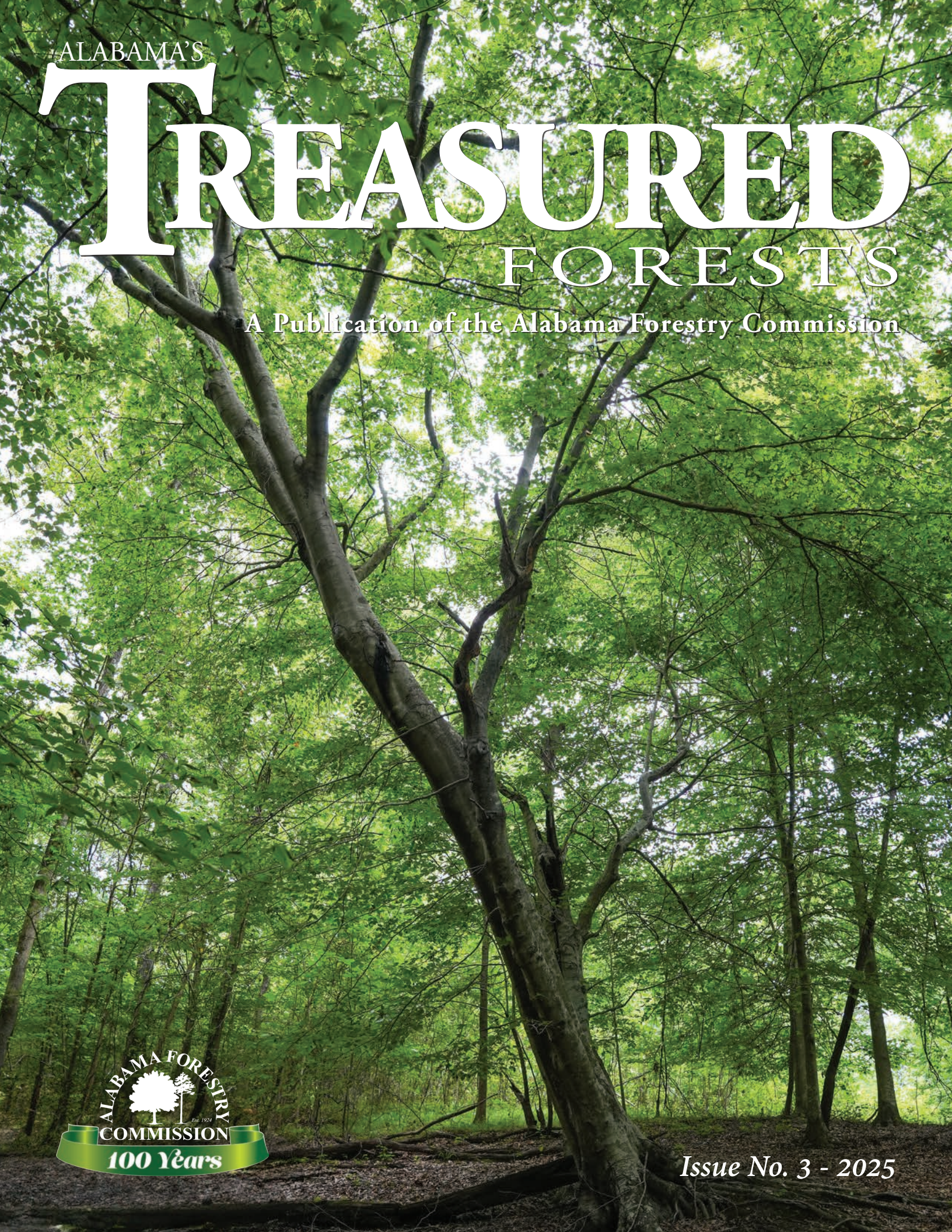

ALABAMA'S

TREASURED FORESTS

A Publication of the Alabama Forestry Commission

ALABAMA FORESTRY COMMISSION
Est. 1924
100 Years

Issue No. 3 - 2025

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Vol. XLIII Issue No.3 - 2025

On The Cover:

Leaning Tree - *located in the "Dark Forest" on the property of landowners Marshall Jemison, Greg Driscoll & Randy Wilson in Jackson County.*

This publication is provided at no charge to the forest landowners of Alabama, with a circulation of approximately 13,000. Published four times each year, the magazine is filled with forestry information and technical assistance designed to assist landowners in making informed decisions about the management practices they apply to their land. Articles and photographs are contributed by AFC employees and other forestry or natural resources professionals.

Alabama's TREASURED Forests magazine is also available on-line! **www.forestry.alabama.gov**

We made a mistake in the Spring 2025 issue of Alabama's TREASURED Forests. As several of our readers pointed out, the lovely photograph on the cover should have been identified as a male eastern tiger swallowtail. We apologize for this error!

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Message from the *STATE FORESTER*

Rick Oates, State Forester

Recently, I approved the list of Alabama Forestry Commission wildland firefighters going on western wildfire details. I am sure you have heard news stories about the massive fires out west, and the resources (people and equipment) that are dispatched from other states to help battle them. Before I became state forester the thought certainly crossed my mind, and I bet yours too, how does this benefit Alabama? Why should Alabama state employees support firefighting efforts in other states? In this letter, I want to reassure you that this is a good thing, with many positive benefits here at home.

Alabama receives financial reimbursements by sending resources to other states. While our employees are traveling to, from, and fighting fires in another state, they are officially off our payroll and paid by the federal government or other states. We are also compensated quite well by the Forest Service for the use of our equipment. This is money we can direct toward the purchase of new equipment that keeps our people safe and helps them fight fires more efficiently here at home. Additionally, all their travel expenses and an overhead rate are paid to our agency for these firefighters. Another benefit is that our employees earn overtime payments when on these assignments – something state employees are generally not eligible to receive when working in-state.

We carefully choose when to send people on details so that they are not away during the peak fire season here at home in Alabama. This means our firefighters go out of state between July and mid-September each year when the western states are busy, but we are generally not having many wildfires. We also try not to send more than one person from each work unit at a time, so any fires that do occur in Alabama are covered by our personnel.

The greatest benefit Alabama gains from sending people to other states on firefighting missions is the experience they bring home. Alabama does not have fires like they do out West. A big fire here is 1,000 acres; out West, fires can reach hundreds of thousands of acres. This means the training they receive on western fires is much more intense than anything we can duplicate here. We try to pair our newer employees with more seasoned folks so they can learn more from this mentor-type relationship.

Each employee receives specific task books and training for leadership roles that we need when incidents occur here. These incidents include large fires, storm clean-up, search and rescue missions, pandemic responses, or other assignments that come through the Governor's office. Think of these like a Boy Scout merit badge book; each task book has accomplishments that must be completed and checked off by a trainer. Once all the assignments in the task book are completed, the trainee moves on to the next level. Ensuring our team is thoroughly trained helps us to better protect the people of Alabama.

Ultimately, the AFC's wildland firefighters are better equipped to handle fires at home because they learn firefighting techniques and enhanced leadership skills from other professional firefighters across the country. The ability to travel on these details also incentivizes them to keep up to date on tasks at home. We have internal requirements above and beyond their basic job requirements that must be met in order to be eligible to participate in out-of-state activities. This means those men and women who go on firefighting details are the best of our best.

I am proud of the job our team does to keep you and your property safe at home. These opportunities are just one of the many tools we have for training them.

Rick Oates

The Alabama Forestry Commission supports the Alabama Natural Resources Council's TREASURE Forest program. *Alabama's TREASURED Forests* magazine, published by the Alabama Forestry Commission, is intended to further encourage participation in and acceptance of this program by landowners in the state, offering valuable insight on forest management according to TREASURE Forest principles. TREASURE is an acronym that stands for **T**imber, **R**ecreation, **E**nvironment, and **A**esthetics for a **S**ustained **U**sable **RE**source.

