an amazing life and career, one that also dominated the last seven years of his professional life. It is arguably his most important work: "Olmsted's success with Biltmore is greater than can easily be measured," Alexander writes in his introduction. "His vision was extraordinary and far-reaching and often ahead of its time. Some of his concepts in forest management and land restoration are now being rediscovered." In many ways, because of his successfully urging Vanderbilt to introduce forest management at Biltmore, Olmsted can be considered the father of American forestry, and Alexander gives him and his work their due. But carrying out Olmsted's vision for the gardens and landscaping around the house, which is the focus of this book, fell to Chauncey Beadle, who served the Vanderbilts for more than sixty years, first in the estate's nursery department, then for nearly half a century as the estate superintendent. Alexander pays tribute to Beadle by giving over a brief chapter to this important figure in the estate's history. (JL)

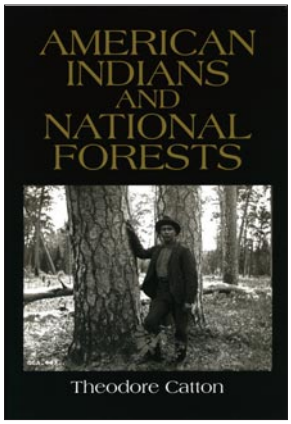
Bill Alexander's book can also be seen as one of two de facto companion books to the new film ***America's First Forest: Carl Schenck and the Asheville Experiment*** (Forest History Society, 2015). The other is ***Cradle of Forestry in America: The Biltmore Forest School, 1898–1913***, the memoir of Carl Alwin Schenck, the forester who emigrated from Germany in 1895 and served as the Biltmore Estate chief forester for fourteen years. The film *America's First Forest* employs an actor reading quotes from Schenck's memoir as well as an omniscient narrator to help tell the story of Schenck and the Biltmore Forest School, the first of its kind in America. The school and its graduates, as well as Schenck, its founder and primary



instructor, made a substantial yet underappreciated contribution to the nascent forest conservation movement. Hired by Vanderbilt in 1895 to replace departing estate forester Gifford Pinchot, Schenck strove to bring his employer's land under scientific forest management, and his efforts

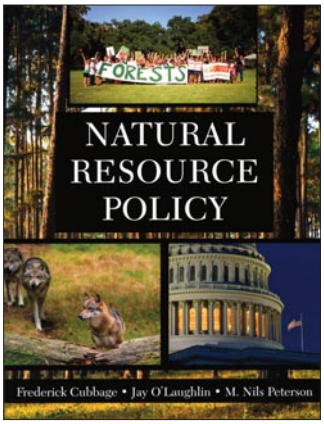
began attracting attention around the country. This was the first time anyone had applied forestry techniques on a landscape scale in America, and young men curious about this "new" profession approached Schenck about serving as apprentices. After a time, Schenck decided to formalize their training, and in 1898 he opened his school. Produced for public television and now available on DVD, the fifty-four-minute film tells this story by first introducing us to Vanderbilt, Olmsted, and Pinchot and the forestry plans they crafted before bringing viewers the story of Schenck's remarkable life and career, and then concludes with assessments of Schenck's legacy for forestry and conservation. It mixes historical photographs and film footage with reenactment scenes and intersperses interviews with historians and writers, including Pinchot biographer Char Miller, Biltmore Estate historians Bill Alexander and Ellen Rickman, and the Forest History Society's own James Lewis, who served as an executive producer and writer. Also available on the DVD is a shorter version of the film, which is ideal for classroom use. The twenty-eight-minute *First in Forestry: Carl Alwin Schenck and the Biltmore Forest School* focuses on Schenck and his time at the Biltmore by condensing the background information on Vanderbilt, Olmsted, and Pinchot and the information about Schenck's life after the school closed and he returned to Germany in 1913. (JL)

The relationship between Native American tribes and the federal government, including the U.S. Forest Service, has been contentious, to say the least. In the case of the Forest Service, the land now managed by the agency once belonged to Native Americans. And although the Bureau of Indian Affairs managed Indian forests from Gifford Pinchot's time until the 1980s, when tribal governments started taking over Bureau forestry operations, the Forest Service periodically tried to take charge of them. Following that change in control, the Forest Service established its tribal relations program in 1988. But to explain the state of relations today between the U.S. Forest Service and Native Americans, Theodore Catton wisely begins his history of ***American Indians and National Forests*** (University of Arizona Press, 2016) in the colonial era. The tribal perspective of history, Catton says in his introduction, is based on cultural memory, which can stretch back decades and even centuries.

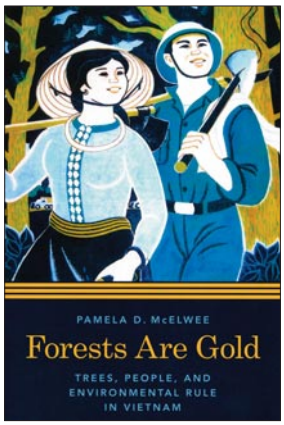


The Forest Service's perspective, on the other hand, is based on institutional memory, which "is notoriously short," lasting in some cases only as long as an employee is in a position. That might be only a couple of years and rarely more than a few decades, or the length of an employee's career. Thus, events from what may seem a "remote" time to whites are often seen as "recent" to Indians and still have a vitality and resonance today. The players' dramatically different perspectives influenced the author's decision to place the administrative history of the Forest Service tribal relations program in the larger context of the history of federal-tribal relations. With that understanding, Catton explores not only natural resource management on tribal lands but also the management of sacred sites like Medicine Wheel on the Bighorn National Forest in Wyoming, places often coveted by non-Indians for the natural resources found on or under them. The issue is important enough that Catton dedicates a chapter to the topic. Alaska, where there are no reservations or treaties, as in the Lower Forty-Eight, receives its own chapter. So does the Nez Perce tribe: a case study that typifies the contemporary relationship but "also reminds us that tribes and the Forest Service have different stories about the past and different perspectives about the journeys that brought them together." This is an excellent contribution to the historiography of the Forest Service and of Native Americans. (JL)

Many of the books considered in this column are appropriate for use in the college classroom but are not published explicitly for that purpose. Conversely, occasionally a textbook may appeal to a broader audience in search of good background on a topic. Such is the case with ***Natural Resource Policy***, by Frederick Cubbage, Jay O'Laughlin, and M. Nils Peterson (Waveland Press, 2016). It was written for students considering careers in the natural resource fields as varied as forestry, wildlife management, and conservation biology, whether in the public or the private sector, so that they can understand "how natural resource policies can be used to achieve sustainable development" in the United States. But for the experienced worker, it can provide a good refresher about how and why natural resource policies are made (Chapter 1), the general process by which policy issues arise and are considered by governments (Chapter 2), and how policy-making processes work and how decisions are made and evaluated (Chapters 3, 4, and 5). The next four chapters review environmentalism, conservation, ethics, and professionalism, and then the principal participants involved in making policy. The last six chapters summarize current natural resource policy programs. The authors adroitly synthesize a great deal of material and ground it in history because, overall, they are looking at the evolution of institutions and processes. A nice touch that assures readers this isn't their fathers' policy textbook is the inclusion of editorial cartoons and current comics like "Pearls Before Swine," which convey the points being made in the main text—whether it is about the 2010 Deepwater Horizon oil spill or how super PACs extend the boundaries of legal political contributions. (JL)

