

FOREST LANDOWNER

JANUARY • FEBRUARY 2022

**NEW JERSEY
LANDOWNERS
BILL AND
NADINE HAINES**

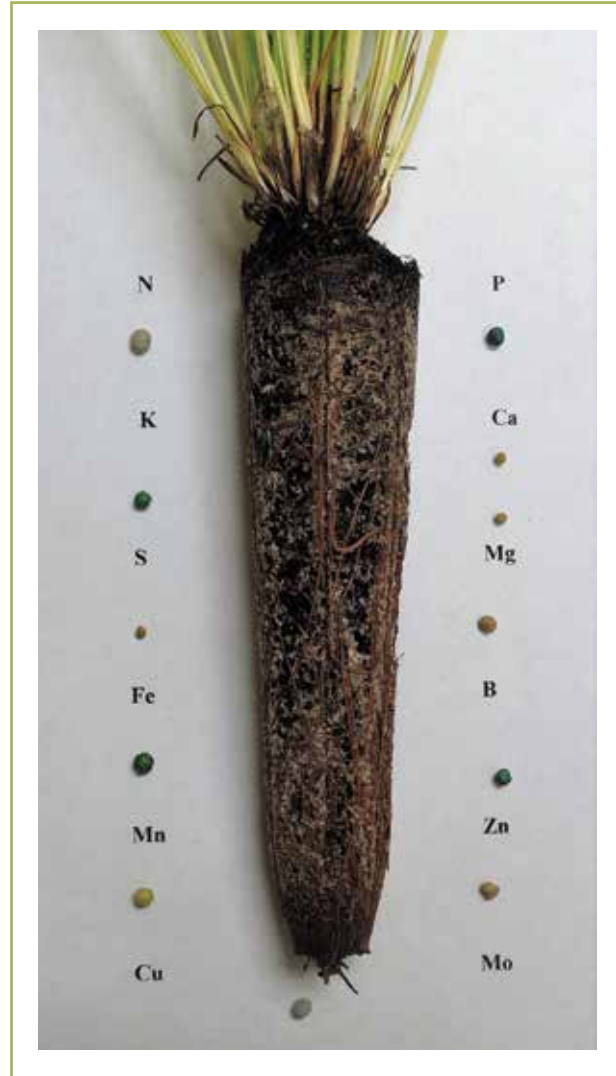
**THE FOREST
YEAR IN REVIEW**

**HISTORY OF
CHARCOAL
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Photo: Pete Williams



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Forest Landowner (ISSN-1087-9110) is published bi-monthly by Forest Landowners Association, Inc. (Publication Number 204940.) Forest Landowner, 406 Bradley Street, Carrollton, GA 30117. Periodicals postage paid in Smyrna, Georgia and at additional mailing offices. Subscription to Forest Landowner is offered only with association membership. Dues range upward from \$35, which includes \$30 per year for the magazine subscription. POSTMASTER send address changes to Forest Landowner, 406 Bradley Street, Carrollton, GA 30117. Phone (404) 325-2954; fax (404) 325-2955. Allow 4 to 6 weeks for a change to become effective. Please include address label. Volume 81, Issue 1

FROM THE PRESIDENT

Every other November I get emails from family members and friends asking me who they should vote for in local and judicial elections.

It always surprises me when this happens, because I'm startled to think anyone would believe I have some insight into these things. But I do my best to research the races and provide guidance. When you think about it, it's a great honor and responsibility to be asked.

FLA has the responsibility to provide its insight into the political ideas of the day. Some issues are easy to identify and the direction is clear, but others require a thoughtful analysis of the repercussions of a course of action, with a keen insight into possible unintended consequences.

When asked what our members expect from FLA, one of the first items is a presence in Washington D.C., to guide the political issues that affect forest landowners. This is a natural expectation of a national organization and we would fail our members if we did not place a high priority on such endeavors.

In response to these expectations, a large part of FLA's efforts goes into guiding government policy. Our staff is made up of those who see this as a prime responsibility, our board meets annually in DC to meet with members of Congress, and the Forest Landowner Foundation hosts a group of students each year through the Forest Policy Institute to allow them to observe firsthand how government works.

But what guides FLA's decision-making in the political arena? This is where it becomes very clear. We have one focus: what is best for forest landowners. It's often said that to sustain the forest, we must sustain the forest landowner. That's why you see forest landowners on the cover of this magazine in every issue.

The thing that distinguishes FLA from other organizations is that we are made up of families who believe that they have been given a great responsibility to make their forest land profitable and sustainable for generations to come. Our message to policymakers is this: you pinch us and it hurts, you cut us and we bleed, and no one provokes us with impunity.

So, every other November this nation honors its tradition of electing leaders to guide our nation in the political direction that its people desire. And every day in-between, FLA will be working to inform policymakers what is in the best interests of forest owners. This has been and will be our foremost priority and our solemn commitment to every member of FLA.



HAYES BROWN



VOLUME 81 – ISSUE 1

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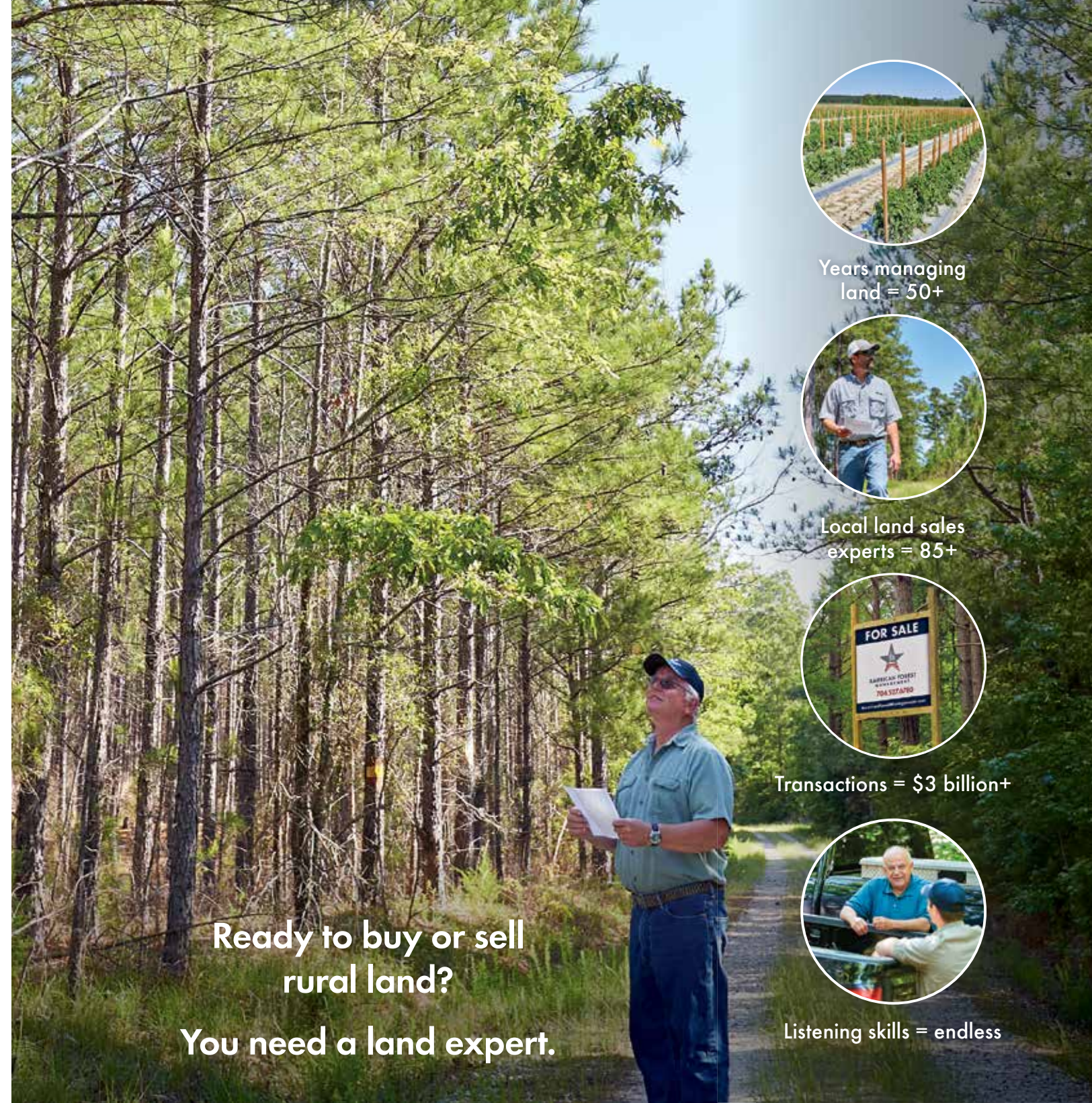
KATIE MOSS

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MICHELLE CAIN

Private forest landowners protect America's natural resources. The Forest Landowners Association (FLA) protects private forest landowners. Since 1941, FLA has provided its members, who own and operate more than 50 million acres of forestland in 45 states, with education, information, and national grassroots advocacy, which enables them to sustain their forestlands across generations. FLA's outreach on behalf of private forest landowners nationwide enhances their forestland management practices and stewardship, and provides peace of mind that they have an advocate working to bring them richly deserved compensation for their work that safeguards America's forestlands.

Hayes Brown, President



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MOOSE ENCOUNTER

A large bull moose walks along Mt. Cube on forestland in Orford, New Hampshire belonging to FLA member Tom Thomson, an amateur photographer who captured the photo.

Thomson, who was profiled in the January/February issue of Forest Landowner magazine, says the moose wandered to within 35 feet of a small building he recently completed, which serves as a forestry educational center for visitors he hosts on the property. For years, Thomson had spotted the moose through his Nikon telephoto lens on his forestland, which includes six beaver ponds and one natural floating bog, but this was his closest encounter.

In 1994, Thomson won New Hampshire's annual moose hunter lottery and harvested a 1,400-pound bull on his forestland. The massive trophy head, dubbed "Oscar," was loaned to the New Hampshire governor's mansion, where Thomson's parents once resided during Meldrim Thomson's tenure as governor from 1973 to 1979. New Hampshire Senator Kelly Ayotte displayed Oscar in her Washington office from 2011 to 2017. When she lost her reelection bid, Oscar returned home to Orford, where he's now on display in Thomson's forest educational center.

Thomson says it's possible the moose he recently photographed could be Oscar's great-great grandson.

Photo: By Tom Thomson



LANDOWNER ENGAGEMENT

BY MELINDA GABLE AND KATIE MOSS

FLA EFFORTS HELP KEEP UNFAIR TAX BURDENS OFF TABLE

Family-owned and operated businesses face several challenges when transitioning to the next generation of ownership, including navigating the tax code. At a time when many family and private forestry businesses still are struggling with disaster recovery and flat stumpage prices, several proposals put forth this Congress have the potential to make operating and passing on a family forestland or forestry-related business even more difficult.

FLA has been working through the Family Business Coalition and 1031 Like-Kind Exchange Coalition to apply maximum pressure on Congress regarding key tax proposals that would affect the ownership and management of forestland or forestry-related businesses.

FLA participated in more than 100 calls and Zoom meetings with Congressional offices on tax issues in 2021. Thanks to the tireless efforts from our partner coalitions and the forestry sector we were able to keep harmful tax provisions off the table for the Build Back Better (BBB) package. At press time, the package does not include some of the tax increases that President Biden and progressives originally called for to be used as pay-fors. Items of interest to FLA members include:

- **Capital Gains.** In the White House-released BBB package, Biden proposed raising the top capital gains tax from 20 percent to 39.6 percent for those making more than \$1 million a year. Biden's proposal to raise capital gains was kept out of the negotiating reconciliation package in Congress.
- **Stepped-up basis.** Biden's proposal to end a tax break on inheritances known as "stepped-up in basis," which wipes out the capital gains tax on assets, is not included in the bill.
- **1031 like-kind exchanges.** A 1031 exchange is a swap of one investment property for another "like-kind" property that allows capital gains taxes to be deferred. Early conversations in Congress proposed to eliminate this program, but at press time there was no change to 1031 exchanges in the package.

- **Estate taxes.** FLA joined the Family Business Coalition in sending a letter urging Congress to keep all estate tax-related changes off the table as BBB negotiations continue. So far changes to estate taxes are not included in the BBB, but we are ever mindful that last-minute changes are possible.