A Wilcox County Treasure

By Mollie Kate Erwin, Digital Marketing & Communications Specialist
Alabama Forestry Commission

The Lawler name has been around the forest products industry for longer than most can remember. Tommy Lawler has lived up to his family's legacy with his booming timber business, Lawler Timber Company, and his beautiful property sprawling across thousands of acres in Wilcox County. The original Lawler property has expanded over the years by Tommy, who acquired the surrounding land from family, friends, and neighbors alike. Mr. Lawler has made quite a name for himself, both in Wilcox County and beyond.

A proud TREASURE Forest landowner for the past 24 years, Lawler's industry experience, coupled with his long-running passion for the land, has shaped him into the incredible steward he is today. The primary objective of his property is timber production, which pairs well with his secondary objective of habitat maintenance. His timber production vision is carried out abundantly through Lawler Timber Co., while habitat maintenance is visible through the great diversity of flora and fauna alike. The only thing Mr. Lawler wishes he had done sooner is familiarize himself with the variety of species on his property and the different needs of each of them. The native wildflowers and plants found around his property are of most interest to him as he recognizes the importance of promoting the growth of native species. Focusing on the success of these native species is essential for supporting the local ecosystems and biodiversity.

Over the years, the variety of species located on the property has led to educational events for all ages. In his partnership with Dr. Bakkegard of Samford University, students have been given the opportunity to visit his land and observe red hill salamanders in their natural habitat, an endangered species and the State Amphibian of Alabama. Mr. Tommy has hosted visitors who were searching all over for this amphibian, and it was found right in his backyard.

Mr. Lawler noted that a study is also ongoing regarding the discovery of a new species of witch hazel. Researchers began touring multiple counties across three different states, spotting only one or two plants at each, that is, until they arrived at Mr. Tommy's property. He took them to an area of his property boasting hundreds of the plant.

He loves learning about the different species of trees located on his property and finding new ways to proudly display them. The most prominent example of this can be found in his home. Boasting a "Persimmon Guest Room," "Red Oak Den," "Walnut Bathroom," and "Red Oak Kitchen," his home is a reflection of his life's work, and one of his greatest accomplishments: his forest. The wood was all sourced from around his property, so his home truly feels like an extension of his woods.

(Continued on page 6)

A Wilcox County Treasure

(Continued from page 5)

Other notable attributes of his property are the three "Champion" trees located there. Mr. Lawler is quite proud that his land is home to the Pyramid Magnolia (*Magnolia pyramidata*), Chalk Maple (*Acer leucoderme*), and Two-winged Silverbell (*Halesia diptera*) – all Champion Trees of Alabama.

Family is a core value for Mr. Lawler, and this trait is demonstrated across his property. His father introduced him to Alabama's Black Belt at an early age, and it became love at first sight. A young Tommy spent his summer days exploring and adventuring in the Grampian Hills between Beatrice and Camden. He claims that exploration is never over, as he discovers something new every day.

One of Mr. Lawler's favorite memories on the property is a turkey hunt he enjoyed with his son and grandson. All three generations were able to snag their own bird, which was a highlight for Tommy, given the opportunity to share this excitement with his legacy. The love of their land is shared across the generations of Lawlers, and it is a full-fledged family affair. Mr. Lawler's wife, Jeanelle, is an active member of their business along with their son Jimmy, who is a registered forester. They love spending time together, carrying out the family business.

Another aspect of the family that many readers may also be familiar with was Tommy's brother, James "Big Daddy" Lawler, who was an avid outdoorsman. Big Daddy Lawler ("BDL") was incredibly active on social media, specifically his podcast "Gettin' Outdoors with BDL," which educated listeners on all facets of the environment before he passed away in February 2024. Like his brother, BDL also developed his love and respect for nature from a very early age. Big Daddy garnered attention from all over the country by hosting a variety of guests on the podcast to speak regarding their expertise. He was incredibly loved for his endearing personality and the captivating way he talked about his love for the outdoors.

In his commitment to continuing forest education, Tommy was an avid partner of 'Classroom in the Forest' for many years. He built an outdoor classroom on his property, which he named for his father, James (Jim) Thomas Lawler. The Lawlers have continued to host children and adults alike over the years, including garden clubs, the Alabama Wildflower Society, as well as numerous schools and workshops. The Lawler estate has proven its dedication to fostering growth and learning across all generations.

Mr. Lawler has dedicated much of his time to various organizations, such as serving on the Alabama Forestry Association's Board of Directors (representing the Blackbelt District), on the Tree Farm State Committee, and as a Tree Farm Inspector. He has also achieved numerous accomplishments in the industry, including receiving the W. Kelly Mosley Environmental Award in 2013, and the Governor's Conservation Achievement Award for Forest Conservationist of the Year, presented by the Alabama Wildlife Federation in 2016. His property was first recognized as a TREASURE Forest in 2001 and then certified in the national Stewardship Forest program in 2005. He was also named a Master Tree Farmer in 2002.

Tommy Lawler has been very involved in the forestry community and is respected greatly for his contributions. However, the first thing said about him is usually a comment on what an incredible person he is. His warmth and infectious energy have made a lasting impact on many, and those who have encountered him consider it truly a blessing to have formed a connection with Mr. Lawler. His love for the outdoors and the people around him shines brightly, and our community is a better place because of him.

New TREASURE Forest Landowners

Created in 1974 by the Alabama Forestry Commission under the vision of former State Forester Bill Moody, TREASURE Forest designation is earned by private forest landowners who affirm the principles of multiple-use forest management. It is this forest landowner recognition program that inspired the national Forest Stewardship Program which began in 1991. TREASURE is an acronym for Timber, Recreation, Environment, and Aesthetics for a Sustained Usable REsource.

Congratulations to these new TREASURE Forest landowners!

Landowner	County
Janet Norris	*Coosa*
Brad Snider	*Coosa*
Jim & Carmen Schrenkel	*Jackson*

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- Cleaner streams, and healthier, more resilient forests
- A landscape built to handle fire, drought, and pests - naturally
- Leaving behind a living legacy your family can walk, hunt, and pass forward

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And you don't have to do it alone. Let's walk the land together.

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A VIEW FROM THE FIELD: FIREBREAKS

A FORESTRY SPECIALIST SUPERVISOR'S PERSPECTIVE

By Mark D. Richardson, Forestry Specialist Supervisor
Alabama Forestry Commission

As I was growing up in Pike County, hunting deer and turkey on the properties of different landowners (with permission, of course), I noticed that some people plowed firebreaks, while others did not. In college, my instructors really did not cover the importance of firebreaks, although they did talk about the benefits of prescribed burning. It was not until years later, after becoming an employee of the Alabama Forestry Commission, that I finally learned the benefits of having firebreaks on your property.

I have learned that firebreaks serve as a defense from wildfires, protection against prescribed fires escaping from your property onto neighboring properties, and a source of access in and around your property. While installing firebreaks, we also install water bars and turnouts where needed to protect against erosion. Water diversion devices require a little time to install correctly, but they can save the landowner a significant amount of time and money by preventing the need for repairs to eroded areas.

Now I work in Bullock County, where some landowners say they only have firebreaks for when they conduct prescribed burns on their property. That is one benefit they provide, but firebreaks that are maintained by clearing fallen trees, bushhogging, or discing once or twice a year can be used for a variety of purposes. Well-maintained firebreaks can serve as walking trails for people like me who enjoy just walking in the woods while watching and listening to nature. For the deer hunters out there, firebreaks can be used to plant food plots. As mentioned earlier, they also provide access around your property and offer protection against wildfires.

My recommendation is to install a good firebreak the width of one and a half to two blades (10-15 feet wide) so you can walk, drive, or even ride horses without worrying about overhanging limbs. There is nothing worse than being slapped in the face by a limb on a cold day…THEY HURT!

As you can see, firebreaks provide multiple benefits to landowners, and I wish ALL landowners had them in their forests. However, if you do not have firebreaks, that's okay. Just call your local AFC office, and we will be glad to meet with you, look over your property, and offer professional forestry advice that will enhance your property.