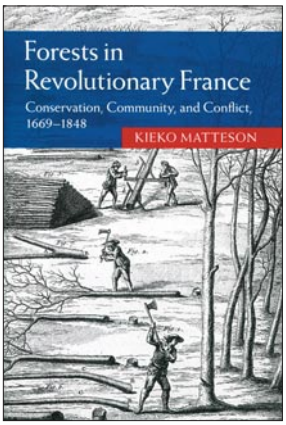


The evolution of forest policy over the last century and a half in Vietnam is the subject of Pamela D. McElwee's ***Forests Are Gold: Trees, People, and Environmental Rule in Vietnam*** (University of Washington Press, 2016). A professor of human ecology at Rutgers University who trained as an anthropologist and environmental scientist, McElwee has a very different perspective from a historian. Starting in 1996, she spent several years off and on in Vietnam not



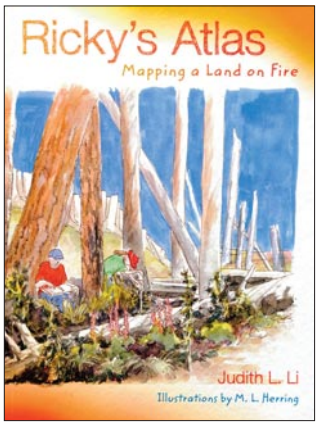
only doing archival research but also field studies, during which she discovered that the accepted forest restoration narrative about the nation was not quite what it seemed. From 1998 to 2010, even though the Vietnamese were planting trees on such an enormous scale in some areas that the effort was hailed as a green success story, high deforestation rates continued elsewhere, primarily in the country's biodiverse natural forests. Vietnam was a global leader in tropical deforestation and afforestation simultaneously. Further, in 2000–2001 McElwee was witness to government afforestation efforts in north-central Vietnam that created "a nightmare of overreliance on introduced fast-growing but low-value trees that displaced native flora and fauna." The government's afforestation policy brought social changes: the poor and women lost their land rights to men who claimed it for new forest plantations. She argues that the common thread throughout the nation's forest history, beginning with the arrival of the French in 1862 and continuing to the present, is that environmental policy was often not about improving natural conditions but about managing people through what she calls "'environmental rule,' whereby states, organizations, and individuals use environmental explanations to justify policy interventions in other social areas, such as populations, markets, or cultural identities." How environmental rule changed with power structures and governments—whether colonial or postcolonial—can tell us much about other former colonies in Asia and Africa grappling with deforestation and afforestation issues. The forests of Vietnam, as seen through McElwee's eyes, provide an illuminating case study of environmental rule. (JL)

Vietnam being a former French colony, it is useful then to examine the history of



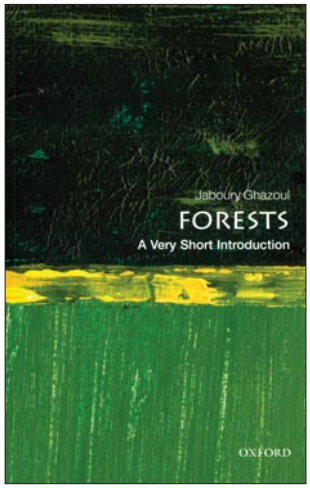
forest management in France during the two centuries immediately preceding its takeover of Southeast Asia. In ***Forests in Revolutionary France: Conservation, Community, and Conflict, 1669–1848*** (Cambridge University Press, 2015), Keiko Matteson takes us from the apex of Louis XIV's reign in the 1670s to the beginning of the Second Empire in 1848. She focuses on Franche-Comté, one of France's most densely wooded and remote areas, in the eastern part of the country. Much of what happened there was typical of what happened in other regions, starting with the fifty-year implementation of the 1669 *Ordonnance des eaux et forêts*, "a landmark of comprehensive, top-down timber controls and woodland management." In an age of total dependence on wood for fuel and nontimber forest products, such intrusion from the central government was not welcomed. As Matteson notes, regardless of who owned the forests, they were defined and governed in terms of use rights: rights to wood, rights of pasturage, and "secondary rights," or the rights to gather fruits and sod. It was not the tragedy of the commons—the depletion of common property by unregulated users who compete for resources—but rather a case of resource exploitation by external actors and loss of local control over the land. Power and the extent of control over private lands by the forest administration ebbed and flowed, and did not ameliorate the problem but rather exacerbated it. She concludes with a look at the present, providing "an instructive coda to the history of forest use in France." (JL)

In her sequel to *Ellie's Log: Exploring the Forest Where the Great Tree Fell*, Judith Li recounts for middle-school readers the story of a boy's adventures in the eastern Cascade Mountains in ***Ricky's Atlas: Mapping a Land on Fire*** (Oregon State



University Press, 2016). Ricky and his mother travel to his uncle's ranch in the eastern Cascades. As they are arriving, a massive thunderstorm is passing overhead. Ricky begins to document the events of the storm and what follows in his notebook. Lightning triggers a wildfire and the family and local firefighters have to mobilize. While firefighters work to extinguish the fire, Ricky's family and neighbors rush to defend their homes and round up cattle. In the aftermath, Ricky and his friend Ellie witness how humans, plants, and animals adjust and recover from wildfire. With much enthusiasm, the two document weather patterns, tree species, fossils, and wildlife. They also learn about fire and its effects in the semiarid landscape. Ricky and Ellie create a colorful diary of the fire, with maps and a timeline of events. Though the book is fiction, once again Li has made a great learning tool. A retired stream ecologist, she bridges the gap between fact and fiction by combining history and scientific observations in the story. The book has wonderful color pen-and-ink drawings by M. L. Herring, and the captions offer details on plants, animals, firefighting, and ranching. The story gives Li opportunity to cover the landscapes and Native Americans of the West and convey historical and scientific information about the Cascades. (JH)

Forests are arguably the richest lands on the planet. Early human cultures were dependent on forests because they provided shelter and resources, and although farming and natural disasters have diminished forests over time, they remain resilient. Jaboury Ghazoul explains the human relationship with forests in a global context in ***Forests: A Very Short Introduction*** (Oxford University Press, 2015), an entry in a series of brief texts on a wide variety of topics. The first three chapters cover