Although there is still time for the content of the bill to change, alterations to the above are not anticipated. Some provisions will benefit private working forests and wood products, and position both as a natural climate change solution. As of this writing, highlights of interest include:

- \$200 million for USDA outreach, training, capacity building, and other technical assistance for underserved farmers, ranchers, or forest landowners, including in high poverty areas.
- \$2 billion for grants to support forest restoration and resilience projects on non-federal forest lands.
- \$1.3 billion in grant funding through the Landscape Scale Restoration Program to:
 - help small forest landowners carry out climate mitigation or forest resilience practices and participate in emerging markets.
 - provide payments to private forest landowners to adopt forestry practices that increase carbon sequestration and storage.
- \$200 million for the Forest Inventory and Analysis Program to modernize data collection and improve forest carbon monitoring and measurements.
- \$775 million for wood innovation grants to support traditional wood utilization projects, expand wood energy markets, and promotes using wood as a construction material in commercial buildings.

INFRASTRUCTURE BILL PASSES WITH FORESTRY PROVISIONS

After months of gridlock, Congress passed the bipartisan \$1.2 trillion Infrastructure Investment and Jobs Act, which includes



\$555 billion in new funding for mostly "traditional" infrastructure (roads, bridges, etc.). However, the term "forest" is mentioned almost 200 times in the bill, making one thing clear – both parties agree that trees are a critical part of infrastructure. Much of the forest-related funding, policy, and programs are aimed at federal lands and keeping national forests healthy, resilient, and covered in trees.

The bill includes \$3.4 billion for wildfire risk reduction and \$2.1 billion for ecosystem restoration, including funding for collaborative-based and landscape-scale restoration projects between federal agencies and the private sector. The bill also included \$460 million for wood innovation such as biomass and \$200 million for a national seed and seedling strategy to provide a stable and economical supply of native plant materials for restoration and rehabilitation efforts on public lands.

As always, FLA will continue monitoring and engaging with legislators to ensure that policies help private forest landowners remain economically viable and spread awareness of the role that landowners play as stewards of the nation's natural resources. For a more detailed breakdown of forestry-related funding in the infrastructure bill, visit the FLA website.

FLA ENCOURAGES MEMBERS TO ENGAGE WITH POLICYMAKERS

The Forest Landowners Association continues to grow its State Engagement (SET to GO) teams to connect members to their representatives in Congress, as well as federal and state agencies. These teams are made of landowners, managers, and supply chain stakeholders focused on staying updated and engaged on federal legislation and regulations that impact the economic viability of forest owners.

FLA began its 2021 State Engagement Teams with 130 members in Alabama, Florida, Georgia, Louisiana, and Mississippi. FLA has recently added a Pacific Northwest team of

forest stakeholders from Oregon, Washington, and northern California, as well as a team in South Carolina.

FLA's two priority areas are currently endangered species issues and the ability for forest landowners to recover after the loss of timber from a natural disaster. FLA staff keeps the teams informed on these issues and offers opportunities for members to engage with policymakers by sharing their stories and how decisions can hinder or help forestry stakeholders, rural economies, and the environment. This direct interaction from constituents can make a lasting impact on leadership and help move the needle on issues of importance to private working forests and their stewards.

If you are interested in joining one of our existing State Engagement Teams or would like to see a team started in your state, please reach out to FLA Policy and Legislative Assistant, Katie Moss, at kmoss@forestlandowners.com.

ENDANGERED SPECIES AND CRITICAL HABITAT ISSUES

FLA is dedicated to ensuring the sustainability and economic viability of private forest landowners through regulatory stability. The FLA team is keeping up with species listings and critical habitat designation proposals that may impact private landowners' abilities to manage and maintain their working forests.

To reverse many Trump-era decisions regarding the Endangered Species Act (ESA), the Biden Administration released an executive order for the U.S. Fish and Wildlife Service (USFWS) to revise, rescind, or reinstate five major ESA regulations finalized by the Trump administration: 1) Rescind regulations that revised USFWS's process for considering exclusions from critical habitat designations, 2) Rescind the regulatory definition of "habitat," 3) Revise regulations for listing species and designating critical habitat, 4) Revise regulation for interagency cooperation, and 5) Reinstate protections for species listed as

threatened under ESA.

USFWS recently began this process by announcing its proposal to rescind the joint agency definition of “habitat” and repeal the USFWS 2020 regulations that guide analyses of the economic impacts when designating critical habitat. FLA will stay engaged through public comments and direct communication with agency leadership as this review process continues.

The USFWS recently proposed critical habitat in Oregon and northern California for the coastal-distinct population segment of the Pacific marten (called the coastal marten), which was listed as threatened under the Endangered Species Act in 2020. The 1.4 million-acre proposed designation is 90 percent federal land, with the remaining 89,475 acres owned privately or by the local government. Additionally, nearly 48 percent of the proposed designation overlaps with existing critical habitat for other threatened or endangered species, including the northern spotted owl and marbled murrelet. FLA is working with its partners in the Pacific Northwest to make sure this proposed designation will not negatively impact private working forests.

USFWS also announced the withdrawal of the January 2021 rule reducing critical habitat for the northern spotted owl by 3.4 million acres. The agency will be adopting as final the proposed reduction of only about 204,000 acres in Oregon. The land proposed for exclusion is managed by the Bureau of Land Management (BLM) or was previously transferred in trust from the BLM to certain Indian Tribes. FLA does not expect any impacts on private forestland, although it’s encouraging that the BLM can resume timber harvest in these areas.

ISSUES WITH H-2B VISA DELAYS CONTINUE

Due to nationwide labor shortages in all workforces, the cap on H-2B temporary labor visas was reached on September 30, marking it the earliest point in time that the first half H-2B cap has ever been reached in program history.

In response, FLA joined other forestry stakeholders in sending a letter to the Department of Labor requesting immediate action to end these delays, including a streamlined process to clear the backlog of applications, and treating timely filed Farm Labor Contractor certificate renewals as valid – as is required by federal law – so that H-2B applications are processed promptly.

These delays are particularly serious because the planting of trees is time-sensitive and weather-dependent. While these applications languish, the clock is ticking.

Forestry operations that rely on H-2B workers for the planting season urgently need additional visas to support their



U.S. workforce. The work done by H-2B workers in the forestry community is restricted to a short season when weather conditions allow for planting trees.

The tree planting season for landowners typically starts in October and ends in February. The timeline for prepping the land, preparing the seedlings to be pulled from the nurseries, quickly packing, and shipping the live seedlings, and finally planting the trees is all interconnected and directly ties to a reoccurring seasonal need.

FLA COMMENTS ON PROPOSED CLIMATE-SMART AGRICULTURE AND FORESTRY PARTNERSHIP PROGRAM



The U.S. Department of Agriculture (USDA) recently requested feedback on a potential Climate-Smart Agriculture and Forestry Partnership Program, which would serve to expand the use of climate-smart farming and forestry practices and aid markets for forest- or agriculture-sequestered carbon.

The climate mitigation benefits of a privately managed forest begin with the commitment, investment, and hard work of the landowner. FLA knows the most important way to sustain private working forests that provide climate solutions is to sustain the landowners that own and manage those forests. FLA’s comments stated that all forest-based climate mitigation programs should acknowledge the climate benefits that family and private landowners provide and work with the landowner to achieve climate mitigation at scale by not hindering the landowners’ ability to own, manage and profit from their land while keeping working forests working. FLA’s comments also highlighted that carbon markets can and should coexist with strong traditional wood markets.

FLA believes that although there is much room for improvement in the current carbon marketplace, the USDA should not infringe on that free market. FLA’s comments reiterated that the role of USDA in the carbon market space should be to invest in research and technology that will help private carbon market providers measure carbon and carbon benefits on forests and wood products in a more consistent, reliable way.



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A man and a woman are smiling and standing in a forest. The man is wearing a blue puffer vest over a blue checkered shirt and a camouflage baseball cap. The woman is wearing a white hoodie over a teal top. They are standing next to a large log that has been cut, with many wood shavings hanging from it. The background is a dense forest of tall trees.

The **CRANBERRY FOREST**

WITH A 130-YEAR-OLD CRANBERRY FARM NESTLED AMID 11,000 WOODED ACRES THAT INCLUDE RARE ATLANTIC WHITE CEDAR, BILL AND NADINE HAINES HAVE AN UNUSUAL AND BREATHTAKING FORESTLAND OPERATION IN SOUTHERN NEW JERSEY.

BY PETE WILLIAMS

The Haines property includes cranberry bogs, like this one in the process of being harvested, surrounded by 11,000 acres of forestland.



Bill Haines grabs a cranberry off a conveyor belt, takes a bite, and smiles. We're standing, along with his wife Nadine, on a platform twelve feet above a flooded cranberry bog. Below us, three employees of their Pine Island Cranberry Company, clad in hip waders and standing waist-deep in water, funnel berries into this two-story harvesting machine that sorts the bright-red fruit and deposits it into a truck that will transport 40,000 pounds of berries to a nearby Ocean Spray receiving facility.

It's one of several trucks that the crew, one of three, will fill on this unseasonably warm mid-October day, the peak of the cranberry harvesting season. By Halloween, the crews will have harvested 1,350 acres and a company-record 34 million pounds of cranberries, making Pine Island the largest New Jersey supplier to Ocean Spray and third-biggest overall.

Because the fruit is harvested in water, it's immediately frozen and ultimately will be made into various cranberry products, but especially craisins because New Jersey grows the largest version of the tart fruit.

The Pine Island cranberry operation, which Haines's great-grandfather Martin Haines started in 1890, might be only the second most unusual thing about the Haineses when it comes to their membership in the Forest Landowners Association. Their 1,500 acres of cranberry bogs and 1,500 acres of reservoirs are surrounded by 11,000 acres of forestland here amid the Pine Barrens, just 45 miles east of Philadelphia International Airport but a world away from the densely-populated urban centers of Philly and northern New Jersey.

Bob Williams, the forester for the Haines property, says it's the largest privately-managed forest in New Jersey. It's also home to a large-scale restoration project of Atlantic white cedar,

which makes up about 1,000 acres of the Haines forestland. For more than 90 years until 2009, the land also included a blueberry operation, and Haines's late father, Bill Haines, Sr., even dabbled in strawberries and Christmas tree sales as a way to ensure the land produced year-round income.

But until 2005, the forests were largely unmanaged other than some occasional prescribed burning. Part of that was because of New Jersey's regulations and bureaucracy, especially in the Pine Barrens, but part of it was the family's focus on cranberries. From the time Martin Haines, a Union Army captain during the Civil War, began assembling forested land in 1890, the primary goal was to have a large source of clean water for the fruit.

"We like to finish in the black no matter what we're doing and it didn't seem it was worth the effort and the challenges we'd have to overcome," said Haines, 68. "But I kept thinking that there was something there and that's proven to be the case. But I've found forest management is much different than the cranberry business."

Williams, the forester, has spent the bulk of his career working amid the Pine Barrens where he was born and raised. A prolific writer, including contributing regularly to this magazine, he writes frequently about the challenges of forest management in heavily regulated, heavily taxed New Jer-



New Jersey produces some of the largest cranberries, ideal for producing craisins.

sey and his concern that as people move south, those big-government bureaucracies could gain a foothold in the Southeast, impacting the rights of private forest landowners there.

Williams also must remind people that the Garden State is heavily forested and not just turnpike stops, oil refineries, casinos, and the suburbs of New York and Philadelphia.

When Haines approached him about creating a forest management plan, Williams knew they would face obstacles unlike landowners in much of the country. The Haines cranberry farm in the town of Chatsworth in an area known as Hog Wallow, where Bill and his three sisters were raised, sits within the boundaries of the New Jersey Pinelands National Reserve, which includes 1.1 million acres and occupies 22 percent of New Jersey's land area. Like most public lands, there's little forest management involved.

When Williams filed a forest management plan with the Pinelands Reserve Commission in 2001, it was the largest ever received and took years of legal fees and permitting negotiations before it was approved in 2005. There were many rules about what could and could not be planted. Loblolly, even though it's found in southern New Jersey, was not considered a native species and thus could not be planted.

The politically-connected Haines was up for the challenge. He has served as mayor of Washington Township, which is the largest of New Jersey's municipalities by land area, but among the smallest with only about 700 people residing across 110 square miles, a population density less than that of Iowa. He also served as a Burlington County freeholder (since renamed commissioner).

"It was an interesting experience," he says. "People would get on your case and friends would ask, 'How do you put up with that?' I always felt that when someone from across the county said I'm an idiot, what do I care? I don't know him. But when someone who knew you when you were a kid says you're an idiot, that kind of hurts."