So, as a Forestry Specialist Supervisor with the Alabama Forestry Commission, my view on firebreaks is that they are invaluable when utilized and maintained appropriately.

Tree Blind: When You Cannot See the Forest OR the Trees

By Katie Wiswall
Registered Forester/Urban & Community Forestry Partnership Coordinator
Alabama Forestry Commission

HHere in Alabama, we have trees all around us. We are blessed with 23.1 million acres of commercial forests, plus another 4+ million acres of urban and community land where tree cover averages 49.7 percent. But when was the last time you looked at those trees where you live, work, and play? They blur into the background of our lives until something causes them to become the main event. And sadly, most community trees that become the main event are telegraphing their issues well before they take center stage. The people around them are simply blind to the signals. We call this being 'Tree Blind.'

You do not have to become a certified arborist or forest pathologist to avoid being tree blind. You simply need to take a few moments to consciously look at all sides of the trees around you, noting any changes or anything out of the ordinary. Just like children and pets, trees grow and change over time. With a little focus, you can often see the changes that foreshadow failure in time to prevent a catastrophe.

Early summer, when all the leaves should be on the tree, and late fall, after most leaves have fallen, are excellent times to take a few minutes to inspect your trees. We recommend viewing your trees around June 1st (the start of hurricane season), and again around November 30th (the end of hurricane season). Start at the bottom and carefully scan your trees from ground to crown. Perform these three simple 'looks' this summer, and answer the associated questions to begin curing your tree blindness.

1. Look at the ground around your tree.
   a. Are there freshly scalped roots?
   b. Do you see mushrooms, fresh 'sawdust,' or shed bark?
   c. Is the ground sunken-in or lifted-up on one side of your tree?
2. Look at the trunk of the tree.
   a. Is it straight (was it always leaning)?
   b. Are there splits, scars, or hatchet marks? (children love hatchets!)
   c. Do you see insects or holes on the bark?
   d. Is there anything oozing out of the bark?
3. Look at the leafy part.
   a. Is it the same color as the others of its type in the area?
   b. Does it have as many leaves as it looks like it should?
   c. See any patches of discolored/dead leaves or needles?
   d. Are there bare twig ends?

If your answer to ANY of these questions is "yes," then call for help in assessing your tree.

The Alabama Forestry Commission is a great place to start when you have concerns. Our county staff can visit and look at your tree. Find your county contacts on the agency website *(forestry.alabama.gov – contact us)*. Many times, they can tell quickly if your yard tree has been attacked by one of the many forest pests they see on larger properties. If they need assistance with your tree, they can call on any of the four certified arborists who work for the Commission to assist them.

Other options include calling your county extension agent *(ssl.acesag.auburn.edu/directory-new/)* or a commercial arborist *(treesaregood.org)* to help you assess and address the situation. Everything could be fine, or your tree might need some attention. A plant healthcare specialist may be able to prescribe some treatments that will re-invigorate a stressed tree, or you might need to remove it before it becomes an insurance claim.

Trees are great assets. Around our homes, they offer beauty, savings on power bills, serenity, and even delicious snacks in the form of fruits and nuts. And while we all love our trees, it behooves us to truly *see* them from time to time. You need to see the forest AND the trees; do not be 'tree blind.' Instead, check your trees, please!

[1b] Mushrooms on the ground around the tree

[1a] Scalped roots

[1b] Shed bark

[1c] Sunken ground

[2a] Trunk leaning

[2b] Trunk scars

[2d] Bark oozing

[3c] Discolored leaves

[3c] Dead leaves/needles

[3d] Bare twig ends

Prescribed Burn – Have a Plan –

By Matt Brock, Habitat 1st Properties, LLC

As a consulting wildlife biologist, I'm often asked under what conditions prescribed fire is used in wildlife management. My standard answer is, almost every one of them! The general rule of thought among many landowners is that fire is reserved for pine stands. However, it applies to most upland grassland or forest systems in the Southeast, including mixed stands, hardwood stands, and fallow openings. Although fire is appropriate in many situations, proper application is the most important thing to consider.

For all landowners with wildlife in mind, fire is one of the first steps to take for increased wildlife benefit and habitat improvement. Fire sets back succession, which is the natural progression of the vegetative community over time. When evaluating the needs for most game species, from northern bobwhite quail to white-tailed deer, much of their food and cover resources exist from ground level to chest high. If forest land is left to naturally progress, it quickly shades the understory, decreasing herbaceous growth and diversity.

Vegetation is the key to browse, seed production, insect prevalence, nesting cover, brooding cover, fawning cover, and escape cover, all of which contribute to the success or failure of reproduction and recruitment of the various species we all love to pursue or enjoy watching. The benefits expand far beyond game species, as many migrant songbirds and ground-nesting animals thrive in habitats characterized by young herbaceous growth.

Recruiting more responsible fire practitioners on the landscape not only improves wildlife habitat but can also improve conditions that could prevent catastrophic fire events. The more aware residents are of fire behavior, the easier it is to combat improper fire usage and wildfire scenarios. Let's review a couple of areas for fire application, as well as how to conduct them safely and responsibly.

Have A Burn Plan

With any planned fire, a good burn plan should be drafted beforehand. Burn plans should include basic information such as desired weather parameters, area to be burned with maps, landowner's information, burner's information, equipment needed, fire techniques to be used, and a contingency in case things do not go as planned. If an escape or damage occurs, having a good written plan that shows consideration was placed on the safe use of fire goes a long way.

As a fire practitioner, each time a fire is set, there should be a primary objective. Understanding why the fire is needed will help determine the fire timing, desired weather parameters, and required intensity to reach that objective. The three primary reasons for utilizing prescribed fire are understory fuel reduction, wildlife habitat improvement, and site preparation for reforestation. Knowing the dominant cover or tree type, its fuel composition and load, as well as identifying possible hazards, should be among the first things to consider before a fire is ever conducted.

Obtain A Burn Permit

Alabama law requires that you obtain a permit from the Alabama Forestry Commission (AFC) to conduct a prescribed burn for silvicultural and agricultural purposes. In general, this permit means the burner has the manpower and equipment to control the

fire and agrees to stay with the fire until it is out. Even though the burner has a permit, he/she is still responsible for any damage to others that may be caused by fire or smoke. If the proposed fire is less than one quarter of an acre, a permit is not necessary.

Permits are issued (at no charge) through the AFC Dispatch Center by calling (800) 392-5679.

Understanding Fire Weather

All fire practitioners must have a basic understanding of fire weather and behavior under various conditions. A wonderful online resource available from the National Weather Service provides a fire weather forecast specific to a region or county. It offers several parameters that assist fire practitioners in deciding whether to conduct a fire on any particular day or time. (See 'Fire Weather Resources' at ***forestry.alabama.gov***.)

The weather parameters that provide the most insight into fire behavior include 1) humidity, which is a measure of moisture in the air as a percentage, 2) wind speed and direction, which increases or decreases fire intensity by helping push a fire, and 3) dispersion, which predicts how well smoke carries away from the fire and where it decides to come back down. There is also this little acronym called the KBDI (Keetch-Byram Drought Index), which illustrates how much moisture is needed to bring the ground to full saturation.

It is vitally important to predict fire behavior, as ground moisture can get quite dry. Multiple other factors predict how and where smoke will eventually end up, but for this article, we will focus on those listed above.

One thing the South can be proud of is our humidity, especially during the summer. Most fires, however, are conducted between November and May, when humidity can drop, especially after a dry air front from the northwest. As the percentage of water in the air decreases, fire intensity increases. A good rule of thumb is to burn on days when humidity falls between 30-45%. Anything lower than 30% can result in intense fire behavior, and spotting over the fire lines if fine fuel moisture is very low. As the atmosphere dries, so do the fine fuels that are easily ignitable.

If lower humidities and winds above 10 mph are combined, the threat of spotting over the fire lines increases even more. Wind speeds should always be 10 mph or less. On days with gusts exceeding 15 mph, it is best to postpone burning for another day. A good burn can quickly turn into a bad burn if humidity and wind indicators are ignored.