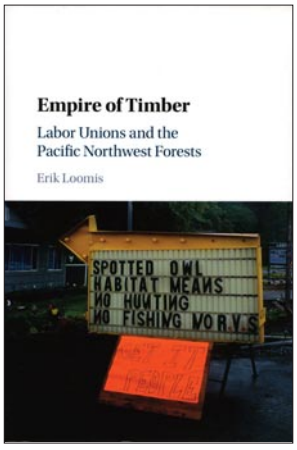


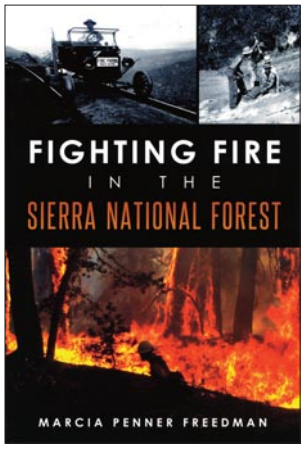
cultural histories of forests, definitions and descriptions of forests around the world, and the evolution of trees and forests. Another chapter explains the consequences of disturbances, such as fire and pests, and is followed by one on the goods and services different cultures derive from forested lands. The last chapter, "Past, Present, and Future," focuses on deforestation and how it could affect human civilization. Ghazoul has packed considerable information into this succinct volume. If one is seeking general information or a solid, engaging introductory text about forests, Ghazoul's book is a good starting point. (JH)

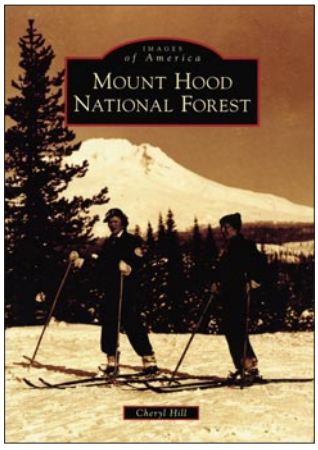
The rapid expansion of the timber industry in the Pacific Northwest at the beginning of the twentieth century transformed the region in many ways, reshaping the environment and economy of the region and profoundly affecting the lives of those laboring in the region's forests and sawmills. These everyday workers are the focus of a new book by Erik Loomis. In ***Empire of Timber: Labor Unions and the Pacific Northwest Forests*** (Cambridge University Press, 2016), Loomis places the struggles of timber workers at the center of the greater narrative of twentieth-century American forest history. These laborers joined unions and cooperatives to advance their personal and political goals. The groups also had varying responses to both the rapid industrialization of the forest and the rise of environmentalism later in the twentieth century. Loomis's work focuses on five labor organizations to examine the multifaceted nature of workers' activism in the region: the Industrial Workers of the World, the Loyal Legion of Loggers and Lumbermen, the International Woodworkers of America, the United Brotherhood of Carpenters, and the countercultural reforestation workers of the 1970s and 1980s. At different times these groups worked for improved working conditions, advocated for sound natural resource policies, and also opposed environmental regulations that would reduce jobs. The history of these struggles also helps illustrate the need for stronger alliances among future green and labor organizations in the face of global capitalism, job loss, and reduced environmental protections. Loomis addresses many basic questions: What were the root causes of the labor and environmental struggle? Did loggers not care about the forest? Did environmentalists not care about loggers' jobs? His impeccable scholarship provides an invaluable contribution to the disciplines of labor, environmental, and forest history. (JH)

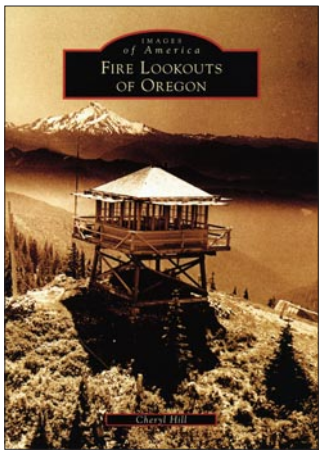
The Sierra National Forest is 1.3 million acres of beauty and splendor, but those who decide to live near the forest are also choosing to live with wildfire. Every year during fire season, the area is under constant threat. Residents become accustomed to clearing brush from around their homes, preparing for potential evacuations, and dealing with weeks of smoke-filled air. Because of expanding wildland development, firefighting in the Sierra National Forest is constantly evolving. In ***Fighting Fire in the Sierra National Forest*** (History Press, 2015), Marcia Penner Freedman examines the history of firefighting and fire management on the western slope of the Sierra Nevada. While hiking with friends in the Sierra National Forest, Penner witnessed a helicopter picking up water. That prompted her to investigate the subject, and her growing interest became her motivation to write the book. Her work traces the long history of fire suppression and fire management in the Sierra National Forest. This history also documents the shift in the U.S. Forest Service's policy on fire, from all-out suppression to a more ecological approach. Freedman details the personal stories of the early-twentieth-century rangers and firefighting crews battling blazes at all costs. She explores the adaptive management strategies of the middle and later parts of the century, as well as the challenges of dealing with the high-intensity fires of the twenty-first century. This is an excellent overview of the evolution of fire policy focused on one forest location. (JH)

It was established in 1892 as the Bull Run Forest Reserve, and then in 1908 it was merged with Cascade National Forest. Finally in 1924 it was renamed Mount Hood National Forest. In ***Mount Hood National Forest*** (Arcadia Publishing, 2014), librarian and Oregon native Cheryl Hill presents a visual history of this stunning area. Hill has gathered historic photos to tell stories of living, working, and leisure in and around Mount Hood. She begins with images of Lieutenant William E. Broughton and Peter Skene Ogden, two early explorers taken in by the beauty of the landscape, and the Native American





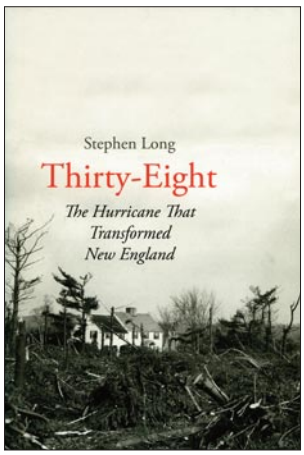




peoples who lived there. The second chapter is filled with those of U.S. Forest Service employees, surveyors, rangers, and many others who worked the lands. The next chapter is about early transportation, highlighting the mule pack trains and dirt roads for navigation, as well as railroads and the various roads built by the Civilian Conservation Corps. The remaining chapters are of early campsites, summer homes, and tours around Mount Hood ("Recreation"); the variety of lodges and hiking shelters ("Places"); and the famous Timberline Lodge. Nothing compares to actually seeing Mount Hood, but Hill has captured the majesty of it while giving the reader a rich history. (JH)