Then there's the issue of markets. South Jersey once had two pulp mills but they're long gone. Williams sold softwood to a Pennsylvania pulp mill but that, too, went away. "We're in a difficult situation where we can't take care of the forest because there's no market," he said. "So, we use a lot of prescribed fire.



American white cedar, like this harvested from the Haines property in October, is a long-lasting, rot-resistant wood used for roof shingles and boat construction since colonial times.

One of 850 truckloads, each containing 40,000 pounds of cranberries, to depart the Pine Island property during harvesting season.



A Pine Island employee harvests one of the company's 350 bogs.



Forest Road: Pine Island's operation includes cranberry bogs on the left and forests on the right that provide clean water essential to cranberry growing.



We do what we can.”

To cut pulpwood, Williams barter the wood in exchange for seedlings and re-planting. The upside to the Haines property, from both an economic and ecological standpoint, is the Atlantic white cedar, a wetland species that once covered more than 500,000 acres along a narrow swath from the coast of Maine to Georgia and from the Gulf Coast states of Florida to Mississippi. Less than 10 percent of that ecosystem remains.

Atlantic white cedar is a long-lasting, rot-resistant wood used for roof shingles and boat construction since colonial times. So treasured is the cedar for building and creating products such as duck decoys that timber cut from the Haines property is hauled to North Carolina. Some of their cedar helped restore a 17th-century building in Colonial Williamsburg that Bill and Nadine visited while attending the FLA national conference there in June. Says Williams, “If it’s worth shipping cedar to North Carolina, imagine what it would be worth if we could process it in New Jersey?”

Cedar does not grow as fast as pine and presents unusual forest management challenges. Though it regenerates on its own with a staggering 5,000 to 10,000 trees per acre, coming in like grass, it must be clear-cut since it requires full sunlight to regrow. It also does poorly when competing against other species, which makes herbicide treatment a must. Without forest management, the cedar species is doomed.

Williams cites the Haines property often in his writing and when speaking at conferences as an example of the importance



Pine Island employees work to harvest some of the 34 million pounds of cranberries produced in 2021.



of forest management in New Jersey and not just restoring Atlantic white cedar. He says there’s more silviculture performed there than anywhere else in the Pinelands. He’s even brought college classes out to the property.

“I obviously get paid as the forester of the property,” he says. “But I’ve been motivated more by the tremendous professional opportunity to take a piece of property and show everyone what we could be doing with similar lands.”

Managing forests in New Jersey is an ongoing struggle, Williams says. But there are signs of progress. Ten years after

the approval of the first management plan for the Haines property, Williams had to submit a new one to the Pinelands Reserve Commission.

This time it sailed through smoothly.

Like many forest landowners, Bill Haines drives a Ford F-150. That might be where the similarities end when it comes to his tour of private forestland.

The Haines trip starts with a drive across dams that divide more than 350 cranberry bogs. There’s an elaborate pump system that moves water by gravity from bog to bog for harvesting, and dozens of small, cranberry-colored pump houses. During peak harvest season, three crews combine to harvest 40 acres of cranberries a day. Two of the Haineses six children, daughter Stefanie and son Michael, along with a son-in-law Jeremy, are involved in the cranberry operation, making it a fifth-generation business. Bill and Nadine have five grandchildren, none old enough to get involved, at least by today’s standards.

Bill Haines was 10 years old when he began helping with the blueberry harvest, nailing on the final slat of crates after they were filled with fruit. (He was in school during the cranberry harvesting months). In high school, his father tasked him with managing a swampy island of pine trees surrounded by cedar. Bill Jr. decided if he ever had his own company, he’d name it Pine Island. He graduated from Rutgers and returned to the family business. After Bill Sr. passed in 2007, Bill Jr. merged a Pine Island company he founded to manage the farm with the existing Haines & Haines to create the Pine Island Cranberry Co.

The Pine Island operation, like the rest of the New Jersey Pinelands, has coarse, sandy soils with high iron content and low pH – ideal for the cranberries that grow there. But it’s the water that makes the difference.

Clean water is a primary benefit of forestlands, one cited often by FLA, but never is that more apparent than driving through a cranberry operation. There are no natural lakes in the Pinelands, so Martin Haines built reservoirs by damming off tributaries to the Wading and Oswego rivers. The wet harvesting process uses reservoirs and a system of wells, pumps, and gates to flood the sandy bogs, which is why the 11,000 forested acres are crucial to the operation.

“The key to all cranberry operations is water,” Haines says, nodding as we pass a reservoir. “People say real estate is about location, location, location. With cranberries, it’s water, water, water.”

Martin Haines purchased land whenever it became avail-

able upstream, mostly during tax sales and with little competition since nobody else wanted it. So treasured was the Pine Barrens water that Joseph Wharton, an entrepreneur and cranberry farmer, accumulated more than 100,000 acres and hoped to provide a source of clean water for Philadelphia. Instead, New Jersey’s legislature passed a law banning the export of water from the state, which bought the tract from Wharton’s heirs in the 1950s. (Wharton, who died in 1909, is the namesake of the nearby Wharton State Forest as well as the University of Pennsylvania business school he founded.)

In Martin Haines’s time, dams were built by hand or with horses and equipment. Harvesting was grueling work done by hand using wooden scoop baskets with comblike teeth that pulled the berries off the vines. When Bill Haines Sr. began wet harvesting in the 1960s, he created more dams and converted larger bogs into smaller ones. Water also is important for irrigation and to protect against frost.

“This is the about the best place in New Jersey to farm for several reasons, including because our neighbors are either other farmers or state forests,” Haines says. “We can start our pumps in the middle of the night and nobody complains.”

Haines turns the F-150 into the woods. We pass some of the plantings from the last decade, all shortleaf or pitch pine since loblolly is not permitted. We pass a logging operation with a load of cedar ready for transport. Bill parks the truck and soon we’re hiking through young cedar

Haines moves quickly through the forest. A tall, fit, avid cyclist, he and Nadine have taken cycling tours through Europe and the Southeast. Walking through their cedar forestland seems like an outdoorsy, eco-tourist experience itself. Says Williams, who has spent a career working in New Jersey forests, “You feel more like you’re in the Pacific Northwest or Canada when you’re in their forestland. It’s breathtaking.”

Haines pauses. He’s more than a decade into forest management but it still seems like he’s just getting started. “There’s an opportunity to do more,” he says. “It’s been fun and interesting and it more than pays for itself. We thought there would be an economic and ecological benefit and that’s been proven to be the case. But the big thing is that we’ve been tied to this land for four generations and all of us have been raised that we were supposed to take care of it. If this can serve as an example for what can happen elsewhere in New Jersey, both in terms of the cedar and overall forest management, then it’s really been worthwhile.”

Pete Williams is editor of Forest Landowner magazine.



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THE 2021 FOREST YEAR IN REVIEW

PRIVATE FOREST LANDOWNERS WATCHED WITH INTEREST AS THE PANDEMIC EVOLVED AND BITTER PARTISAN FIGHTS OVER TAXES AND THE DIRECTION OF THE COUNTRY CONTINUED IN WASHINGTON.

BY PETE WILLIAMS

Members of the Forest Landowners Association, like the U.S. public at large, learned in 2021 to be adaptable in an ever-changing political, economic, and health landscape.

When Republicans lost control of the Senate in January after two Georgia run-off elections, it appeared a new Democrat-controlled White House and Congress would have a devastating impact on private forest landowners. Instead, FLA continued to make progress on its policy objectives. The feared tax changes, at least at press time, had not come to fruition as Congressional Democrats struggled to come to consensus even among themselves.

Lumber prices continued to skyrocket, fueled by pandemic-related construction, along with labor and supply chain issues that affected all consumer goods. Though lumber demand did not translate into higher stumpage prices, a recurring landowner frustration, FLA helped draw attention to its members plight in several high-profile news articles.

When it appeared the Covid-19 pandemic was waning following the introduction of vaccines in the spring, FLA became the first national forestry group to hold a major conference, drawing huge attendance to Williamsburg, Virginia, for the National Conference of Private Forest Landowners in June. Though the summer's rise of the Delta variant and vaccine hesitation prolonged the pandemic, FLA's board and staff continued to work tirelessly across the nation.

FLA's annual midwinter D.C. board meeting and visit to Capitol Hill became a Covid casualty in February, and landowners feared that tax proposals from the progressive wing of the Democratic party led by new budget committee chair Bernie Sanders, the Vermont socialist, would lead to a reduction of the death tax exemption, the elimination of the 1031 exchange and the step-up in basis system, and much higher capital gains.

Those potential changes, along with a multi-trillion-dollar social spending and climate package, struggled to gain consensus among Democrats, who held razor-thin majorities in the House and Senate. President Joe Biden, who ran as a centrist Democrat, drifted far left and, at press time, had struggled to bring his party to agreement on his "Build Back America Act." Even a bipartisan infrastructure bill did not pass until November.

FLA, meanwhile, worked on both sides of the aisle, as it has historically regardless of the party in power. "We don't change our principles," FLA CEO Scott Jones told members at the annual conference. "But the game plan of how we accomplish our goals and how we set up a narrative that will protect our interests has to change with the administration."

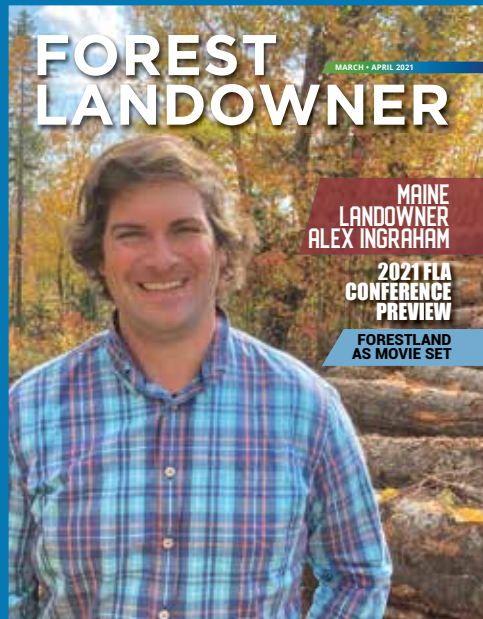
Alex Vogel, CEO of The Vogel Group lobbying firm that has worked on FLA's behalf in recent years, said in June that the new administration had but a small window of opportunity to get things done before the 2022 midterm elections.

That window might have closed further when Virginia, which Biden won by 10 points over Donald Trump in 2020, in November elected as governor Glenn Youngkin, a Republican and first-time politician, on a night where Phil Murphy, the incumbent Democrat governor of deep-blue New Jersey, barely held off Republican challenger Jack Ciattarelli.

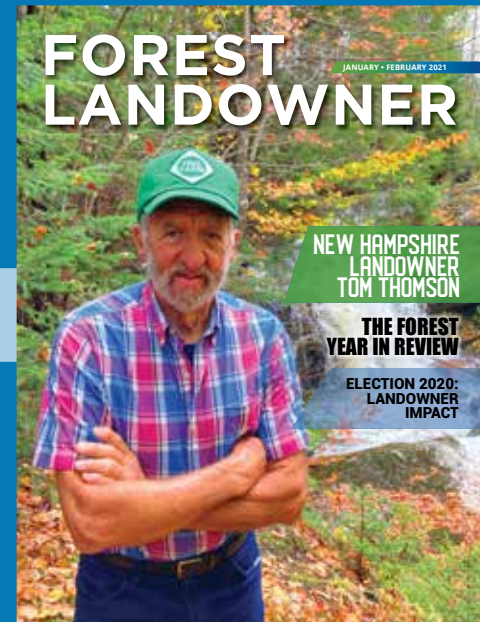
JANUARY-JUNE 2021

The Biden Administration takes office and Covid vaccines roll out. More states allow mass gatherings while supply chain issues become more serious.

JANUARY- FEBRUARY



MARCH - APRIL



MAY - JUNE



All of which sets the stage for another tough-to-predict year in 2022.

(For more analysis of the current administration's policies and their impact on forest landowners, see "The 2022 Year Ahead" on page 24.)

MARKET WATCH

Though the stock market reached new highs in 2021, continuing a bull run of more than a decade, Americans felt the pinch in the



Demand for lumber continued in 2021, though stumpage prices languished.

wallet due to runaway inflation, supply chain and labor issues, and skyrocketing gasoline prices, all brought on by the new administration's policies.

Lumber prices continued to soar, especially as the supply chain began suffering from a shortage of loggers, mill workers, and truck drivers. The pandemic lumber boom of 2020, fueled by do-it-yourselfers and home office projects, continued as many U.S. workers discovered they could work from home permanently and "home" could be wherever they wished, further fueling the building boom.