Dispersion, mixing height, and transport winds are often viewed together to determine how well smoke will lift from an area and be transported through the atmosphere before falling. One thing is always certain: when smoke rises, it later falls. The higher the dispersion, the better the smoke is going to rise above ground level and disperse throughout the atmosphere. Dispersion rates of 50 or greater are desired, along with mixing heights of greater than 1,500 feet and transport winds of 9 mph or greater. What that means is smoke will rise, disperse through the atmosphere, and be carried a long way by transport winds before falling. Stagnant conditions allow the smoke to condense in an area and potentially create issues locally.

KBDI is a measure of soil saturation. This parameter doesn't normally have an impact on dormant season fire behavior, as saturation will be 300 or below. However, as the top layers of duff and soil dry through the growing season, this measure begins to increase, meaning more rain is required to bring soil moisture to full saturation. When KBDI exceeds 450, fire behavior can become quite unpredictable, and fuels become highly ignitable. It is best to hold off on burning under those conditions.

Establishing Adequate Firebreaks

Before any burning takes place, adequate firebreaks or lines are necessary, which can be either manmade or natural barriers to stop a fire. The size and type of firebreaks are determined by the types of fuels to be burned and when. A simple strip of green grass in May is usually sufficient to stop an understory burn, while the same burn conducted in January may require a 6-8 foot path of bare dirt disced with a tractor, or a line pushed with a dozer. A leaf blower can be used to establish adequate firebreaks in a hardwood stand with minimal effort. A large flowing creek at the base of a hill tied into a gravel county road is plenty sufficient. Become familiar enough with fire behavior and local conditions to use whatever means necessary to have adequate firebreaks. They are your first line of defense against escapes.

Necessary Equipment

Landowners interested in burning need only basic equipment to conduct most fires. Following is a list of equipment that will make burning easier and safer. The first is having a tool for ignition. A drip torch is the preferred method. It is also the safest. Next, an ATV or UTV can be used for water transport and mobility. Make sure the water tank has a functional way to disperse the water before each burn, and backup parts are always recommended. A fire rake or gravel rake is useful for removing fuels near snags, fire approaching a plastic culvert, etc. Leaf blowers are one of the most diverse tools to own. They can be used to put in firebreaks in particular fuel types, direct fire in certain directions, or fight fire in case of an escape. Chainsaws are useful for felling snags before a burn, so they do not ignite, casting embers across a fire line. There are additional useful tools, but those mentioned here should be present on each fire.

Becoming A Certified Prescribed Burn Manager

How can landowners get involved in conducting their own prescribed burns, and what challenges do they face? Thankfully, there is an abundance of information and resources to light the path to becoming a fire practitioner. The Alabama Forestry Commission provides in-person training annually to certify prescribed burn managers. This class provides the basic information needed to understand fire weather, fire behavior, as well as fire techniques and application with different tools and equipment. The course is not only required for certification but also a joy to attend. Anyone interested in applying fire to the landscape should check out 'Prescribed Burn Manager' at ***forestry.alabama.gov*** for dates and locations.

Additionally, a solid burn plan is always recommended. With a little assistance and experience, anyone can draft a burn plan with the basic information needed to conduct a safe burn. It is also included in the certification training.

Let's get more fire on the landscape for healthier forests and healthier wildlife.

NASA Uses Airborne Sensor to Lead **Alabama Firefighters to a Wildfire**

By Andrew Wang, Jet Propulsion Laboratory, NASA

A NASA sensor recently broke new ground, providing real-time wildfire data in Alabama that helped firefighters in the field contain the blazes. Called AVIRIS-3, which is short for Airborne Visible Infrared Imaging Spectrometer 3, the instrument flew aboard a research plane, providing information about a 120-acre fire that had started on March 19 and hadn't yet been reported to officials.

As AVIRIS-3 flew over the fire about 3 miles east of the town of Castleberry, Alabama, a scientist on board did quick calculations to map where the blaze was burning most intensely, then sent the file via satellite internet to fire officials, who distributed the images to firefighters' phones in the field.

All told, the process from flyover to handheld device took a few minutes, said Ethan Barrett, a fire analyst for the Forest Protection Division of the Alabama Forestry Commission (AFC). In addition to pinpointing the location and extent of the fire, the data showed firefighters its perimeter, helping them gauge whether it was likely to spread and decide where to add personnel and equipment. "That gave us, I would say, an hour-and-a-half head start on decision making," he said.

Flying at about 9,000 feet aboard a NASA King Air B200 prop plane, AVIRIS-3 flew five times over Alabama, Mississippi, and Florida between March 19 and 28 in preparation for prescribed burns in April at Fort Stewart, Georgia, for the NASA 2025 FireSense Airborne Campaign. During the March span, it produced maps of at least 13 wildfires and prescribed burns, as well as dozens of small hotspots, all in real time.

Data from imaging spectrometers like AVIRIS-3 typically takes days or weeks to process into highly detailed, multi-layer imagery that scientists often need for research. Simplifying the algorithms allowed the processing to be done on a computer aboard the plane in a sliver of the time it otherwise would have taken. And the advent of satellite internet connectivity enabled the images to be distributed almost immediately, while the plane was still in flight, rather than after it landed.

"This is very agile science," said Robert Green, the AVIRIS program's principal investigator and a senior research scientist at NASA's Jet Propulsion Laboratory in Southern California.

AVIRIS-3 belongs to a line of imaging spectrometers built at JPL since 1986. The instruments have been used to study a wide range of phenomena — including fire — by measuring sunlight reflecting from the planet's surface.

During the March flights, researchers created three types of maps. One, called the Fire Quicklook, combines brightness measurements at three wavelengths to identify the relative intensity of burning. Orange and red areas show cooler-burning areas, while yellow indicates the strongest flames. Previously burned areas show up as dark red or brown.

Another map type, the Fire 2400 nm Quicklook, focuses on a slice of the near-infrared range of the electromagnetic spectrum. The images are particularly useful for seeing hotspots and the perimeters of fires, which show brightly against a red background. A third type, called just Quicklook, shows burn areas and smoke.

The Fire 2400 nm Quicklook was the 'fan favorite' among the fire crews, Barrett said. Seeing the outline of a wildfire from above helped AFC firefighters determine where to send bulldozers to stop the spread.

That's what happened with the Castleberry Fire: having a clear picture of where it was burning most intensely enabled firefighters to focus on where they would make the most difference — on the northeastern edge.

Then, on March 21, the sensor spotted a fire about 4 miles southwest of the unincorporated community of Perdido, Alabama. As they worked to prevent flames from reaching six nearby buildings, forestry officials noticed that the fire's main hotspot was inside the perimeter. With that intelligence, they decided to shift some resources to fires 25 miles away near Mt. Vernon, Alabama.

Data from AVIRIS-3 sensor was used to create detailed fire maps in minutes, enabling firefighters in Alabama to limit the spread of wildfires and save buildings.

To combat one of the Mt. Vernon fires, crews used the scene shown to determine where to establish fire breaks beyond the northwestern end of the fire. They ultimately cut it off within about 100 feet of four buildings.

"Fire moves a lot faster than a bulldozer, so we have to try to get around it before it overtakes us. These maps show us the hotspots. When I get out of the truck, I can say, 'OK, here's the perimeter.' That puts me light-years ahead." - Ethan Barrett, Fire Analyst, AFC

Fighting fire with science:

UAH and NASA Forge Ground-breaking Fire Management Collaboration at **GENEVA STATE FOREST**

Courtesy of Paola Pinto | UAH ESSC

Researchers from The University of Alabama in Huntsville (UAH), part of The University of Alabama System, partnered with the Alabama Forestry Commission and NASA's FireSense initiative to study prescribed burns in the Geneva State Forest in South Alabama in March. The goal of the collaboration was to improve fire management practices using advanced technologies and data collection methods.