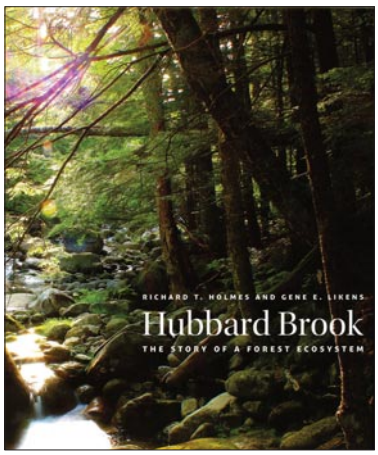
Also from Cheryl Hill is ***Fire Lookouts of Oregon*** (Arcadia Publishing, 2016). In 1910, devastating fires burned millions of acres in the American West. The following year, the young U.S. Forest Service adopted a new agency-wide policy for fire protection. Soon, lookout towers were being constructed on national forests throughout the country. Some of the early towers were primitive, just meager structures nested in trees or perched on windswept mountaintops. But building designs improved and construction intensified over the following decades. New inventions like the Osborne Fire Finder helped make lookouts an important first line of defense against forest fires. Heavily forested Oregon has a long history of using fire lookout towers. Of the hundreds of towers built, fewer than 175 remain today, and only about half of those are staffed. Hill presents a fascinating photographic history of these impressive structures. In seven chapters the book covers every region of Oregon. For each lookout, Hill describes an interesting event that took place in that area. She also found amusing and interesting anecdotes about the many men and women who served as fire lookouts. Her storytelling, accompanied by historical photos, makes this book a valuable addition to the libraries of lookout aficionados and forest history enthusiasts alike. (JH)

Seventy-eight years ago one of the biggest hurricane-induced forest disturbances in United States history occurred in the Northeast. Hurricane number 4 of the 1938 season cut a devastating path through New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine and up into Canada. The storm killed more than 700 people, destroyed thousands of homes, and caused massive forest damage throughout the entire region. The story of this storm is the subject of Stephen Long's new book, ***Thirty-Eight: The Hurricane That Transformed New England*** (Yale University Press, 2016). Long focuses on the region's forested landscape: the hurricane caused extensive forest damage in 35 percent of New England's total land area, toppled an estimated 2.6 billion board feet of timber, and caused approximately $5 billion (in today's money) of damage to the region's infrastructure. The ecological effects were far reaching, both from the storm and from the cleanup



efforts that followed, and Long details how the makeup of New England's forests was profoundly affected for decades to come. The book begins with accounts of the storm and its immediate devastation, including the personal account of one Fred Hunt, who as a 14-year-old survived the storm by taking shelter under a pine tree that had just fallen in front of him while he was walking home. He rode out the storm under there only to emerge afterward to find nearly every tree around him had blown down. Long describes the responses of residents and the federal government in the aftermath. Concerns over the imminent threat of fire due to the massive amount of flammable debris led the U.S. Forest Service to create the New England Forest Emergency program to protect populated areas. Most downed trees required immediate attention, though. In true New Deal–era fashion, a new federal program was established: the Northeastern Timber Salvage Administration (NETSA). Staffed by Forest Service personnel and assisted by Civilian Conservation Corps and Works Progress Administration workers, NETSA worked to salvage the timber. A project of this scale was not without its difficulties, and Long recounts the conflicts between the federal government and local lumbermen. In the end, the cleanup and salvage effort was viewed as a success, with the government recovering 92 percent of the program's total cost. Long concludes by looking at the ecological changes since 1938 and discussing how the next "Thirty-Eight" might affect New England's forests today. (EL)

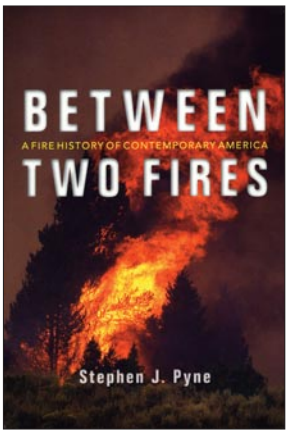
The 1938 hurricane illustrated the need—and created the opportunity—for studying the long-term recovery of forest ecosys-



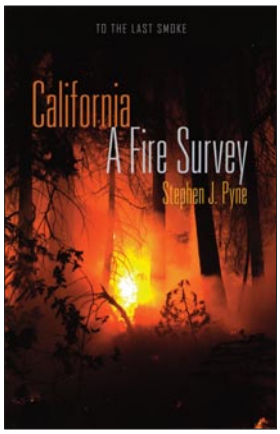
tems after major disturbances. This is just one of the many topics studied at the Hubbard Brook Experimental Forest in the White Mountains of New Hampshire. Operated by the U.S. Forest Service, the site has produced numerous important ecological findings that continue to influence forest research throughout the world and is the subject of a new book, ***Hubbard Brook: The Story of a Forest Ecosystem*** (Yale University Press, 2016), by Richard T. Holmes and Gene E. Likens. The book

explores the history of research at Hubbard Brook and its implications for environmental policy, forest management, and ecological debates locally and throughout the world. Beginning in 1963, the Hubbard Brook Ecosystem Study pioneered the small watershed technique as a method of studying ecosystem processes, using the forests of north-central New Hampshire as a living laboratory. Scientists began detailed investigations into the functions of all aspects of the forest ecosystem. Holmes and Likens look at why Hubbard Brook is such an important site, examining its environmental history and ecological characteristics. They highlight notable research findings and major scientific discoveries that came out of Hubbard Brook, including the discovery of acid rain—research that directly affected environmental policy throughout the world. Other important research that has received public attention was the investigation into the decline of migratory songbird populations. These and many other invaluable ecological discoveries have made Hubbard Brook a model for long-term forest ecosystem studies throughout the world. Though packed with detailed information on ecological research, the book remains accessible to nonscientists, aided in part by its beautiful layout and design. With its large size and numerous full-color photos, maps, and figures, the book would look at home on display atop a coffee table. It is a fitting tribute to half-century of perhaps the most influential long-term research study of a forest ecosystem. (EL)

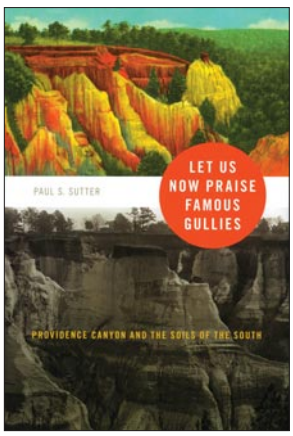
In 1982 Stephen J. Pyne published *Fire in America: A Cultural History of Wildland and Rural Fire*, the definitive account of the role of fire in shaping the American landscape from prehistoric to contemporary times. Since then, Pyne, the leading scholar of wildland fire and its place in human history, has focused more on fire history outside the United States. With his new book, ***Between Two Fires: A Fire History of Contemporary America*** (University of Arizona Press, 2015), he returns his attention to the United States, directly building on his classic 1982 work. *Between Two Fires* focuses on the past fifty years of American fire management, covering new ground and shedding light on contemporary debates over wildland fire policy. He opens with a look at the 1961 fire season, one of the most devastating of the mid-twentieth century. This is coupled with an examination of the first Tall Timbers Fire Ecology Conference in 1962, an influential event that "forced the fire establishment to accept fire's role in landscape ecology and management." Tall Timbers represented a shift toward accepting the use of prescribed fire by government land management agencies. This paradigm shift in fire management strategy was not a one-size-fits-all fix, however, since wildfire characteristics vary across the country. Pyne also devotes attention to the U.S. Forest Service and its struggles to redefine its role in the national fire landscape. One interesting component of the book is its discussion of the influence of national politics on fire management, illustrated in what Pyne refers to as the "lost decade" of the 1980s, when fire management policy was completely divorced from the greater environmental movement. Interspersed between chapters are brief examinations of catastrophic blazes that altered public perceptions of fire and public policy, ending with a look at the Wallow Fire of 2011, the largest fire recorded in Arizona history. As a whole, the book stands as a companion to *Fire in America* and demonstrates why Pyne remains such an important voice on both the past and future of American fire policy. (EL)