None of which has translated into higher prices paid for the raw material provided by forest landowners, a dilemma chronicled in February by The Wall Street Journal. The story focused in part on Joe Hopkins, the Forest Landowner Foundation President, and how he's struggled with his 70,000 acres in southern Georgia near the Florida line.

"If I'm not sustainable, I can't keep that land," Hopkins said. "Everything is going up except the price of timber."

CLIMATE AND CARBON

The Biden Administration's focus on climate change and green energy drew attention to forest landowners as a source for potentially valuable carbon credits to offset the emissions produced by U.S. companies.

Such programs have been around for years and offer landowners the chance to receive payments for not cutting trees – in



Forests became a bigger focus of the climate discussion in 2021.

some cases, trees they had no plans to cut anyway. With timber prices plunging to their lowest levels in decades despite the soaring prices for finished lumber and pulp, landowners have examined the increasing number of carbon credit offerings more seriously.

Climate change often was cited as the major contributor to another brutal season of western wildfires. In the first nine months of 2021 alone, the U.S. recorded 11 wildfires that reached more than 100,000 acres in size. The Los Angeles Times noted on Nov. 8 in a story headlined “Prescribed burns are key to reducing wildfire risk, but federal agencies are lagging,” that the U.S. Forest Service could be doing considerably more prescribed burning to reduce the risk of wildfire.

DISASTER RELIEF

FLA made progress with the Disaster Reforestation Act, which allows family and private timber growers to recover from



Natural disasters continued to impact forest landowners in 2021.

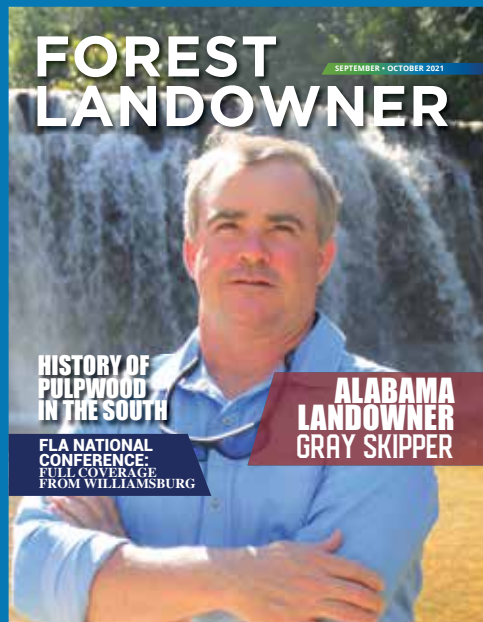
JULY - DECEMBER 2021

The Delta variant stalls the Covid recovery. Glenn Youngkin wins Virginia governor's race, giving hope to Republicans for 2022 midterms.

JULY - AUGUST



SEPTEMBER - OCTOBER



NOVEMBER - DECEMBER



the loss of timber destroyed by natural disasters and reforest their lands. Landowners face immense financial burdens when needing to reforest their lands after a natural disaster, which is compounded at tax time when their ability to claim a casualty loss for destroyed timber is limited to zero dollars.

The bipartisan HR 4210 was sponsored in the House of Representatives by Rep. Terri Sewell (D-AL-07) and Rep. Buddy Carter (R-GA-01). In the Senate, it was championed by Senators Raphael Warnock (D-GA) and Bill Cassidy (R-LA).

Unlike producers of other agricultural commodities, forest owners operate on thin margins and decades-long timelines. Fixing the casualty loss issue would support continued investment in private forests and its ripple effects on rural economies and the environment.

“Forest landowners do not qualify for USDA Crop insurance following natural disasters, and private insurance products are unavailable,” said FLA CEO Scott Jones “Forest landowners are not asking for a handout, just fair treatment when it comes to recovering after a natural disaster. The Disaster Reforestation Act fixes this inequality.”

MIDTERM ELECTIONS

With the midterm elections looming on Nov. 8, this figures to be another volatile, polarizing year. Thirty-four Senate seats and all 435 House seats are up for grabs. The party that controls the White House typically loses seats in both chambers during the midterm election, which does not bode well for the Democrats, who hold a slim majority in the House of Representatives and a 50-50 split Senate where they cannot afford to lose a single Democrat vote.

The strong showing by Republicans in the 2021 Virginia and New Jersey gubernatorial races, as well as in state and local contests in November, suggests that 2022 could be a repeat of the 2010 midterm elections, when Republicans gained a whopping 63 seats in the House and six in the Senate in response to a sluggish economy and the passing of ObamaCare. Joe Biden, who was vice president during the Obama administration, faces similar headwinds between a low approval rating and the unpopularity of his multi-trillion dollar Build Back America Act, which was still on the table at press time.



The midterm elections loom large in 2022.

Photo: Getty Images

THE 2022 YEAR AHEAD



Photo: Shutterstock

PARTISAN GRIDLOCK IN WASHINGTON AND INTRA-PARTY FIGHTING ON THE LEFT KEPT MOST TROUBLING TAX SCENARIOS OFF THE TABLE IN 2021. HERE'S WHAT PRIVATE FOREST LANDOWNERS CAN EXPECT THIS YEAR HEADING INTO THE MIDTERM ELECTIONS.

BY ALI KHIMJI, BRIAN JOHNSON, AND EMILY KLECK

The end of the legislative year typically is a flurry of activity as Congress races to address must-pass legislation and, at press time, this year promised to be no different.

While the stakes are high for both parties, the party that has a majority in both chambers of Congress and controls the White House faces an especially daunting and chaotic sprint - recognizing that their results by year's end could make or break the President's agenda and will surely set up battles for the 2022 midterm elections.

Democrats were approaching the year-end sprint with four key priorities: passing the bipartisan Infrastructure Investment and Jobs Act, along with the \$1.75 trillion Build Back Better Act (BBBA), funding the government to prevent a shutdown by Dec. 3, preventing a debt ceiling crisis that could hit as soon as mid-December, passing the National Defense Authorization Act (NDAA), and addressing ancillary legislation related to China and technology.

THE HARMFUL REPEAL OF STEP-UP BASIS HAS BEEN SUCCESSFULLY LOBBIED AND KILLED BY FLA AND OTHER ORGANIZATIONS; THE SAME IS TRUE WITH THE PROPOSED INCREASE IN THE CAPITAL GAINS RATES.

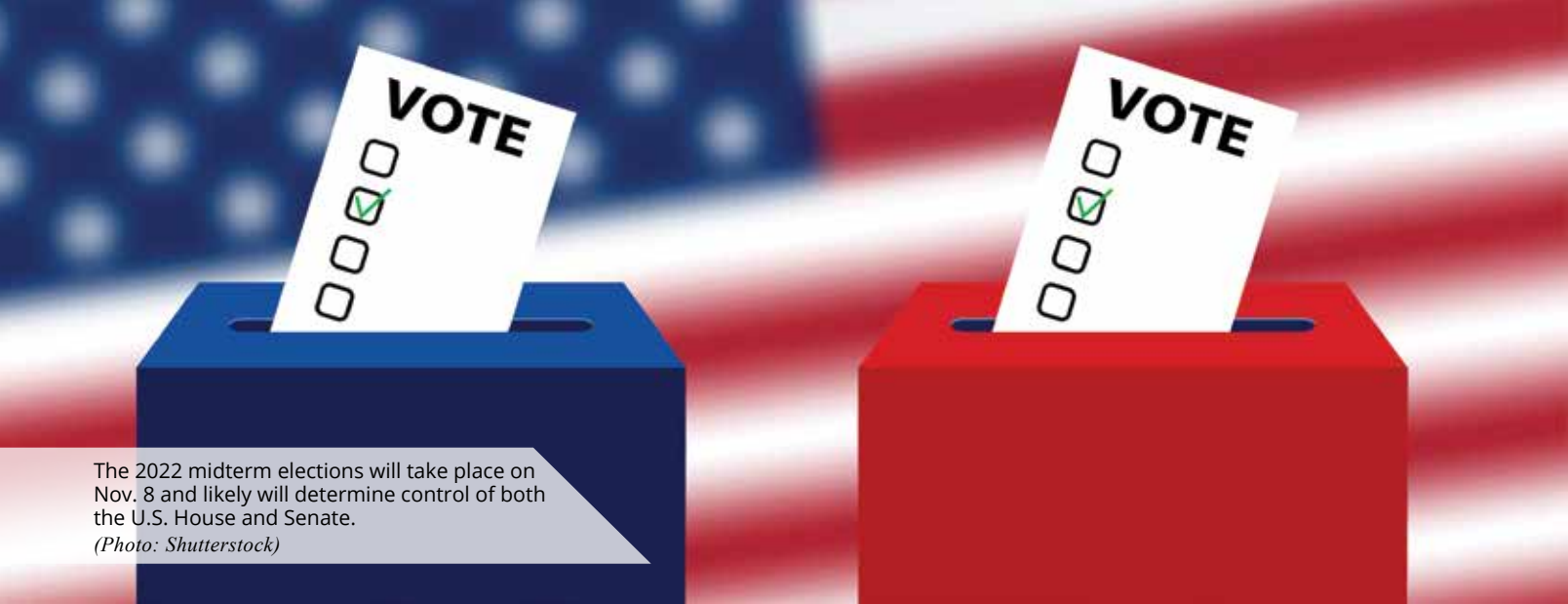
At press time, the House and Senate were expected to be in session for 11 days and 13 days, respectively, and both chambers were scheduled to adjourn on December 10. Given the list of items and tightening window, House Speaker Nancy Pelosi, Leader Steny Hoyer, and Senate Majority Leader Chuck Schumer were almost guaranteed to amend the calendar - much to the dismay of members.

Senator Mark Warner (D-VA) provided a candid assessment of Congress having to remain in session for an extended period. "Having only other senators to kiss on New Year's Eve?" he asked. "The only thing that might be worse would be opening each other's stockings on Christmas Eve."

While the end of the year is always marked by intense negotiations and activity in Washington, it also provides a unique opportunity to reflect on the events that have transpired in 2021 and more importantly, an opportunity to assess the implications of these events going into 2022 - a midterm year which promises to be a referendum on the Democrats and President Joe Biden.

Biden took his oath of office more than 300 days ago amidst a period of profound economic, health, and political crises. Throughout the campaign, inauguration, and weeks after being sworn in, Biden highlighted his reputation for bipartisanship following a nearly four-decade career in the Senate, while emphasizing the need to "restore the soul of America."

Biden kicked off his presidency with a slew of prime-time executive orders intended to reverse course on his predecessor's legacy across various policy and regulatory issues associated with Covid-19, the environment, immigration, and the economy. Despite an ambitious agenda, a majority in the House and Senate, and focus on bipartisanship, the first two months of Biden's political and legislative agenda were overtly shadowed by former President Donald Trump's second impeachment trial and delivered the stark realization that Trump still could consume the political oxygen in Washington despite not being in the White House.



The 2022 midterm elections will take place on Nov. 8 and likely will determine control of both the U.S. House and Senate. (Photo: Shutterstock)

By March 2021, the impeachment trial had concluded and with President Trump largely out of the picture, Biden and the Democrats were able to establish a sense of focus and passed the American Rescue Plan Act of 2021 – a \$1.9 trillion Covid-19 relief package. Notably, Democrats passed the bill in Congress without a Republican vote via the budget reconciliation process.

Following the enactment of the American Rescue Plan, Democrats pivoted to focus on two signature pieces of Biden’s domestic policy agenda: a \$2 trillion plan to overhaul and upgrade the nation’s infrastructure and a massive, \$3.5 trillion spending package to address “soft infrastructure” priorities such as childcare, rebuild schools, and provide free community college tuition.

Heading into June and July, Biden had a 53 percent approval rating and by July, Democrats in Congress unveiled the \$3.5 trillion budget blueprint. In August, the Senate passed the bipartisan Infrastructure Investment and Jobs Act – a \$1.2 trillion infrastructure package that includes spending for roads, bridges, electric vehicles, broadband, water infrastructure, and grid resilience, among other priorities. The infrastructure package was the first installment of Congressional Democratic leaders’ “two-track” legislative strategy, designed to enact much of Biden’s domestic agenda - achieved through the passage of the infrastructure bill followed by passage of the budget reconciliation package.

On August 10 - the day the Senate passed the \$1.2 trillion infrastructure package, Biden’s approval rating stood at 50 percent. Over following weeks, Biden’s approval rating saw a swift reversal marked by multiple crises including the Taliban offensive in Afghanistan and bipartisan backlash regarding the Administration’s response to evacuate Americans and Afghan allies, the Delta variant, inflation concerns, a surge at the border, and a difficult path ahead for infrastructure amidst fractures within the Democrat caucus. Biden’s approval on the day the Senate returned to session from August recess stood at 44 percent.