During the prescribed burn, UAH researchers deployed low-cost soil moisture and temperature sensors to examine the role soil moisture plays in shaping fire behavior and recovery processes. These sensors, developed in collaboration with the UAH Atmospheric Science Department and the Alabama State Climate Office, provided critical insights into how soil moisture influences fire dynamics.

The UAH team, led by research scientist Ryan Wade and Alabama's Associate State Climatologist Dr. Lee Ellenburg from the Earth System Science Center (ESSC) at UAH, worked alongside the Alabama Forestry Commission and NASA to enhance the understanding of fire behavior and its ecological impacts. These controlled burns served as a valuable research tool, offering critical data that will refine strategies for wildfire prevention, response, and recovery.

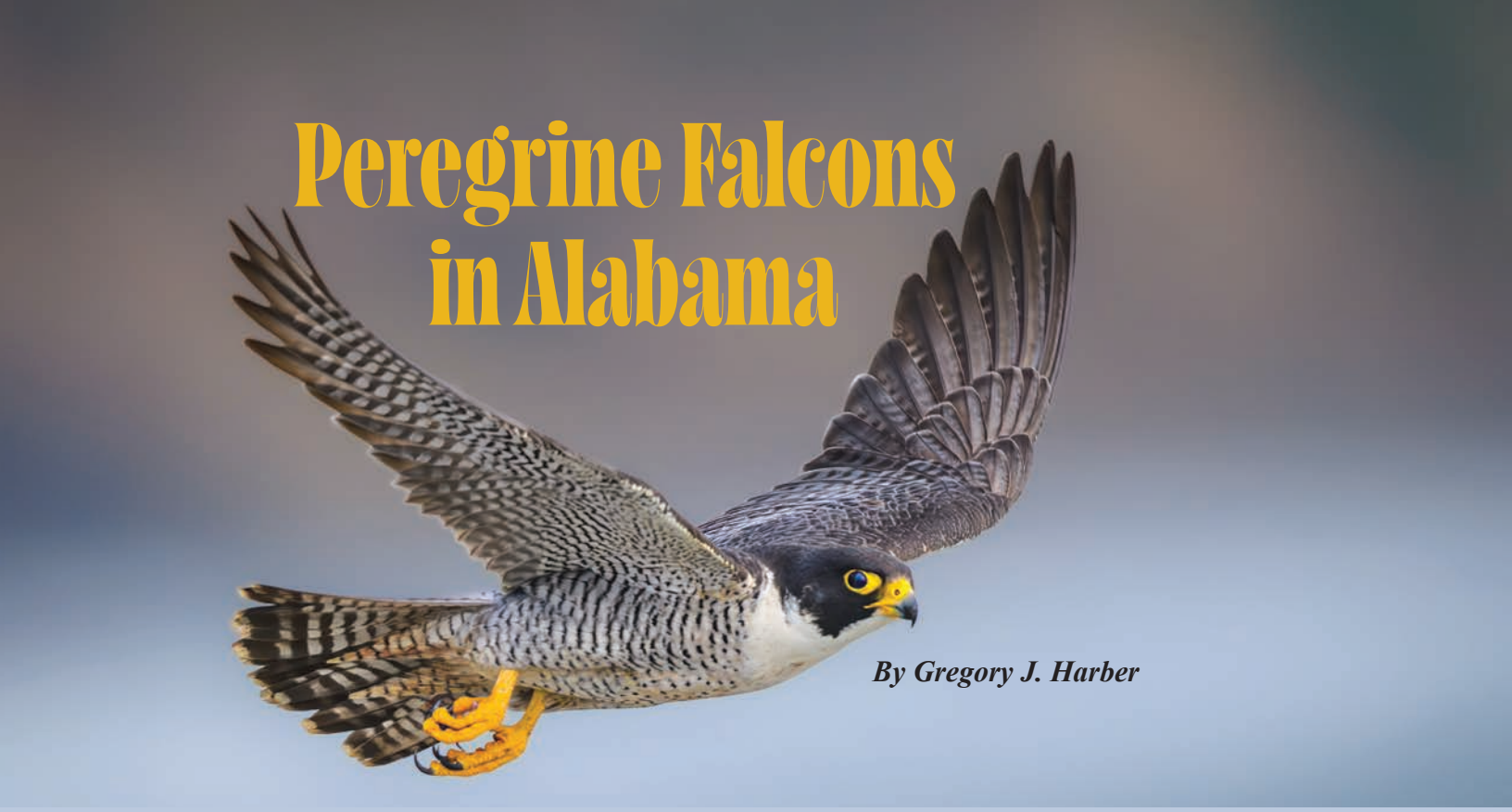
"Our goal was to gather real-time data to improve fire management and enhance safety," Wade explained. "By leveraging advanced weather and soil monitoring tools, we can predict fire behavior more accurately, allowing land and forest managers to better leverage prescribed burning to reduce the risk of uncontrolled wildfires."

NASA's FireSense initiative plays a key role in advancing wildfire management through innovations in fire fuel mapping, detection systems, post-fire impact assessments, and air quality forecasting. By integrating UAH's soil moisture sensors with remote sensing technology and NASA's satellite data, the team is gaining deeper insights into fire behavior and its environmental effects.

"We're focusing on understanding the role of soil moisture before, during, and after a fire," Ellenburg noted. "This information is vital for assessing drought severity, understanding how moisture impacts fire intensity, and evaluating how fire alters the soil's ability to absorb water."

Prescribed burns are crucial for managing vegetation and preventing unmanageable wildfires in the Southeast, particularly in pine-dominant forests. The effort seeks to enhance fire forecasting methods and ensure that prescribed burns are safe, controlled, and effective in maintaining long-term forest health, improving both ecological outcomes and public safety.

Peregrine Falcons in Alabama



By Gregory J. Harber

Peregrine Falcon (*Falco peregrinus*) is a widespread species (the name Peregrine means 'wanderer') found on all the inhabited continents and is one of four falcons that has been documented in Alabama (the others being American kestrel, merlin, and prairie falcon). Peregrines are the embodiment of speed and power, having a well-deserved reputation as the fastest animal on the planet. They can achieve speeds over 200 mph when in a steep dive in pursuit of prey. In the avian world, they are known as "feathered fighter jets."

A relatively large, somewhat stocky bird with a weight of approximately 1.6 lbs., peregrine falcons are 16-20 inches in length and possess a wingspan of 36-44 inches. Females are larger than males. In flight, they are the picture of power; their torpedo-shaped bodies exhibit smooth yet powerful wingbeats on long, pointed wings and a relatively short, tapered tail. The 'tubercles' in their nares serve as a baffle that allows them to breathe during high-speed pursuits, much the same way that the cone in the center of an airplane engine breaks up the airflow and allows the air to pass through the engine. Simply put, these raptors are built for speed.

Recognizing perched peregrines is a straightforward task: the dark 'mustache,' cap, back, and tail of the adults give the bird what is often described as a hooded appearance, and is accompanied by a white throat and fine, light barring on the belly. Juveniles, on the other hand, are brownish above and feature streaked underparts. Juveniles also possess the mustache mark. In flight, their powerful, steady wingbeats are unlike those of other hawks such as accipiters (Cooper's and sharp-shinned hawks that exhibit a flap-flap-flap-glide flight style) or the soaring patterns of the buteos (red-tailed, red-shouldered, and broad-winged hawks). With practice, recognizing peregrines in flight becomes easier as familiarity builds.

Their diet consists primarily of birds taken in flight, caught by flying above their prey and then entering a steep dive (stoop) in

which they use their hind talon (hallux) to strike their intended target with such force that it kills them on contact. Waterfowl and shorebirds are a common target for birds found near water, with pigeons and starlings often being on the menu in cities. The peregrine's speed and agility are such that even fast-flying chimney swifts are occasionally caught.

Peregrine falcons have been documented year-round in Alabama but are most often seen from fall through spring when northern birds come south to spend the winter on the northern Gulf Coast. The Fort Morgan Peninsula and Dauphin Island, especially in the Bird Sanctuary, are reliable locations to find this species in winter. The Tennessee River Valley region near Decatur (check the supports of the bridges that span the river and power line towers) and Guntersville (near the dam) are also good places to look. During spring and fall migration, they can be seen almost anywhere in the state, including urban centers, but are generally found near the major waterways where prey is plentiful.