Luckily for those interested in American fire management, Stephen Pyne has extended his examination in a new series titled ***To the Last Smoke*** (University of Arizona Press, 2016). Pyne describes this work using the metaphor of a sports broadcast: whereas *Between Two Fires* is the play-by-play announcer, the series is the voice of the color commentator, discussing the stories and people behind the scenes in a specific region. The first four volumes focus on seminal regions in the history and development of American fire policy: ***Florida***, ***California***, ***The Northern Rockies***, and ***The Southwest***, each subtitled ***A Fire Survey***. More a collection of journalistic essays rather than a scholarly or scientific treatment, the books give an overview of fire management in each region, along with some historical context, personal stories, and interesting anecdotes. Regional approaches to fire management are presented in an engaging style, comfortable for general audiences and fire experts alike, and the ground-level look provides insights into the challenges of fire in the twenty-first century. We look forward to future volumes in the series as Pyne covers other regions of the country. (EL)

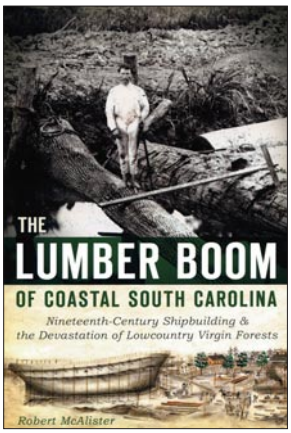


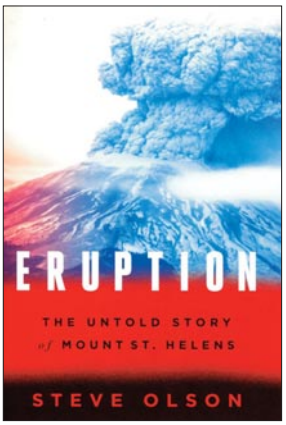
Providence Canyon State Park in southwestern Georgia features a striking network of red and orange canyons up to 150 feet deep. Known as the "Little Grand Canyon," Providence Canyon is recognized as one of the state's "Seven Natural Wonders." Unlike the Grand Canyon in Arizona, though, Georgia's version has a much more recent history, one tied directly to human failure. How this came to pass is the subject of Paul Sutter's ***Let Us Now Praise Famous Gullies: Providence Canyon and the Soils of the South*** (University of Georgia Press, 2015). The book explores the irony of a natural area destination that



is almost entirely an artifact of human origin. The beautiful canyons that park visitors admire are actually a severely degraded landscape. Sutter details the environmental history of the area, revealing how poor farming practices during the nineteenth century led directly to the massive erosion responsible for the canyons seen today, placing the landscape within the broader context of soil erosion in the American South. More interestingly, he also looks at twentieth-century debates over how the Providence Canyon area should be interpreted. The contests over the site's meaning pitted New Deal–era soil conservationists who viewed the canyon as a strong cautionary tale against regional boosters who wanted the area preserved as a park to promote tourism. Ultimately, Sutter argues that our national parks and wilderness areas are all cultural products to some degree, and that Providence Canyon more than deserves its protected status. Though it may be human induced, Providence offers the opportunity for broader thinking and discussion about natural areas as cultural products. By the book's end Sutter has effectively made the case that Providence Canyon is much more important than just a cautionary tale: it is an important subject for those interested in both the environmental history of the South and the cultural history of American parks. (EL)

Another important yet sometimes overlooked chapter from the environmental history of the American South is examined by Robert McAlister in ***The Lumber Boom of Coastal South Carolina: Nineteenth-Century Shipbuilding and the Devastation of Lowcountry Virgin Forests*** (The History Press, 2013). The environmental, commercial, and social history of Antebellum South Carolina's rice plantations have already been well explored; McAlister focuses on the lumber industry. He finds a direct tie between nineteenth-century shipbuilding in Maine and logging in South Carolina in the person of Henry Buck. Visiting from Maine, Buck marveled at South Carolina's coastal forest and saw the potential for turning its longleaf pine, bald cypress, and oak into lumber for northern shipbuilders. He established the first steam-powered sawmill in South Carolina in 1828 and quickly expanded his lumber operations, which eventually supported the new communities Bucksport and Bucksville. Although the Civil War interrupted production—and Buck's wealth contracted from $1 million to $1,000—the business survived and was passed along to his son following Buck's death in 1870. William L. Buck then presided over a fascinating episode in South Carolina shipbuilding history: the construction of the *Henrietta* in 1875. The idea began with the realization that the cold winters and shallow river where he and two partners had been building ships in Maine limited the construction season and the size of the vessels. McAlister details how instead of shipping lumber north for ship construction, Buck and his partners brought skilled Maine labor and materials south to construct the largest wooden vessel ever built in South Carolina. A massive undertaking, the *Henrietta* measured more than 200 feet long and carried 24 sails. The Downeaster-style cargo ship was larger than and nearly as fast as the earlier Clipper ships; this one would ultimately run trade routes all over the world for decades. McAlister also addresses the devastating effects of the lumber industry on the area's environment. Forest loss was exacerbated by the extensive mill complex of the Atlantic Coast Lumber Corporation, built in Georgetown in 1900. After clearcutting old-growth pine forests and bald cypress wetlands, the company abandoned the area in the early 1930s. McAlister rounds out his narrative on a more upbeat note, discussing how International Paper came in and eventually adopted and implemented sustainable forestry practices. The twentieth century would also see more conservation efforts and the creation of state parks and national forests in South Carolina. Despite its brevity—just over 100 pages—the book provides insight into the fascinating relationship between Maine shipbuilders and South Carolina loggers and sawmills and the long-term consequences for the region's landscape. (EL)





In spring 1980, the Mount St. Helens volcano, on the Gifford Pinchot National Forest in Washington, began releasing ash and gases and blue flames, and growing both a dome and a crater. Then at 8:32 a.m. local time on May 18, a 5.1-magnitude earthquake directly below the north slope triggered a landslide, one of the largest in recorded human history. In an instant, the mountain dropped in height at least a thousand feet, and the forests surrounding the volcano were flattened. The subsequent explosion, volcanic mudflows, and spewed ash claimed the lives of fifty-seven people, half of whom were never found. Among the dead were scientists studying the volcano and campers and residents who had ignored warnings to evacuate. Writer Steve Olson, a native of the region, wondered what had drawn them to the volcano and motivated them to remain despite the clear danger signs. In his outstanding account, ***Eruption: The Untold Story of Mount St. Helens*** (W. W. Norton, 2016), Olson vividly captures their stories along with the gripping tales of the many survivors, as well as the aftermath—both environmental and political—and recovery of the land. He also weaves together the activities of the Weyerhaeuser Company, which was logging on land adjacent to the volcano, the U.S. Forest Service, and the Mount St. Helens Protective Association and other environmental groups that since 1970 had been trying to stop the logging to preserve the old-growth forest. All these players debated about whether and how to salvage some of 4 billion board feet of damaged or destroyed timber, and whether to leave some areas untouched as a laboratory so that scientists and ecologists could monitor how the flora and fauna, and the land, responded. In the end, all these things happened, and the area around the volcano was declared a national monument. (JL) □