After a tumultuous path and clashes between the progressive and centrist Democrats, in early November the House passed the bipartisan Infrastructure Investment and Jobs Act, delivering Biden the biggest legislative victory of his



Glenn Youngkin’s stunning win in the Virginia governor’s race might have provided a blueprint for Republicans across the country heading into the 2022 midterms. (Photo: Shutterstock)

presidency. The House passed the legislation 228-206, with six Democrats voting no and 13 Republicans voting in favor.

Despite a much-needed legislative victory, Biden and the Democrats still have a difficult path ahead as they shepherd the Build Back Better Act, which most agree is the more difficult part of Biden’s infrastructure agenda. If the House passes the Build Back Better Act, the Senate likely will amend the language and the Senate Parliamentarian will have to ensure the bill is in line with the Byrd Rule, which determines the reconciliation process. The Senate would then hold a vote-a-rama to consider a long list of amendments. There is a strong likelihood that Congress will try and pass the Build Back Better Act while simultaneously working to extend the debt limit and prevent a government shutdown.

After the U.S. Senate runoffs in Georgia in January, there was a sense of cautious optimism among Democrats because they controlled all three chambers, but there was equally an acknowledgment that slim majorities in the House and Senate along with an ideologically diverse coalition will essentially result in almost every Democrat Member having leverage and as a result, large pieces of legislation will be difficult to pass.

This was echoed by Biden at a recent town hall. “You have 50 Democrats; everyone is a president,” he said “Every single one. So, you got to work things out.”

This year we have seen this issue play out in real-time as Pelosi and Progressive Democrats have not only been at odds, but Progressive Democrats flexed their muscles in defiance and

forced a delay on the bipartisan infrastructure legislation unless the Senate passed the “soft infrastructure” package. Meanwhile, it was well established that Biden’s signature policy priorities will be contingent upon support from Senator Joe Manchin (W.Va.) and Senator Krysten Sinema (AZ). As witnessed across the infrastructure negotiations, Sinema and Manchin exercised their leverage and have narrowed the scale and scope of Biden’s grand vision.

Heading into the Virginia gubernatorial election, Biden had a 42 percent approval rating and Vice President Kamala Harris’ approval stood at approximately 28 percent - a historic low for any modern vice president. The consequences of infighting and inability to enact key pieces of Biden’s agenda despite controlling both chambers reverberated in a stinging defeat for Democrats in the Virginia gubernatorial elections with Republican newcomer Glenn Youngkin winning a state Biden won by 10 points in 2020.

Pollsters and politicians were looking to Virginia as a bellwether for the midterms in 2022 when control of the House and Senate is up for grabs. The 2022 midterms will take place on Nov. 8, and Democrats do not have history or statistics on their side. The President’s party has lost House seats in 19 of the last 21 midterm elections, including an average loss of 33 House seats in those 19 cycles.

During the 2018 midterms, Republicans lost 40 seats. In the Senate, according to publicly available research, during the last 25 midterms in the last 100 years, the president’s party broke even in two of them and gained seats on five occasions, most recently in 2018. As a result, control of the Senate in 2022 remains uncertain and could even end up in another tie. House minority leader Kevin McCarthy predicted that Republicans could win 40 seats in the House and Republicans are guaranteed to win the House just through redistricting.

The political environment in 2022 will present various challenges and opportunities for private forest landowners. Given the bleak outlook in 2022, Republicans will not be incentivized to work with Democrats on most pieces of legislation, but there could be potential for both parties to come together and pass certain pieces of legislation that have bipartisan support. For example, the Disaster Reforestation Act – which would amend the tax code to allow forest owners to deduct the full market value of their timber before the loss caused by a natural disaster, could see movement.

Concerning Biden’s climate agenda, centrist Democrats are aware they are facing an election year and are almost guaranteed to break with any radical proposals to address climate change. Meanwhile, forest landowners will face a threat of Biden trying to implement some facet of his climate agenda through executive action.

Taxes will remain at the forefront in Washington as Congress contends with how to fund infrastructure spending and other priorities. Legislation such as the Sensible Taxation and Equity Promotion (STEP) Act - which would tax unrealized capital gains passed to heirs with a \$1 million exclusion, or efforts to repeal the Tax Cuts and Jobs Act are unlikely to move forward. The same is true for the 99.5 Percent Act, which would reduce the estate tax exemption to \$3.5 million (from \$11.7

million in 2021) and increase the progressivity of the estate tax with rates from 45 percent to 65 percent.

Forest landowners remain concerned with their ability to access markets and sell timber both in the U.S. and in the global wood supply chain. The forestry sector’s access to global markets

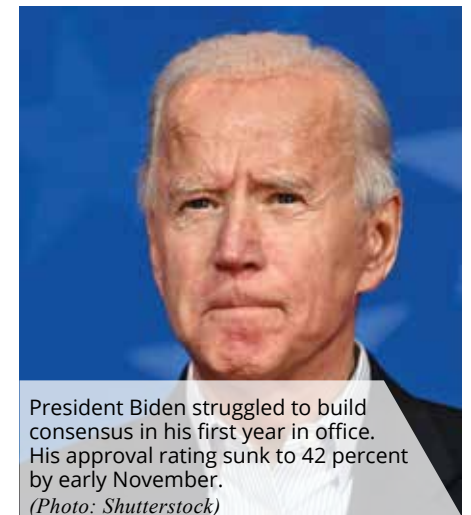
has been restricted by tariffs and an unstable trading environment and while Biden was expected to maintain a predictable approach to trade policy as compared to Trump, he has almost maintained a similar course.

In early October, Ambassador Katherine Tai delivered remarks outlining the Biden Administration’s “New Approach to the U.S.-China Trade Relationship” and provided a road map for re-engaging with Beijing after a months-long internal policy review. Tai indicated the Biden Administration has conducted a “comprehensive review” of U.S.-China trade policy and views the current Phase I agreement as the starting point for discussions to realign trade policy between the two nations to defend America’s interests.

Tai’s speech was absent of any specific details, but she indicated the Biden Administration’s trade policy will be guided by their commitment to a worker-centered trade policy, and what is best for U.S. workers is a growing domestic economy with a focus on competitiveness. In 2022, Biden will continue shaping his trade policy and it remains critical that forest landowners remain engaged in this debate.

So, what does this mean for forest landowners? Thankfully, not too much. The harmful repeal of step-up basis has been successfully lobbied and killed by FLA and other organizations; the same is true with the proposed increase in the capital gains rates. While there are some provisions designed to stimulate carbon capture in other sectors, our industry remains focused on getting the Disaster Reforestation Act across the finish line.

Generally speaking, Democrats will be unwilling to support Biden’s legislative agenda in 2022, but forest landowners will continue to see various policy proposals from different factions across the party – many of which will have harmful consequences and will impact the operational concerns of forest landowners. Accordingly, FLA remains confident and committed in its ability to navigate the legislative and political environment and to champion and advocate for policies that promote the stewardship, vitality, and continued legacy of forest landownership. 🌱



President Biden struggled to build consensus in his first year in office. His approval rating sunk to 42 percent by early November. (Photo: Shutterstock)

The authors work at the Vogel Group, a bipartisan lobbying and consulting firm headquartered in Washington, D.C.

Cutting THE CORD

FOREST LANDOWNERS DON'T USUALLY THINK OF FIREWOOD AS A MANAGEMENT TOOL OR REVENUE STREAM. IN SOME CASES, IT CAN BE BOTH.

BY DAVID MERCKER AND ADAM TAYLOR

Harvesting firewood can help make a forest healthy and more productive.
(Photo: David Lindahl on Unsplash)

Firewood is the major use of all wood harvested globally, predominantly for household heat and cooking. Burning firewood has many benefits. For some, it's simply the cozy ambiance of a wood fire. However, it also can be a less expensive form of heating than gas or electricity. Firewood is local and often considered carbon neutral. Finally, harvesting firewood can help make a forest healthy and more productive.

Many forest stands have historically been mismanaged by repetitive improper harvesting of only the high-value trees, leaving low-value trees as residuals. Without intervention, such "high-graded" stands will continue to perpetuate the growth of mainly poor-quality trees. Yet often hidden within these degraded stands are younger and healthier trees that, if given sufficient growing space, could become the top-value crop trees that are in demand by the wood industry. The removal of undesirable trees for use as firewood can provide growing space for these crop trees.

Timber stand improvement (TSI) is a cultural practice applied to a forest to improve the composition, stocking, and growth. TSI helps ensure that desirable trees are not only retained in the forest but that they increase growth and maintain a healthy condition.

Firewood removal, when implemented properly, is a form of TSI that benefits forests. Desirable future crop trees are first identified, then lesser desirable trees that are in direct competition with crop trees are removed for firewood. The goal is a

crop tree release on three of four sides of the crop trees. In other words, identify the crop trees, then remove as firewood those trees whose crowns are crowding the crown of the crop trees.

Crop tree release is typically conducted in younger stands that are 15 to 30 years old with trees averaging 3 to 8 inches in diameter. These trees are good candidates to be felled by non-professionals and require less splitting before being burned. But crop tree release can be applied to more advanced stands too, whereby culls or unacceptable trees are removed to lightly release larger crop trees.

As crop trees are released, growth increases to the roots first, followed by branch expansion, ending with enlarged trunk diameter - as can be seen by observing annual growth rings. The growth response of fully released crop trees varies from 25 to 70 percent. Note that in general oak trees respond favorably to crown-touching release.

What constitutes a preferred crop tree? Three criteria are important: species, form, and grade. A preferred crop tree is a high-value species, having good form (i.e., straight) and grade (i.e., with few defects). All three are ideal as these attributes will produce high-value timber. For example, a white oak (financially a highly preferred species) may not qualify as a desirable crop tree if it is crooked (poor form) or with many knots, or is hollow (poor grade). The financial potential for such trees would be limited. In contrast, a tulip poplar (financially a



Firewood is best stored under a shelter but with open sides for good air flow.



A hardwood stand following removal of firewood trees. Note the residual red oak and the increased growing space after firewood tree removal.

moderately preferred species) might qualify as a desirable crop tree if it has desirable characteristics (i.e., very straight and with few knots).

UNITS OF FIREWOOD MEASUREMENT

Firewood is bought and sold using a variety of measurements. The only officially-recognized measurement is the cord: a stack of firewood 4' high, 4' deep, and 8' wide – or an equivalent volume (128 ft³). “Rick” is an informal measurement that usually represents 1/3 of a cord or that same stack but only 16” deep – a common length for a stick of firewood. Some use other definitions of a rick, or speak of “face cords” to mean essentially the same; these are not official volumes. Firewood often is sold by the “truck full,” which of course depends on the size of the truck.

LESS DESIRABLE TREES = GREAT POTENTIAL FIREWOOD

The trees removed during TSI have the potential to make great firewood. Almost any species can make useful firewood. Some of the “defects” that detract from a crop tree’s potential lumber value (poor form, damage, disease, small size, and slow growth) do not prevent the tree from making good firewood. Finally, these “lesser desirable trees” can provide a considerable amount of desirable firewood.

The wood from any tree species can be good firewood. The most important requirement for firewood is that it be dry. All wood from living trees starts quite wet (often referred to as “green wood”). If water isn’t removed, the wood will be difficult to burn, will burn with considerable smoke (smolder), and will provide less heat. Some wood starts wetter than others, and some wood is easier to dry than others; however, all species will eventually dry to make perfectly acceptable firewood.

Because of the large amount of energy required to heat and evaporate water from green wood, it will deliver less than half the heat than dry wood. The energy content of firewood can be expressed in various units, including British thermal units (BTUs). A BTU is defined as the heat energy needed to raise a pound of water by one degree Fahrenheit. For an average cord of mixed hardwood firewood, the yield of useful energy is greatly reduced in green wood.

The drier the wood, the more heat it can provide. Firewood

never can be too dry. Drier wood will burn faster but the best way to control the rate of combustion is by limiting the airflow, not by using green wood to slow the fire. Modern wood stoves allow for the precise control of the supply of air. In open fireplaces and campfires where the air supply cannot be controlled, it is better to add less wood than to try to slow the fire down with green wood.