Photos by David Chamberlain

Longtime readers may remember when, in 1993, biologists at Alabama Power and Birmingham-Southern College undertook a hacking program to reintroduce peregrine falcons to Alabama as a breeding species. Of the ten birds that were hacked/released atop the Alabama Power headquarters building in downtown Birmingham as part of this program, one suffered an injury that prevented its survival in the wild and was sent to Auburn University. One was found dead in 1997 in Transylvania County, North Carolina, and another was known to have successfully nested in Fort Wayne, Indiana, producing two young in 1996. The fate of the other falcons in this hacking program is unknown, as they were never observed again once they departed the Birmingham area, or their leg bands were never recovered.

Typically, the female lays three to four whitish/pinkish eggs in a shallow, well-rounded scrape on a cliff or even the ledge of a building. Both sexes incubate the eggs for 33-35 days, and the hatchlings are semi-altricial [covered with down, fed by the parents, and cannot leave the nest]. Fledging takes place at about 35-42 days of age, with both parents tending to the young. Peregrines can live to be 16-20 years of age in the wild, and perhaps a bit longer in captivity. The survival rate of first-year birds is unknown, but some researchers believe it is about 40-50 percent of fledglings.

Historically, these birds nested in the Tennessee River Valley near the mouth of the Elk River in Limestone County (from 1892 to 1948) and the mouth of the Paint Rock River (in Marshall County, north of the Guntersville Dam, from 1901 to 1954). Sadly, the national and worldwide use of the pesticide DDT caused eggshell thinning, and subsequent nest failures led to their decline. Peregrine falcons no longer nest in Alabama but have nested at the Tennessee River Gorge Trust's Castle Rock property, which is not far from our state's northern border, near Jasper, Tennessee, west of Chattanooga.

The hope is, of course, that one day peregrine falcons will once again nest in Alabama after their long absence as a breeding species. To that end, there was great optimism in early Spring 2020 when my friend, Jessie Griswold, informed me that she often saw peregrines while conducting her window strike bird surveys in downtown Birmingham during spring and fall migrations. Thus, in the midst of the pandemic year of 2020 when free time was plentiful, I endeavored to determine the status of the peregrines in Birmingham.

It quickly became evident, based on Jessie's initial observations and my subsequent ones, that there were two adult falcons in Birmingham, with the former BellSouth headquarters building (now The 600, a residential and retail development) as the epicenter of our sightings. The ledges on each floor of this 28-story building were ideal perches from which to scan for prey, and as a result, the falcons were often seen there. Indeed, during the days of the 1993 hacking project, BellSouth employees often reported seeing falcons outside their office windows, eating prey such as American Coots or Wood Ducks.

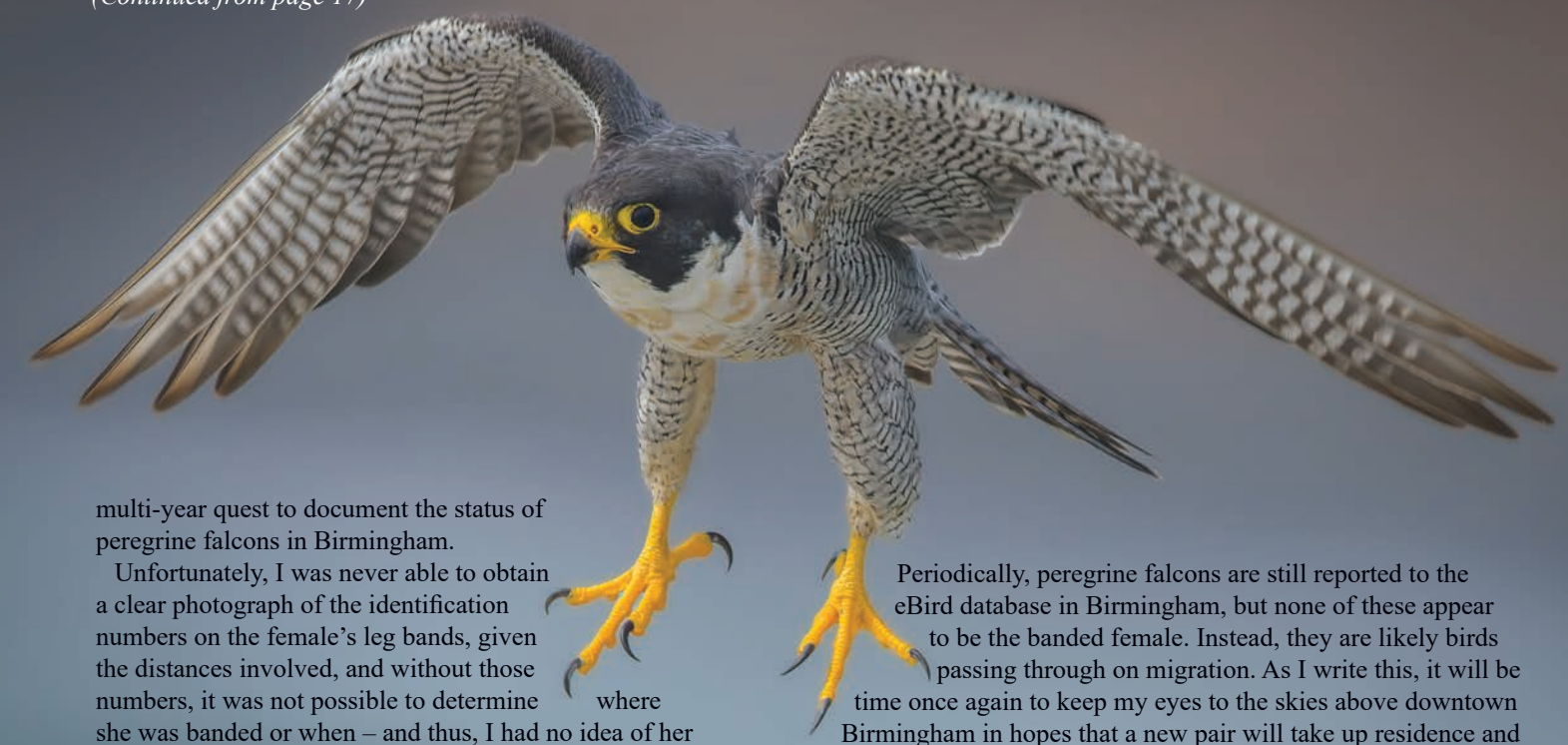
As spring gave way to summer, the window for migratory falcons had lapsed, and the possibility of this being a breeding pair had to be considered. The pair was observed mating on several occasions during that summer of 2020, but as far as could be determined, there was no sign of nesting or parental behavior. Summer gave way to fall, which yielded to winter. Two falcons, no nest, no young. Sightings continued into 2021, again with hopes of nesting as April arrived. These hopes were dashed when the male was found deceased by Jessie on May 16, 2021 – the victim of a window strike.

The female remained faithful to the site (as is often the case in this species) through the fall of 2021 before she departed to points unknown for the winter. Hope returned when this banded female was observed again on April 15, 2022, and the excitement continued the next day when a sub-adult male was also observed. A few days later, on April 23, the pair (adult female and now this sub-adult male) was photographed mating on the scaffolding of the construction elevators attached to The 600 building, thus engendering a new optimism for nesting success. Alas, this young male remained for only one month, with its last sighting on May 22. Again, the female remained faithful to the site and was seen throughout the summer of 2022, but this time stayed through the winter of 2022-23 and nearly all of 2023. She was last seen on November 3, 2023, thus ending the

(Continued on page 18)

Peregrine Falcons in Alabama

(Continued from page 17)



multi-year quest to document the status of peregrine falcons in Birmingham.