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October 20, 2016. Durham, NC
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Cosponsored by the Forest History Society
Information at: www.foresthistory.org/Events/lecture.html
Contact: Jamie Lewis at james.lewis@foresthistory.org

FOREST HISTORY SOCIETY
October 27–29, 2016. St. Paul, MN
Board of Directors meeting
Contact: Andrea Anderson at
andrea.anderson@foresthistory.org

SOCIETY OF AMERICAN FORESTERS
November 2–6, 2016. Madison, WI
Information at: www.xcdsystem.com/safconference/website/Schedule

AMERICAN SOCIETY FOR ENVIRONMENTAL HISTORY
March 29–April 2, 2017. Chicago, IL
Theme: Winds of Change: Global Connections Across Space, Time, and Nature
Information at: aseh.net/conference-workshops/2017-conference-chicago-1
Contact: Lisa Mighetto at director@aseh.net

NATIONAL COUNCIL ON PUBLIC HISTORY
April 19–22, 2017. Indianapolis, IN
Information at: ncph.org/conference/2017-annual-meeting

FOREST HISTORY SOCIETY
April 28–30, 2017. Quebec City, Quebec
Board of Directors meeting
Contact: Andrea Anderson at
andrea.anderson@foresthistory.org

ASSOCIATION OF CONSULTING FORESTERS
May 20–23, 2017. Lake Tahoe, NV
Information at: www.acf-foresters.org/ACFWeb

FOREST LANDOWNERS ASSOCIATION
May 30–June 2, 2017. Asheville, NC
Information at:
www.forestlandowners.com/page/2017NationalConf

FOREST PRODUCTS SOCIETY
June 2017. Starkville, MS
Information at: www.forestprod.org/ic/about.php

EUROPEAN SOCIETY FOR ENVIRONMENTAL HISTORY
June 28–July 2, 2017. Zagreb, Croatia
Theme: Natures in Between
Information at: eseh.org/event/next-conference

INTERNATIONAL UNION OF FOREST RESEARCH ORGANIZATIONS
September 19–22, 2017. Freiburg, Germany
Theme: Interconnecting Forests, Science and People
Information at: iurfro2017.org

ORAL HISTORY ASSOCIATION
October 4–8, 2017. Minneapolis, MN
Information at: www.oralhistory.org/annual-meeting

FOREST HISTORY SOCIETY
October 26–28, 2017. Durham, NC
Board of Directors meeting.
Contact: Andrea Anderson at
andrea.anderson@foresthistory.org

WESTERN HISTORY ASSOCIATION
November 1–4, 2017. San Diego, CA
Theme: Against the Grain. Information at:
westernhistoryassociation.wildapricot.org/conferences

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November 2017. Durham, NC
Cosponsored by the Forest History Society
Information at: www.foresthistory.org/Events/lecture.html
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SOCIETY OF AMERICAN FORESTERS
November 13–19, 2017. Albuquerque, NM
Information at: www.xcdsystem.com/safconference/website/Schedule

AMERICAN SOCIETY FOR ENVIRONMENTAL HISTORY
March 14–18, 2018. Riverside, CA
Information at: aseh.net/conference-workshops/2018-conference-riverside-ca
Contact: Lisa Mighetto at director@aseh.net

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Gifts to the Forest History Society Library

July 1, 2015, to June 30, 2016

Ancinas, Rene: Banham, Russ. *A True and Lasting Legacy: The History of Port Blakely Companies and the Family Behind It*. Seattle: Port Blakely Companies, 2016.

Berngartt, Mel and Peggy: *Forest Trees of Maryland: How to Know Them*. Baltimore: University of Maryland, State Department of Forestry, 1938; Arno, Stephen F. *Discovering Sierra Trees*. El Portal, CA: Yosemite Natural History Association, 1973.

Doggett, Coleman: Approximately 800 photographs and negatives taken by the North Carolina Forest Service, documenting NCFS activities over the first half of the twentieth century.

Gaige, Michael: Wessels, Tom. *Reading the Forested Landscape: A Natural History of New England*. Woodstock, VT: Countryman Press, 1997.

Heym, Doug: 19 volumes of *Michigan Forester* (published by the Forestry Club, University of Michigan), from 1935 to 1962.

Hogans, Mack L.: Two copies of *Men, Mills and Timber*, 1950 Weyerhaeuser publication; one copy of *The Nation's Wood Supply*, AFPI publication.

Janik, Pat: Seventeen color posters of Smokey Bear from 1979 to 1994; two posters of Pinchot Institute/Grey Towers.

Kestner, Donnia B.: September 2, 1922, issue of *American Lumberman*.

Lowe, Larry: Volumes 1–6 of Romeyn B. Hough's *The American Woods: Exhibited by Actual Specimens and with Copious Explanatory Text, 1888–1895*; Steer, Henry B. *Lumber Production in the United States, 1799–1946*, 1948; Hough, Franklin B. *Report Upon Forestry, 1878–79*, Vol. II.

Lowery, Michael: "Whiting Timber and Mill Interests," article from January 1910 *American Lumberman*; Lenox Saw Mill Company print from August 1918 *American Lumberman*.

Lyseth, Alaina Wolter: One signed copy of *Hinckley and the Fire of 1894*. Arcadia Publishing, 2014. (Donated in honor of her father)

McConnell, James: *Trees of New York State: Native and Naturalized*, 1922; *A Forest Atlas of the South*, 1969.

Meyers, Terry: A complete run of *Garbage* magazine, published from 1989 to 1994.

Miho, Judith: Seven volumes from the Champion Papers Imagination series. Art director of series was James Miho (husband of Judith). Volumes donated: XV Scandinavia, XVI Brazil, XVII Australia, XVIII Hong Kong, XX Rivers USA, XXIII Catalogues, 25 Fun and Games.

Nygren, Tom: Kellogg, R. S. *The Drain Upon the Forests*, 1907 (from the library of Carl L. Hawkes, retired USFS forester).

Oates, Bill: Billings, Ronald F. *A Century of Forestry, 1914–2014*. Lufkin, TX: Texas Forestry Association, 2014 (3 copies).

Quinn, Cathy: *Forest Focus* newsletters and magazine from 1976 to 2001; maps, photos, and slides relating to Westvaco operations mainly in South Carolina, Georgia, and West Virginia.