The wood of all species has more or less the same energy content per pound: about 8,600 BTU per pound of dry hardwood. Thus, the second most important consideration in firewood is the density of the wood – the number of pounds in a given volume of wood. Wood species vary substantially in their density. For example, basswood has half the density of dogwood on average, and thus dogwood can provide twice the heat per cord burned (44 million BTU versus 22 million). Remember that energy content is the potential energy; the actual heat provided will be less due to inefficiencies in the burning process and, most importantly, the amount of water in the wood. Even completely air-dried wood has some water in it.

While denser woods provide more heat per piece, low-density woods can be better for kindling (the small pieces of wood used to get a fire started). Low density (and dry) wood is easier to initially heat and ignite when starting a fire. Furthermore, some of the low-density softwoods such as pine and spruce naturally contain especially flammable resins, making the wood particularly useful for kindling.

Another consideration for firewood is the ease of splitting. Firewood must be cut to length and split to speed the drying process and to provide pieces of a convenient size for burning. Most species will split reasonably easily if the wood grain is straight. The grain will deviate around branches and knots, so splitting wood chunks with these features will be more difficult. Some species also naturally have interlocked grain, meaning the wood cells alternate their orientation periodically during growth. Species where this trait is common include sweetgum, elm, and hackberry - these woods can be very difficult to split. Contemporary use of mechanical splitters has mitigated this issue.

PREPARATION OF FIREWOOD

Because dry firewood is important, the first consideration in the preparation of firewood is providing the opportunity for drying to occur. Wood will dry slowly, and not thoroughly if left in whole log form. Firewood should be cut to length for appreciable drying to occur because the bark is a good moisture barrier and wood dries much faster on the end grain (the cut surface).

By cutting the logs into 12-24” long sections (or the desired length), the amount of exposed end-grain is greatly increased, thereby facilitating rapid drying. Splitting the sections will also expose more wood surfaces, thus increasing the drying rate. Wood is also weaker, and usually easier to split when it is wet. It is best to buck and split logs into firewood as soon as possible after felling to begin the drying process.

The next consideration in firewood drying – or “seasoning” – is to allow adequate time for the water to evaporate. Many variables affect the drying rate, including species, temperature, humidity, and rainfall, but as a general rule, wood cut and split

between the spring or early summer will be dry enough for burning in autumn. Although wood directly touching the ground might rot in wet conditions, the remaining stack above ground should dry satisfactorily. Stacking the wood on a surface that doesn’t retain moisture is best. Sheltering a stack of firewood can prevent rewetting from rain, but good airflow is important. Drying is enhanced if firewood is not completely covered with a tarp.

Firewood is a resource that has been used for millennium for household heating and cooking. It is natural, renewable, and biodegradable, and the energy to produce firewood is free – a product of the sun’s energy and photosynthesis. To many, the burning of firewood is considered carbon-neutral because the carbon dioxide gases released are cycled back into trees when new wood is formed.

For landowners and those with whom they share their trees, the burning of firewood is a means to offset heating costs. Further, the proper selection of trees to harvest and use as firewood provides an opportunity to overcome past harvesting mistakes and thereby improve forest stands. It’s much like weeding a garden, in that growing space and other resources are made available to the desired plant, in this case, preferred trees. However, the task lies in knowing which trees to cut, and which to leave. Professional foresters are available to assist in meeting these challenges. So as with many forest improvement activities, it is best to first see a professional forester. 🌿

David Mercker is an extension forester and Adam Taylor an extension wood products specialist at the University of Tennessee.

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MY FAVORITE TREE

BY NANCY ELDER WALDEN



My favorite tree is not one but two trees in our family forestland in Brunswick County, Virginia. As a youngster, I remember my grandparents placed a board between the trees, a pair of giant oaks. Family members and others sat upon that board during gatherings and had long conversations.

The property was once more than 100 acres and goes back in my family to my grandfather's grandfather. It's now owned by various family members. My grandparents once had a home near these two trees and I can remember my grandmother having a garden near them.

My brother Jack Elder and I recently rediscovered these trees and took pictures, bringing back fond memories. 🌿

DO YOU HAVE A FAVORITE TREE?



Is there a tree on your forest property or in your yard that holds special significance for you and your family? If so, we'd love to hear about it. It doesn't have to be the biggest or most historic tree, though it could be. Perhaps it's a hardwood that kids love to play under or where someone proposed marriage. Maybe it's a tree with a tire swing, tree house, or

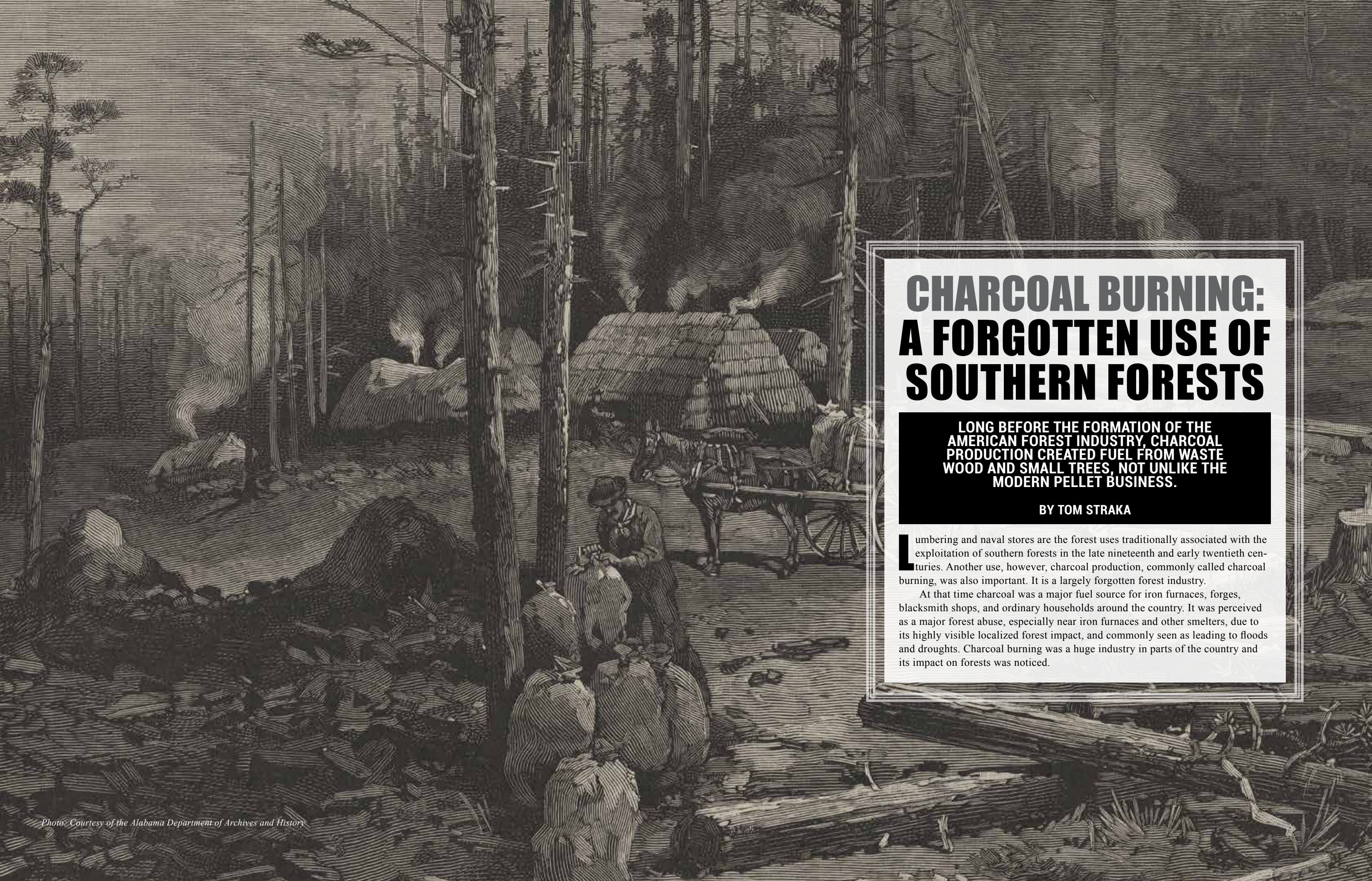
rope swing over water. Think in terms of the tree Forrest and Jenny played under in the movie *Forrest Gump*, a tree that has carried special meaning for you. If you have such a tree, email us a photo of the tree to editor@forestlandowners.com - with or without family members in the photo - and a couple of paragraphs on why that tree is so special to you.

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Left magazine cover: FOREST LANDOWNER LANDOWNERS OF THE YEAR
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CHARCOAL BURNING: A FORGOTTEN USE OF SOUTHERN FORESTS

LONG BEFORE THE FORMATION OF THE AMERICAN FOREST INDUSTRY, CHARCOAL PRODUCTION CREATED FUEL FROM WASTE WOOD AND SMALL TREES, NOT UNLIKE THE MODERN PELLET BUSINESS.

BY TOM STRAKA

Lumbering and naval stores are the forest uses traditionally associated with the exploitation of southern forests in the late nineteenth and early twentieth centuries. Another use, however, charcoal production, commonly called charcoal burning, was also important. It is a largely forgotten forest industry.

At that time charcoal was a major fuel source for iron furnaces, forges, blacksmith shops, and ordinary households around the country. It was perceived as a major forest abuse, especially near iron furnaces and other smelters, due to its highly visible localized forest impact, and commonly seen as leading to floods and droughts. Charcoal burning was a huge industry in parts of the country and its impact on forests was noticed.



Charcoal from a pit, in a traditional charcoal basket used for transport. Notice the wood structure is visible within the charcoal.

Why charcoal? What made charcoal an important fuel? Charcoal is made by partially burning (carbonizing) wood. Controlled combustion results from regulating airflow to the burning wood. Water vapor and volatile gases from the wood are burned off, leaving a carbon residue called charcoal. The wood is reduced to about half of its original volume and a quarter of its original weight, making it easier to transport.

Charcoal has advantages, particularly for iron furnaces or other smelters which were near a wood supply. It produced a higher quality iron than coal, and a charcoal iron furnace cost half the capital of one fueled by coal. Charcoal is a concentrated heat source (producing more heat than an equivalent amount of wood). Especially before coal became readily available, it was a crucial heat source throughout the country.

CHARCOAL DEMAND

Since I am a forest economist, I'll use supply and demand to describe the charcoal burning industry. Iron furnaces in the East and silver and lead smelters in the West required tremendous amounts of charcoal to fuel their operations.

Iron furnaces in the South employed the largest segment of their workforce in woodchopping and charcoal burning. By far, the largest expense of producing iron in a charcoal furnace was fuel. In terms of impact on the forest, it was the iron furnace

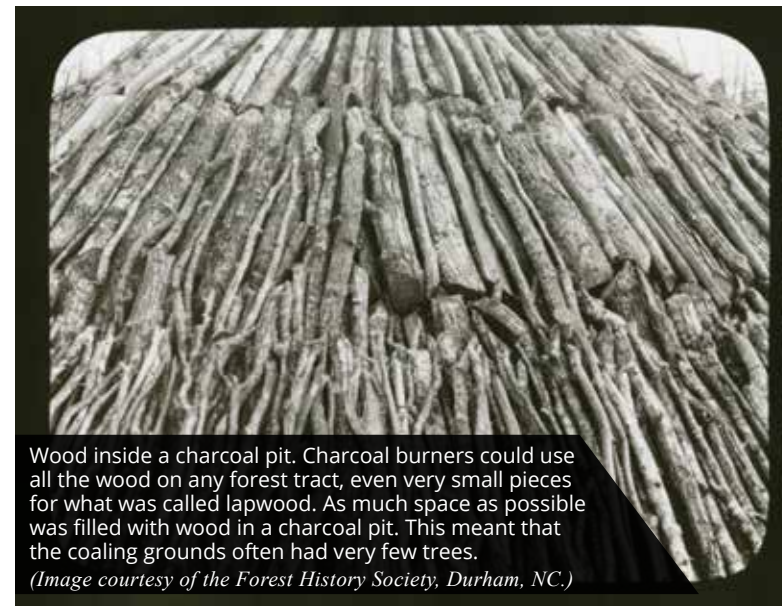


Diorama of a charcoal pit with three tiers of billets, a chimney in the middle, and partially covered with leaves and earth. (Credit: Douglas H. Page, Jr.)

woodchoppers that clearcut thousands of acres across the South, leaving a most conspicuous impact. The vast areas that were harvested for charcoal were called "coaling grounds" and, due to the burning that went on there, were often described as dark and uninviting places.

In 1849 a traveler that passed an iron furnace in South Carolina presented a dismal picture: "For miles on either side of the iron works, the whole country has been laid waste, presenting as far as the eye can reach, the most desolate and gloomy appearance. The lands have all been bought up by the company for the sake of fuel."