Unfortunately, I was never able to obtain a clear photograph of the identification numbers on the female's leg bands, given the distances involved, and without those numbers, it was not possible to determine where she was banded or when – and thus, I had no idea of her age. However, the presence of the bands made reliably identifying her possible. Both the adult and sub-adult males were unbanded birds.

Periodically, peregrine falcons are still reported to the eBird database in Birmingham, but none of these appear to be the banded female. Instead, they are likely birds passing through on migration. As I write this, it will be time once again to keep my eyes to the skies above downtown Birmingham in hopes that a new pair will take up residence and take their proper place in Alabama's bird records as a nesting species. 1954 was a long time ago; it's time to fill that gap.

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PORTABLE SAWMILLS

HOBBY OR BUSINESS VENTURE?

By Ray Metzler, Threatened & Endangered Species Specialist/Certified Wildlife Biologist
Alabama Forestry Commission

Trees are harvested from Alabama's landscape every day through natural processes or human activity. Forest landowners generally prefer to have their timber removed through a pre-planned process that results in financial gain. This is usually done on a large scale through a forester, timber buyer, or logger. But what options are available to landowners that suffer timber loss on a much smaller scale, such as isolated pine beetle outbreaks, disease, or even cutting a small area to improve forest health? Very few options allow forest landowners to harvest small acreages at a profit for themselves and the logger. These types of forest issues often result in dead standing timber, left to rot or piled and burned.

Portable sawmills are an option that may allow landowners to utilize wood that would otherwise be left in the woods. Portable sawmills generally employ one of two different types of cutting mechanisms: 1) a large chainsaw in a carriage that ensures uniform thickness, or 2) a large bandsaw built into a carriage system that traverses up and back through a log. Today's portable sawmills are truly portable, as they can be pulled behind a pickup truck to the site where the trees are located.

Like automobiles, portable sawmills come in several different "trim" packages. A basic model is typically manual operation, while a deluxe model comes with hydraulic features allowing for improved mechanization and less manual operation. A basic trim package portable sawmill can be purchased for a few thousand dollars, while a deluxe model will cost quite a bit more – tens of thousands of dollars. The old saying, "you get what you pay for," is true with portable sawmills; generally, the more you pay, the more features and automation you receive. Greater automation allows for single-user operation, as opposed to a manual mill that may require up to three or four operators to efficiently process lumber.

Reasons to buy a portable sawmill vary greatly, but surveys have shown that completing a project such as a barn, cabin, or outbuilding around their farms or homes is a driver in the initial purchase for many individuals. I know three individuals who own a portable sawmill, and all of them purchased it to build a cabin or house on their property. Most portable sawmill operators quickly learn they can earn some part-time or full-time income if they have the desire and energy. John Goff, AFC Forest Protection Division Director, told me he typically doesn't engage in projects outside of his farm activities, but has sold some white oak slabs for specialty projects in condominiums at Orange Beach. Johnny Ponder, a Talladega County landowner, has owned his portable mill for 30 years. It was originally purchased to cut lumber to build a house. He said he actually had all of the lumber cut for the house before the footer foundations were dug. While he has performed some revenue-generating work over the years, he has limited his milling to projects for his farm in more recent times. Mr. Ponder noted that his enthusiasm to mill timber for outside activities has waned as he has aged. Although his mill is considered portable, he has built a roof overhead and brings most of the logs to the mill instead of taking the mill to the woods.

Manually operated units may utilize a tractor with a grapple to load logs onto the mill, but sawing and subsequently turning with a cant hook, slab and lumber removal, and stacking are accomplished manually by the operator or assistants. Folks who intend to

use a portable sawmill for more than hobby-type work or a specific project typically invest in 'high-end trim' packages with more automated features as opposed to the basic models with manual operation only. Units with 'higher trim packages' offer efficient, user-friendly features that increase productivity while reducing operator fatigue. Some of these features include hydraulic log loaders, drag-back systems, and remote controls.

Do your research prior to investing in a portable sawmill as a business venture. You must decide whether you plan to 'make a living' or simply wish to offset expenses to justify a purchase for hobby-type activities. Research has shown that business opportunities exist, but the majority (60 percent) of portable sawmill operators receive no income from their milling operations. Like buying farm equipment, purchasers of portable sawmills must do their homework before the purchase and consider the availability of parts and service.

Portable sawmill operators generally use one of three common methods to develop pricing for sawing services.
They include 1) charging an hourly fee, 2) charging by the board foot, or 3) keeping a percentage of the customer's sawn lumber to sell or use as needed.

I recently visited with Johnny Ponder while Talladega County FFA students were visiting his property as part of an outdoor classroom event. He provided an excellent demonstration of his mill and gave some tips to the students to remember if they chose to become a portable sawmill operator. His suggestions included looking for any metal objects in the wood before sawing, being aware of the growth rings/grain of the wood to minimize warping, looking at cracks in the wood and sawing parallel to them if possible, and being sure to set up the sawmill in a location where the slabs and sawdust won't interfere with future operations or ecological functions. He also noted that dry wood sands and takes stain better than wet wood. Perhaps Ponder's most important advice was that sawmilling can be hard work and dangerous if all safety precautions are not followed. Students took the lumber they milled back to the school to use in future projects. I must add that this event was very informative and provided students with a 'boots on the ground' learning experience.

Producing specialty products is one way to maximize income from a portable sawmill. These products will yield higher returns when they fill a niche market as opposed to competing against the big box lumber stores. Niche markets may include items made from tree species not generally available at retail establishments. For example, rough-cut lumber from oak, maple, cherry, and walnut can be highly sought after by custom furniture makers. Wood flooring is another product that portable sawmill operators have found to be lucrative and in demand.

Homeowners often enjoy utilizing wood from a favorite tree on their property for projects, especially if the tree has recently fallen or died. Just before having a fireplace built in their living room, my mom and dad employed a portable sawmill owner to cut a mantle from a tree that had fallen on their property. The project was done on a fee basis. While working as a wildlife biologist many years ago, I had a white oak located near the equipment shed of the wildlife management area sawn into boards for decking on a lowboy trailer used for hauling heavy equipment. This project was completed on the exchange system where the mill operator kept some of the lumber in exchange for providing the decking and enough extra boards to put on another trailer.

An advantage to milling your own lumber is that you aren't limited to the standard lengths and widths found in most retail stores. You can make almost any board you need, including beams, headers, posts, and other larger pieces. Custom cutting allows folks who do fine woodworking projects to plan around wood grain to minimize warping and cracking.

As with any mechanical device, portable sawmills must be routinely maintained to ensure functionality and longevity. Engine oil needs to be changed according to the manufacturer's specifications, while fittings and moving parts may need lubrication periodically. Blades need to be changed or resharpened periodically. The length of time between sharpening or changing a blade can be highly variable depending on wood density, moisture, and the cleanliness of the outer bark. Dirty wood significantly decreases the life of a blade. Some other common expenses associated with portable sawmilling include fuel and a host of accessories such as a chainsaw, log peavey, cant hooks, and safety gear.

There are a dozen or more portable sawmill manufacturers in the United States, with at least one in Alabama. Cooks Saw is Alabama's homegrown portable sawmill manufacturer located in Newton in Dale County. This is not an endorsement of their products, just a statement that there is a manufacturer here in Sweet Home Alabama.

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My Journey to Become a Registered Forester

By Bradley Dunham
Forestry Management Specialist, Registered Forester, Alabama Forestry Commission

My journey to become a registered forester in the state of Alabama truly began on March 16, 2015, the day I transferred from the Alabama Department of Environmental Management (ADEM) to the Alabama Forestry Commission (AFC). I graduated from Auburn University with a bachelor's degree in wildlife science in December of 2003. After almost a year of job searching, I was offered a position as a biologist aide with ADEM in September of 2004. Accepting this position, I began my career with the State of Alabama. For the next 11 years, I worked in Montgomery as a Biologist Aide, Pollution Control Specialist, and finally an Environmental Scientist.