Reed, Stanford: Arnold, Oren. *Roundup of Western Literature: An Anthology for Young Readers*. Dallas: Banks Upshaw and Co., 1949.

Sellers, Terry, Jr.: Five northwest logging paintings by artist Roald Amundsen; nine three-ring binders of forestry slides; miscellaneous files.

Tweedie, Jim: Tweedie, Jim. *The Long-Bell Story*. Lee's Summit, MO: ParamPress, 2014.

Wallinger, R. Scott: Photos of Douglas fir growth in Washington 1960; *Sound Wormy: Memoir of Andrew Gennett, Lumberman*, 2002; Westvaco annual reports from 1960s through 2010s; National Commission on Science for Sustainable Forestry reports; file of correspondence between Scott Wallinger and David L. Luke III.

Weyerhaeuser Company: The Weyerhaeuser historical archives. Includes correspondence, director and executive files, branch and region files, advertising materials, oral histories, scrapbooks, publications, photographs, and audio/visual items documenting the activities of the company from its inception through 2010. 1,211 boxes; 687.32 linear ft. of processed materials. □

The Forest History Society awards program enables the Society to recognize research and writing in forest and conservation history and to stimulate further research into our understanding of the relationships between people and forests. High standards for selection reflect equally upon the recipient and the Society. The following is a list of awards for 2015–16.

LEOPOLD-HIDY AWARD

The Aldo Leopold–Ralph W. Hidy Award honors the best article published in the journal *Environmental History* during the preceding year. The award is presented jointly by the American Society for Environmental History and the Forest History Society. The 2015 winner was **Alan Mikhail** for "Ottoman Iceland: A Climate History," 20(2) (April 2015): 262–84.

In "Ottoman Iceland," Mikhail argues that a volcanic eruption and the resulting ash cloud in the North Atlantic resulted in distant and discernible effects on riverine flow of the Nile, and animals and people in Egypt. The author combines both physical and political sources across a large region, linking different scales of environmental process and social experience. Judges thought his essay demonstrated a first-class historical imagination, clarity of thought, deft use of illustration, convincing arguments, and the ability to orchestrate multiple factors at multiple scales without losing the thread of the argument.

THEODORE C. BLEGEN AWARD

The Theodore C. Blegen Award recognizes the best scholarly article in the field of forest and conservation history that is not published in *Environmental History*. This year the award went to **Erik Loomis** for "When Loggers Were Green: Lumber, Labor, and Conservation, 1937–1948," *Western Historical Quarterly* 46 (Winter 2015): 421–41.

From 1937 to 1948, the International Woodworkers of America challenged the timber industry's forestry practices, attempting to reshape the Northwest's timber industry to work for the sustainability of logging communities and the forest instead of corporate profits. Their activities demonstrate the long history of unions pressing for the environmental agenda of their members.

JOHN M. COLLIER AWARD FOR FOREST HISTORY JOURNALISM

The John M. Collier Award is given annually to a journalist to foster the best journalism in forest and conservation history. The 2016 Collier Award prize was given to **Phil McKenna**, a freelance journalist focusing on energy and the environment.

His piece was copublished as "Life in the Death Zone" at *NOVA Next* and as "The Boys Who Loved Birds" at *The Big Roundtable* in February 2015. McKenna's article tells the epic story of two nature-loving friends on opposite sides of the Iron Curtain between West and East Germany, and the ongoing transformation of the Iron Curtain's "death zone" into a European Green Belt.

F. K. WEYERHAEUSER FOREST HISTORY FELLOWSHIP

The F. K. Weyerhaeuser Forest History Fellowship is awarded annually to a student at the FHS university affiliate, Duke University, whose research is historical in nature and related to forestry, land use, or the environment. The award for the 2016–17 school year was given to **David Grace**. His project is entitled "The Sacred Groves of India's Independence: Revisiting Tradition with Forest Conservation in India's National Capital Region, 1864–2016."

WALTER S. ROSENBERRY FELLOWSHIP IN FOREST AND CONSERVATION HISTORY

The Walter S. Rosenberry Fellowship provides a stipend to support the doctoral research of a graduate student attending a university in North America whose research contributes to forest and conservation history. The 2016 fellowship was awarded to **Nickolas Perrone**. His dissertation, "Hemlock Democracy: Nature and Capitalism in the Leather Industry, 1812–1911," focuses on leather tanning during the nineteenth century and how this industry affected the eastern hemlock forests. This project will draw together business and economic history with environmental and forest history in important and valuable ways.

FHS FELLOW AWARD

The Forest History Society bestows the honorary title of Fellow of the Forest History Society on persons who have provided many years of outstanding leadership and service to the Society or many years of outstanding sustained contributions to the research, writing, or teaching of forest, conservation, or environmental history. This honor is the Society's highest award and is only given occasionally. **Robert J. Olszewski**, the vice president of environmental affairs at Plum Creek Timber Company from 2001 to 2015, was posthumously awarded the honor in 2016. Rob joined the Forest History Society board of directors in 2011 and served on the Finance and Administrative Affairs Committee and as chair of the Nominating Committee. He was a fervent supporter of forest history and used a historical context effectively in his hundreds of educational presentations with forestry associations, landowner groups, and many others.

ALFRED BELL TRAVEL GRANTS AND VISITORS

William Bryan, a Postdoctoral Research Fellow at The Fox Center for Humanistic Inquiry at Emory University, used a Bell Travel Grant to conduct research on a book manuscript entitled "Nature and the New South: Promoting 'Permanent' Uses of Resources in a Developing Region, 1865–1930." It traces how business leaders worked to address resource depletion in the late-nineteenth and early-twentieth centuries in ways that presaged strategies of sustainable development that emerged decades later. It also reframes the history of the post–Civil War South by showing how conflicts over natural resources shaped Southern economic development.

April Merleaux, a history professor at Florida International University, received a Bell grant to examine files from the U.S. Forest Service Headquarters History Collection and the Western Timber Asso-

ciation Records. She is conducting research for a new project examining the environmental history of the "War on Drugs" in the United States and abroad.

Jon Hazlett, a PhD candidate at Case Western Reserve University, used a Bell grant to examine conservation efforts within the lumber and paper industry and how they influenced early recycling movements. Jon spent significant time with the collections of the American Forest Institute and the National Forest Products Association in an effort to gain a broader understanding of how the lumber and paper industry adapted to and influenced changing ideas of environmental stewardship in postwar America.

David Benac, an associate professor of history at Western Michigan University, received a Bell grant to spend a week at FHS. David works in both the public and environmental history fields. He conducted research for his manuscript, "Town for Sale: Oregon's Timber Industry Heritage." In his application, David wrote, "I have four primary objectives to pursue at the archives. The most pressing is to gather information on representations of timber heritage by corporate entities, unions, and social organizations in advertising/publicity, art, music, folklore, and festivals. My secondary topic is to gather information regarding the thirteen communities that serve as my case studies. The third item on my agenda is to gather specific records on the tree farm movement. Finally, I hope to acquire additional records to develop the national context of the company-owned sawmill town."