Eight years later, the state geologist warned that the state's iron industry would only continue to exist "until the destruction of the forest growth—no remedy for which has hitherto been attempted—will render the charcoal used too expensive to pros-



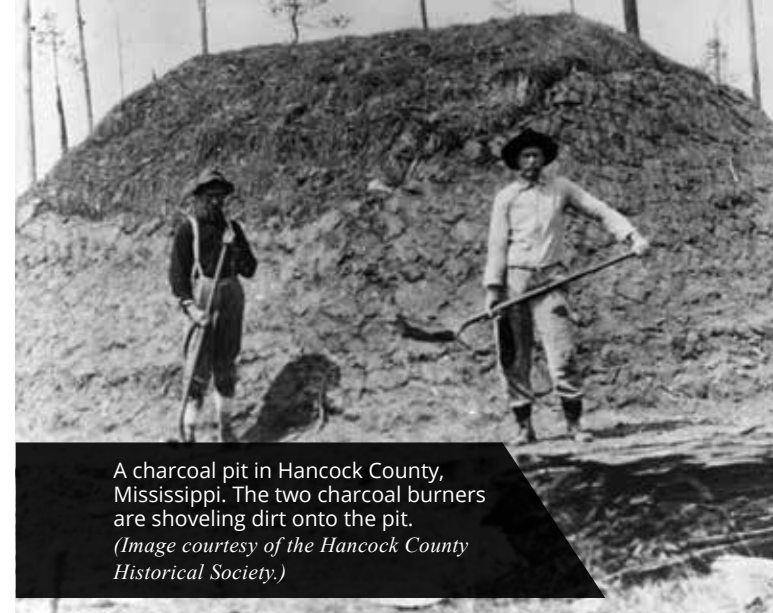
Wood inside a charcoal pit. Charcoal burners could use all the wood on any forest tract, even very small pieces for what was called lapwood. As much space as possible was filled with wood in a charcoal pit. This meant that the coaling grounds often had very few trees. (Image courtesy of the Forest History Society, Durham, NC.)

ecute the manufacture of iron with advantage. This fatal result can be avoided only by a thoroughly organized cultivation of woods."

Forestry in America had not yet been invented, but the state geologist was calling for it to save the state's iron industry. His warning was well-founded; it was much more common for an iron smelter to close down due to a lack of charcoal, rather than a lack of iron ore.

While a few areas of the South are noted for iron production (like northern Alabama), actually it was spread over almost all the southern states, at least parts of the states. Virginia had 12 principal iron districts, located in the Piedmont, the Blue Ridge, and the Valley and Ridge Province. While iron ore deposits are scattered across North Carolina, the three major deposits were centered on Lincoln, Chatham, and Avery Counties. South Carolina had iron production in its northwest piedmont, centered on Cherokee, Spartanburg, and York Counties. Georgia's iron furnaces were in its northwest counties, mostly along the Alabama state line, mainly in Bartow, Dade, Floyd, and Polk Counties.

Tennessee had two iron regions, one in the extreme



A charcoal pit in Hancock County, Mississippi. The two charcoal burners are shoveling dirt onto the pit. (Image courtesy of the Hancock County Historical Society.)

northeastern counties and one in Middle Tennessee along the Western Highland Rim (west of Nashville). The Hanging Rock Iron Region, along the Ohio River, was a major iron-producing region in southern Ohio that extended into Kentucky (Carter, Greenup, and Boyd Counties). Western Kentucky had charcoal iron furnaces in Trigg and Lyon Counties; other furnaces were in Estill and Bath Counties. Even East Texas had charcoal iron furnaces in Cherokee and Marion Counties.

Alabama is well-known as the South's leader in iron production. In the mid-1880s coke overtook charcoal as the fuel for the state's iron furnaces; however, the number of charcoal iron furnaces continued to increase into the 1890s and tremendous amounts of charcoal were consumed by the state's iron furnaces.

Alabama's charcoal iron furnaces were across the state line from the Georgia furnaces in Cherokee, Etowah, and Calhoun Counties, and ran generally southwest down through Talladega, Shelby, and Bibb Counties, also including Morgan and Montgomery Counties. In 1840 the three greatest charcoal iron producers, in order of magnitude, were Kentucky, Virginia, and Tennessee. In 1884, that same order had become Alabama, Tennessee, and Virginia.

In the 1880s iron and other smelters accounted for just over half of charcoal consumption, leaving plenty of other uses. Domestic heating, cooking, and laundries accounted for much charcoal demand. Energy using industries like glass, salt, and bricks also consumed much charcoal and often located near forests to be near charcoal sources. Plumbers, tinmiths, and other artisans used it as a heat source. Other uses included printer's ink, black paint, liquid purification filters, deodorizers, and ice storage insulation. It was even used in the home for toothpaste and medication to absorb "the gases and impurities always present in the stomach and intestines."

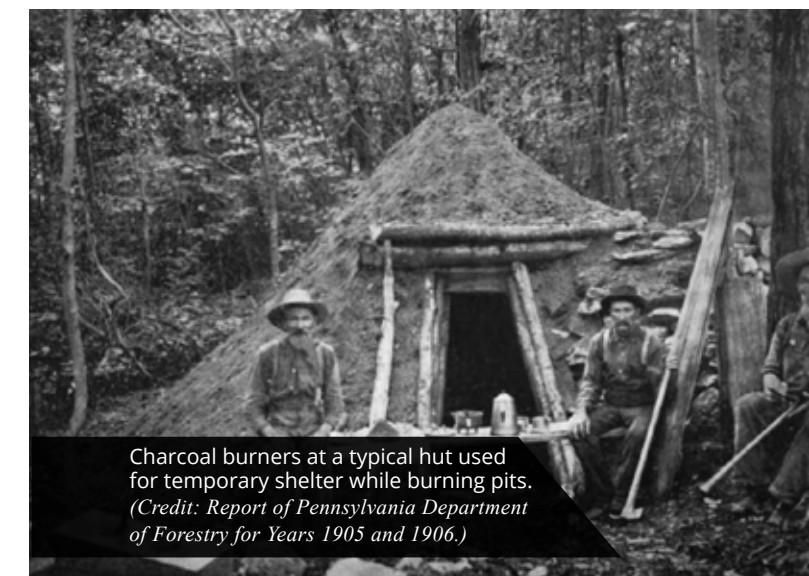
Charcoal even played a role in the Civil War. Gunpowder was a critical resource to the Confederate war effort. At the beginning of the war, the South had no substantial gunpowder industry and one had to be quickly developed. The South's single largest industrial project was the Augusta Powder Works, considered the heart of the Confederate war machine.

Gunpowder production requires charcoal and a major reason the powder works ended up in Augusta was its ample

woodlands. Willow charcoal was preferred for gunpowder, but that tree species was limited in the area. A process was developed to utilize the readily available cottonwood near Augusta's Savannah River. Thus, a forestry connection to the Civil War involves charcoal. The powder works were demolished by the U.S. Government after the war, with only the distinctive obelisk chimney allowed to remain (it is still there along the Augusta Canal).

Mississippi provides a good example of a charcoal production region with no iron industry. There was a major charcoal industry in South Mississippi which supplied mainly New Orleans, but also Mobile. One newspaper account noted that "before the advent of electricity and gas in New Orleans, and for well over a half-century thereafter, charcoal was a major fuel in that city and its environs."

That charcoal came from the Mississippi Coast on charcoal schooners via Mississippi Sound and the area north of Lake Pontchartrain. The newspaper account went on: "As a child, I saw the peddler with his mule and wagon on the streets of New Orleans selling charcoal in quantities from 5-cents-worth and up. His cry of 'C-har-c-o-a-l' could be heard blocks away." The charcoal peddlers are fondly remembered and there were varia-

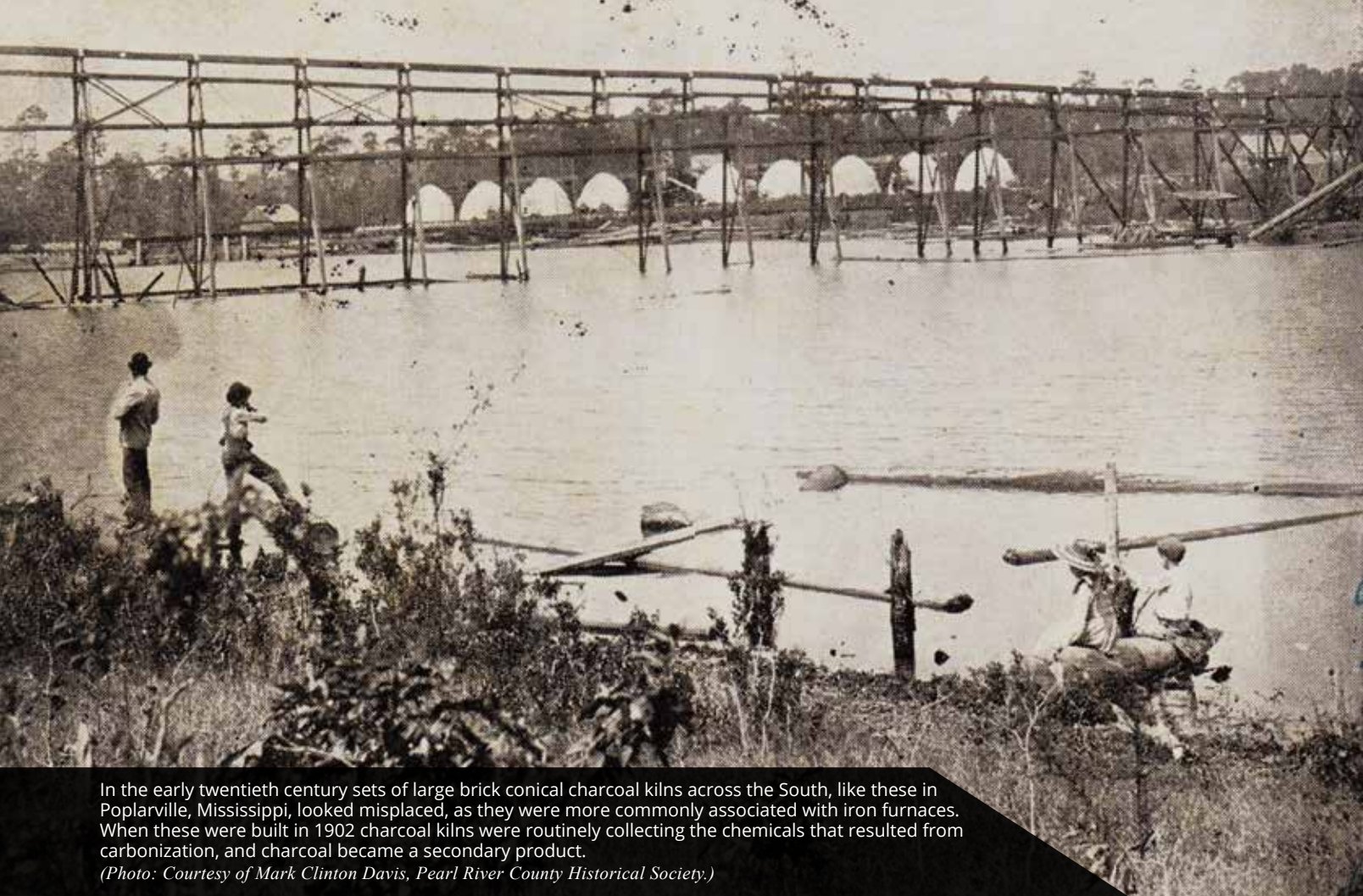


Charcoal burners at a typical hut used for temporary shelter while burning pits. (Credit: Report of Pennsylvania Department of Forestry for Years 1905 and 1906.)

tions in his call from city to city. In Mobile, it was "C-o-o-a-l! C-o-o-a-l! CHARC-O-A-L-LA-Y!"

CHARCOAL SUPPLY

Charcoal was produced from wood that was obtained from forests, making it a significant forest utilization issue. While charcoal burners rarely used large sawtimber, smaller diameter trees were completely stripped from forests. In 1883 an Atlanta newspaper reported on charcoal consumption for the Anniston, Alabama furnaces. The furnaces there consumed 6,000 bushels of charcoal daily, or 2,200,000 bushels a year. To make that amount of charcoal, 66,000 cords of wood were needed. Woodchopping required 350 men for five months of the year, and 250 charcoal burners for the entire year. Forty teamsters were required to haul the wood and charcoal, with as many teams. Annually 1,800 acres were clearcut to furnish the wood.



In the early twentieth century sets of large brick conical charcoal kilns across the South, like these in Poplarville, Mississippi, looked misplaced, as they were more commonly associated with iron furnaces. When these were built in 1902 charcoal kilns were routinely collecting the chemicals that resulted from carbonization, and charcoal became a secondary product.
(Photo: Courtesy of Mark Clinton Davis, Pearl River County Historical Society.)

tells by the color of the escaping smoke, how far the charring has proceeded, and what treatment is necessary for the successful completion of the process. The earth with which the pit is covered is called dust, if new, not having been used, it is green dust, if old, having been used on a former kiln, it is dry dust; no matter how wet it may be, it is still dry.

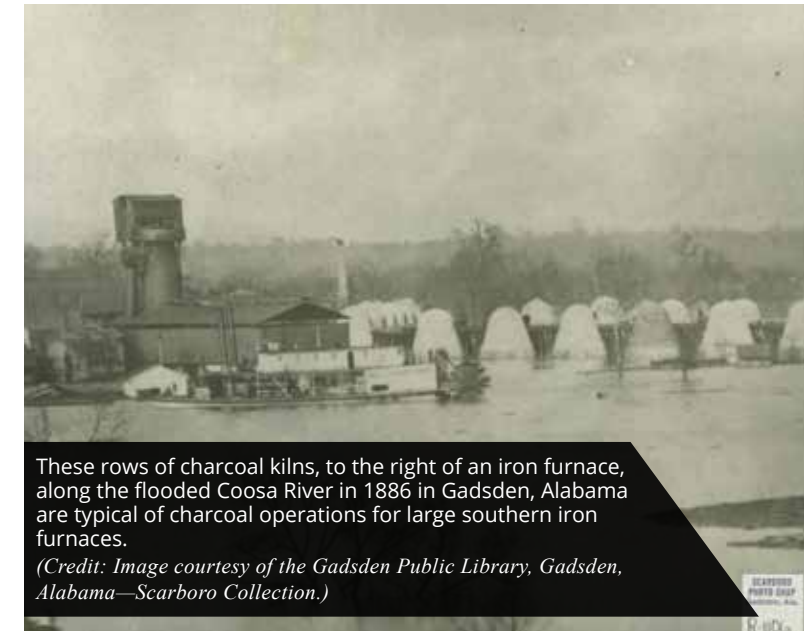
“When the fire in a pit is ‘cooled down,’ the dust is taken off, a little space only being uncovered at a time, and the coal carefully drawn out. This part of the work requires great care. There is always more or less fire after the charring process is complete, so there must be kept a supply of water to extinguish any burning coals as they are drawn.”

Two omitted details are important to understand the process. The “aperture” in the center where the pit is ignited was a small chimney built of very small diameter wood at the beginning of pit construction. Charcoal results because the process occurs in a nearly airless environment, but some ventilation is necessary, thus the chimney. To keep the burning process proceeding properly and evenly, the collier might open small holes or vents at the base of the pit, or close them if necessary.

In the 1880s brick charcoal kilns began to appear in the South; they operated like the pits, with brick taking the place of the earthen covering. Properly speaking, a kiln is a permanent brick or stone structure. Charcoal kilns were well-known parts of the landscape in other parts of the country, with many in protected interpretative historical sites at the state and federal level. This isn’t the case in the South. One main reason being most southern ones were in clusters at or near iron furnaces, where surviving kilns around the country tend to be in forested areas where charcoal was made and transported to furnaces. While

there were thousands of charcoal pits located across the South, from Virginia to Texas, there were also hundreds of charcoal kilns. Often in clusters of dozens adjacent to a furnace. Decatur Furnace in Alabama, for example, had four dozen kilns.

At the turn of the nineteenth century, wood chemical plants built more charcoal kilns across the South, producing charcoal more as a secondary product, and capturing the valuable smoke that was lost in the past to produce chemicals like wood alcohol and acetate of lime. After World War II when outdoor recreation



These rows of charcoal kilns, to the right of an iron furnace, along the flooded Coosa River in 1886 in Gadsden, Alabama are typical of charcoal operations for large southern iron furnaces.
(Credit: Image courtesy of the Gadsden Public Library, Gadsden, Alabama—Scarboro Collection.)

It was noted that eight iron furnaces existed on the East Tennessee, Virginia, and Georgia railroad south of Rome, and to supply those furnaces 7,000 acres of land were cleared annually. Charcoal was the costliest element of an iron furnace and the saying among furnace men was that “the money is made or lost at the coal shed.”

The earliest and most simple production method for charcoal was the charcoal pit where charcoal was made on the “coaling grounds.” That 1883 newspaper article gave an excellent description of the process, which is quoted below; the article began with the nomenclature that the charcoal burner is properly called a collier, the earth-covered mounds of wood being made into charcoal are properly called charcoal pits (not kilns), and the term charcoal pit is a misnomer, as the pit is entirely above ground.

“In preparing a pit, the collier first ‘levels off’ a circular space of ground, about the size and looking very much like a small circus ring. This he calls the hearth. On this hearth the wood, being cut in four feet lengths, is placed on end and is piled three tiers high, being brought to a point at the top, making the form of a low cone, this is then covered with leaves, and then a coat of earth is thrown over all. The wood is now ready for charring, and the pit is complete.

“Fire is applied to the pit through an aperture in the center, at the top of the cone; this is allowed to blaze and burn furiously for a while until well started, then the whole is covered with dust and so remains. It is carefully attended by the collier, who

These remnants of eight round charcoal kilns built by the Pioneer Charcoal Company in the late 1950s and early 1960s were typical of kilns built to supply increased demand for charcoal from expanding interest in outdoor recreation. They are on U.S. Highway 41 in Romeo, Florida (about 111 miles north of Tampa), and are so close to the road, that when burning charcoal, the smoke would sometimes shroud the highway.
(Photo: Richard Elzey, Creative Commons license CC BY-NC-ND 2.0.)





One of the many charcoal plants built in the early 1960s to meet increased charcoal demand due to expanding interest in outdoor recreation was Pachuta, Mississippi's first industrial plant, Dizzy Dean Enterprises. Dizzy Dean was a well-known baseball and television personality with ties to Mississippi. The product was called "Ole Diz" charcoal briquets.

(Image courtesy of the Alabama Department of Archives and History.)

boomed, charcoal boomed with it, and charcoal plants, mostly with large rectangular kilns, were located across the South to meet the demand.

There are still charcoal kilns scattered across the South, mainly just foundations or lower remnant portions. There is an intact round charcoal kiln at Kenan's Mill near Selma, Alabama. The Pioneer Charcoal Company built eight round kilns near Romeo, Florida adjacent to U.S. 41 in the late 1950s and early 1960s to supply the demand from increased outdoor recreation. They too are intact and, not surprisingly, many denizens are not sure what they are.

IMPACTS ON THE FOREST

Most locals looked at charcoal production as part of a productive and economically important industry. At the same time, it was not hard to find contrary opinions that southern forests were being "denuded." Charcoal was a significant forest use issue, but its impact was nowhere near as disastrous as lumbering and tar/turpentine production, as its impact was often concentrated near an iron furnace.

It was common for an iron furnace company to own thousands of acres to support charcoal production and many furnace owners recognized that sustained yield could pro-

duce a continuous wood supply. If a furnace owner did not practice some sort of sustained yield, depleted forests would result in a lack of economical fuel.

A good collier might produce between 30 and 40 bushels of charcoal per cord. In 1884 it took around 144.3 bushels of charcoal to produce one ton of pig iron and southern production was just over 116,155 tons. That is 16.8 million bushels of charcoal, requiring roughly 500,000 cords of wood. To end up with acres of land deforested, cordwood volume on the coaling lands must be estimated. Sawtimber from the virgin forests would not be used in charcoal production. Cut-over lands and smaller diameter trees would have been used. A fair estimate would be ten to twenty cords to the acre, probably closer to ten, equating to a range of 50,000 to 25,000 acres annually. There were 23 charcoal iron furnaces in blast in 1884, so each furnace would be expected to clearcut, on average 2,174 to 1,087 acres annually. To minimize transportation costs the harvesting would occur as close to the furnace as possible.

In *The Making of the American Landscape*, Michael Williams, a renowned author on global deforestation, discussed the clearing of the American forest for charcoal production: "Impressive as this is [charcoal production acres], it should be compared to the amount of land cleared for agriculture during the same period [between 1855 and 1910]. It is a mere 1.3 percent of that or 0.8 percent if regrowth is considered. Having said that, however, charcoal iron production was concentrated and the effects on the forest were noticeable; it was an industrial intrusion into the rural landscape and thus commanded special attention and comment. Locally, the furnaces and the thinned and cut forests were visibly prominent, and charcoal iron, rather like fuel for locomotives, could be pointed to as a great destroyer of forests. Nationally, it was a mere pin prick."

One reason history interests me is that it tends to repeat itself. I could not help thinking of today's wood pellet industry, as it has common traits with the charcoal industry. Wood for fuel. The same concentration of harvesting near production plants. The same use of waste wood or small trees, with active reforestation or regrowth. Both industries produce a significant economic impact. And the same public outcry over "denuding the forest."

The South's forests continue to produce a multitude of useful products, and not all of them are used in building or paper products. Charcoal is still a significant forest use in some regions, though it tends, like in the past, to utilize "waste" materials and "scrub" timber. It is a forest product you see in the grocery store, so common you might not even think of a forest when you see it. It has an interesting forestry history and is created with fascinating technology. It's a history you can still see in the South if you know where to look.

Thomas J. Straka is a professor emeritus of forestry and environmental conservation at Clemson University. He can be reached at tstraka@clemson.edu.



Forest Landowner Awards

2022 Awards Nomination Form

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A VIEW FROM YOUR STUMP

BY PETE WILLIAMS

WANTED: MORE FOREST LANDOWNER STORIES

As we begin a new year of Forest Landowner magazine, we've taken a look back at the previous year in forestry, as we typically do. That package, which begins on page 18, always includes the magazine covers from the year's six issues, which in 2021 for the first time all featured at least one forest landowner on the cover.

This being Forest *Landowner* magazine, it's our goal to profile actual forest landowners each edition while also chronicling the many issues that concern them such as markets, government affairs, FLA policy initiatives, taxes, endangered species, and anything that helps landowners better manage, monetize, or enjoy their property.

Since our members tend to be *private* forest landowners, they're not always willing or able to share their stories in this magazine for any number of understandable reasons. But we're thankful that more and more landowners have been amenable to opening their forestland and spending a day or two with us so that other members can learn and benefit from their experiences and expertise.

In 2021, we profiled landowners from New Hampshire (Tom Thomson), Maine (Alex Ingraham), Alabama (Gray Skipper, and also Barrett McCall and his family), and Florida (Frank Graddy, and later Mickey and Stephanie Parker). We've kicked off 2022 with Bill and Nadine Haines, whose cranberry farm surrounded by 11,000 acres of forestland in southern New Jersey (page 10 and pictured behind me above) ranks among the more unusual properties in FLA's membership.

Actually, if there's one thing I've learned while having the wonderful opportunity to ride shotgun with landowners through their forests around the country, it's that everyone has both a unique story to tell and plenty of common ground with



their fellow forest landowners. Issues that impact landowners in the Southeast resonate in the Northeast, the Midwest, and on the west coast, especially in the Pacific Northwest.

That's one reason why FLA CEO Scott Jones and I headed to Oregon and Washington state in late November as this issue went into production. The Pacific Northwest often is the frontlines when it comes to forest policy issues and political climate that impact the rest of the country. We also wanted to have the opportunity to profile members from a region with a vast forest history that we can learn so much from as FLA continues to fight for the rights of private forest landowners throughout the country.

Scott and I flew into Portland, Oregon, and we hope you will join us at our national conference in Portland, Maine, from June 29 through July 1. Our goal is to cover everywhere from Portland to Portland, including as far south as possible.

In the time I've served as editor of this publication, I've visited forest landowners at their property in 13 states. The goal is not necessarily to spend time with folks in all 50 states, were that even possible. Regrettably, Hawaii does not have a forest industry. But since FLA is the only national organization that represents the actual forest landowner, it makes sense that we get out to see as many of you as possible, especially now that the pandemic is waning and the airlines seem to have figured out their staffing and scheduling challenges.

This is your magazine. Please consider sharing your story so that a year from now, we again can look back and appreciate all that we've learned from our unique national perspective. 🌱

Pete Williams is editor of Forest Landowner magazine.

Got a view? Send it to editor@forestlandowners.com in 700 words or less.



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