Jameson Karns, a doctoral student at the University of California-Berkeley in the History of Science Program, used a Bell grant to examine the notebooks and photographs of Harold Weaver, an American forester best known for his mid-twentieth-century work on prescribed burning and a pioneer in the fire science field. Weaver's papers provided Jameson with an opportunity to place him in the fire science historiography. This research will also be shared with several environmental scientists, foresters, and fire scientists, who will apply the findings to current and ongoing studies.

The Forest History Society cohosted **Dr. Li Li**, an associate professor at Beijing Forestry University. She spent a year in Durham exploring methods and approaches in forest history. Dan Richter, professor of soils and forest ecology at the Nicholas School of the Environment at Duke University, cohosted during her tenure.

Rob Newman, a PhD student and assistant lecturer at the University of Kent in Canterbury, England, visited FHS while on a research trip to the United States. Rob's dissertation, "British Empire Forestry and the First World War," in part looks at how the American army's Forestry Engineers working in France interacted with the Canadian, British, and multinational forces. His research also addresses the forestry situation in France and the wider world before, during, and after World War I. While at FHS he spent time looking at the American Forestry Association records, the National Forest Products Association records, the Greeley Family papers, various oral histories, and other materials from the library and archive collections.

Alex Poole conducted research here for a biography of historian and archivist Harold T. Pinkett. Alex earned a PhD at the UNC School of Information and Library Science in 2015. While at FHS, he looked at FHS organization papers and other materials and spoke extensively with archivist Eben Lehman and librarian Jason Howard about Pinkett and his work with FHS. Pinkett was an important figure in the field of forest history as well as within our own organization. □

PUBLICATIONS OF THE FOREST HISTORY SOCIETY

These are books and films available from the Forest History Society on our website at www.ForestHistory.org/Publications.

From THE FOREST HISTORY SOCIETY

Issues Series—$9.95 each

Books in the Issues Series bring a historical context to today's most pressing issues in forestry and natural resource management. These introductory texts are created for a general audience.

America's Fires: A Historical Context for Policy and Practice, Stephen J. Pyne
America's Forested Wetlands: From Wasteland to Valued Resource, Jeffrey K. Stine
American Forests: A History of Resiliency and Recovery, Douglas W. MacCleery
Canada's Forests: A History, Ken Drushka
Forest Pharmacy: Medicinal Plants in American Forests, Steven Foster
Forest Sustainability: The History, the Challenge, the Promise, Donald W. Floyd
Genetically Modified Forests: From Stone Age to Modern Biotechnology, Rowland D. Burdon and William J. Libby
Newsprint: Canadian Supply and American Demand, Thomas R. Roach
Wood for Bioenergy: Forests as a Resource for Biomass and Biofuels, Brooks C. Mendell and Amanda Hamsley Lang

Other Publications

A Hard Road to Travel: Lands, Forests and People in the Upper Athabasca Region, Peter J. Murphy, et al., cloth $42.95, paper $29.95
Bringing in the Wood: The Way It Was at Chesapeake Corporation, Mary Wakefield Buxton, cloth $29.95, paper $19.95
Common Goals for Sustainable Forest Management, V. Alaric Sample and Steven Anderson (eds.), $24.95
Cradle of Forestry in America: The Biltmore Forest School, 1898–1913, Carl Alwin Schenck, $14.95
Forest Aesthetics, Heinrich von Salisch, trans. by Walter L. Cook Jr. and Doris Wehlau, $24.95
Forest and Wildlife Science in America: A History, Harold K. Steen (ed.), $14.95
Forest Management for All: State and Private Forestry in the U.S. Forest Service, Lincoln Bramwell, $10.95
Forest Service Research: Finding Answers to Conservation's Questions, Harold K. Steen, $10.95
From Sagebrush to Sage: The Making of a Natural Resource Economist, Marion Clawson, $9.95
Ground Work: Conservation in American Culture, Char Miller, $19.95
Jack Ward Thomas: The Journals of a Forest Service Chief, Harold K. Steen (ed.), $30.00
Millicoma: Biography of a Pacific Northwestern Forest, Arthur V. Smyth, $12.95
Pathway to Sustainability: Defining the Bounds on Forest Management, John Fedkiw, Douglas W. MacCleery, V. Alaric Sample, $8.95
Plantation Forestry in the Amazon: The Jari Experience, Clayton E. Posey, Robert J. Gilvary, John C. Welker, L. N. Thompson, $12.95
Proceedings of the U.S. Forest Service Centennial Congress: A Collective Commitment to Conservation, Steven Anderson (ed.), $24.95; also available on CD with bonus material
The Chiefs Remember: The Forest Service, 1952–2001, Harold K. Steen, cloth $29.00, paper $20.00
The Forest Service and the Greatest Good: A Centennial History, James G. Lewis, paper $20.00
Tongass Timber: A History of Logging and Timber Utilization in Southeast Alaska, James Mackovjak, $19.95
View From the Top: Forest Service Research, R. Keith Arnold, M. B. Dickerman, Robert E. Buckman, $13.00

With DUKE UNIVERSITY PRESS

Bernhard Eduard Fernow: A Story of North American Forestry, Andrew Denny Rodgers III, $21.95
Changing Pacific Forests: Historical Perspectives on the Forest Economy of the Pacific Basin, John Dargavel and Richard Tucker, cloth $39.95, paper $14.95
Changing Tropical Forests: Historical Perspectives on Today's Challenges in Central and South America, Harold K. Steen and Richard P. Tucker, cloth $31.95, paper $16.95
David T. Mason: Forestry Advocate, Elmo Richardson, $8.00
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Lost Initiatives: Canada's Forest Industries, Forest Policy and Forest Conservation, R. Peter Gillis and Thomas R. Roach, $40.95

With ISLAND PRESS

The Conservation Diaries of Gifford Pinchot, Harold K. Steen (ed.), cloth $29.00

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Forestry in the U.S. South: A History, Mason C. Carter, Robert C. Kellison, and R. Scott Wallinger, $65.00

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Crusading for Chemistry: The Professional Career of Charles Holmes Herty, Germaine M. Reed, $36.00

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The Forested Land: A History of Lumbering in Western Washington, Robert E. Ficken, $25.00
The U.S. Forest Service: A History (Centennial Edition), Harold K. Steen, cloth $40.00, paper $25.00

Available Videos from FHS on DVD

America's First Forest: Carl Schenck and the Asheville Experiment (55 min.); *First in Forestry: Carl Alwin Schenck and the Biltmore Forest School* (28 min.), $24.95
The Greatest Good: A Forest Service Centennial Film (2005), $18.00
Timber on the Move: A History of Log-Moving Technology (1981), $20.00
Up in Flames: A History of Fire Fighting in the Forest (1984), $20.00

For a list of oral history interviews available for purchase, visit: www.foresthistory.org/Publications/oralhist.html or call 919/682-9319.

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Which of the following best describes your employment setting?

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☐ Association or foundation
☐ Museum or library
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Which of the following best describes your current position?

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