Following the retirement of Blake Kelley, a long-time forester and work unit manager in Coosa County, I was asked if I would be interested in a biologist position with the Alabama Forestry Commission. Having an opportunity to come back home and assist landowners in managing their forests was something that I couldn't wait to do! I interviewed and was offered the position, which I gladly accepted. During my interview, I was informed that I would be a biologist as long as I worked for the AFC, since only registered foresters were eligible for promotion into management positions. And so, the journey continues...

I had been working with the Commission for approximately three years when I was approached by State Forester Rick Oates one morning at Flagg Mountain. When Mr. Oates arrived and said he needed to talk to me about something, initially, I was terrified. I didn't even know Rick knew my name. Little did I realize, he was about to answer one of my prayers. That day, he asked me what he could do to make me happy and want to stay with the AFC. I replied that I would like to have an opportunity to earn a promotion one of these days. Again, I was reminded that only registered foresters were promoted at the AFC. When Rick asked if I would consider returning to Auburn to obtain a degree in forestry, I immediately got those good ole goosebumps, knowing that this was God's will for me.

Folks, my journey to registered forester had just hit overdrive! Honestly, I was a little apprehensive at first about returning to college almost 20 years after graduating the first time around. Could I still do it? Am I too old for all of this? But, after praying about it and talking to my family, I decided to face the challenge head-on! I applied to graduate school at Auburn University and was accepted soon afterwards. Over the next two years, I juggled work, school, and family while pursuing my master's degree in Natural Resources Management. Along the way, I was given the nickname "Mr. Brad" by my classmates. I still smile every time I think of them! They made me feel like one of the gang from day one! With God's help and a lot of hard work, I maintained a 4.0 GPA and graduated in May 2022. Then I tested for and passed the Alabama Registered Foresters Exam. Yes, the six-hour, writing all day, Alabama registered forester exam. You see, what God has planned for you cannot be stopped, and what isn't His will can't be forced.

Fast forward to May 2024. After gaining two years of post-graduation work experience, I received an email from Mrs. Lea Anna Meadows at the Alabama State Board of Registration for Foresters stating that my application to become a registered forester had been approved! Finally, after nearly five years, my journey to become a registered forester was complete! I can't wait to see where God leads me here at the AFC. I truly feel that He continues to answer my mother's prayers over me. She has always prayed Numbers 6:24-26: *"The Lord bless you and keep you; the Lord make his face shine on you and be gracious to you; the Lord turn his face toward you and give you peace. AMEN."*

The Great Alabama 650

By Ryan Gillikin

The Alabama Scenic River Trail (ASRT) was founded in 2007 and established a 650-mile paddling trail from Weiss Lake in Cherokee County to Fort Morgan. This trail is the longest National Recreation Water Trail in the United States.

Starting in northeast Alabama at the Georgia border, the trail crosses Weiss Lake and then follows the Coosa River through Gadsden, passing through a series of lakes and dams, including Neely Henry, Logan Martin Lake, Lay Lake, Mitchell Lake, and Jordan Lake. After the Jordan Dam, paddlers experience a 7-mile stretch of exhilarating white water where the river falls off the Piedmont Plateau. In Wetumpka, the Coosa River joins the Tallapoosa River to form the Alabama River. Paddlers pass through downtown Montgomery and the Riverwalk with its paddlewheel boats. In Selma, paddlers pass under the historic Edmund Pettus Bridge, site of the famous civil rights marches in 1965. Once on the Alabama River, there are three more lakes and dams: Robert F. Henry Lock & Dam, Millers Ferry, and Claiborne Lock & Dam. This series of lakes and dams creates a challenge for paddlers as the lakes have no flow to assist them on their way, and dams must be portaged around.

After passing through Gadsden, Montgomery, and Selma, paddlers get to experience the backwoods of Alabama. Boat traffic is minimal to nonexistent, ramps are few and far between, and cell service is spotty. It is truly a wilderness experience. In Mount Vernon, the Alabama River joins the Tombigbee River to form the Mobile River, and paddlers prepare to enter the Mobile Tensaw Delta, a braided series of creeks and rivers that form the estuary for Mobile Bay. Paddlers cut off the Mobile River on the Tensaw River, then cut through the narrow and twisty Bottle Creek, passing the Bottle Creek Indian Mounds before rejoining the Tensaw River. At the mouth of Mobile Bay, the Delta forms Five Rivers that empty into the Bay. Paddlers take the easternmost river, the Blakeley, as they pass under the causeway and I-10 bridges to begin a 50-mile bay crossing on their way to Fort Morgan. The bay presents its own hazards with shallow mud flats, piers, and obstacles, as well as unpredictable wind and waves. As paddlers approach the end of their journey, the brackish waters of the delta and bay become saltier as they dump into the Gulf. Here, the paddlers complete their 650-mile voyage across the entire state of Alabama.

The Alabama Scenic River Trail has grown since its inception as just one paddling trail to include well over 6,000 miles of navigable waterways in Alabama, which promote paddling, camping, and exploring Alabama's beautiful and diverse waterways.

In 2019, the first 'Great Alabama 650' paddling race was held to promote the River Trail. It has grown every year since and has become well known, drawing paddlers nationally and internationally. The Alabama Scenic River Trail and the Great Alabama 650 have not only led to increased awareness of the unique opportunities to explore and paddle in Alabama, but also the communities along the trail are seeing economic benefits from tourism and the development of local paddling communities.

Several things make this race unique. For one, it is one of the longest paddle races in the world. Racers have 10 days to finish, and because they must traverse such a wide range of conditions, they are allowed to change boats along the way. Many of the portages must be driven around, and as such, each paddler must have a ground support crew that follows them throughout the race to supply them at resupply points, carry all their extra gear, and assist with portages.

In 2024, the race ran for its sixth consecutive year. This was my 5th year to finish the race, and by doing so, I became the third member of the "3250 club." As a lifelong Alabama resident, I feel so fortunate to have such a great event right in my backyard. I have been involved with the race from the first year and was one of only three teams to finish that year. Watching the race grow, I have seen it shine a spotlight on our beautiful state. I travel the country racing and training, and everywhere I go, paddlers have heard of this race. People come from all over to race and train. I have also watched as our local paddling community has grown in response to the race. In the first year of the race, I was the only Alabama resident to finish, but now people from all over the state have finished the race. The overall winner for the past two years, Trey Reaves, is a resident of Florence.

The race is beautiful but grueling. The challenge is too much for many racers, and most years, less than half the field reaches the finish line. For most of the trail, there is little to no flow. Racers earn every one of those 650 miles. Lakes can have challenging wind, waves, and boat traffic; dams must be portaged; navigation can be tricky; and, of course, there is a 50-mile open-water bay crossing at the end. Many paddlers, including me, have pulled out just miles from the finish line when conditions became too dangerous and had to wait for the weather to clear before making it to the finish. The race is 'continuous,' meaning that other than portage times, racers paddle day and night. One of the biggest challenges is sleep deprivation. Paddlers forego sleep to try to get ahead, and after several nights with little to no sleep, they can experience signs of severe sleep deprivation, including hallucinations. It is a contest to see how long you can go without sleep before it impacts your ability to paddle.

A solid ground crew is critical to the success of the racer. The ground crew carries your extra boats, supplies, and food. When a racer gets to a boat ramp, the ground crew will be waiting to give them hot food, change out batteries, clean out the dirty boat, and reset it for the next leg of the journey, as well as provide a tent or camper for some much-needed sleep.

This year will be the 7th Great Alabama 650, and a new lineup of paddlers has already stepped up to the challenge, including returning veterans and new racers. Due to the extreme nature of the challenge, all racers must have a qualifying race to sign up. The race will begin on October 4th and run through October 14th. I will not be racing this year, but you can bet I will be cheering them on.

Each boat has a tracker on it, and you can follow along their adventure on the tracking map and watch as they make their way across the state at 4 mph. Fans can use the map to estimate when paddlers will reach access points such as boat ramps or bridges, or they can go out in a boat or paddle craft to cheer them on, or throw them a soda or banana as they go by. Last year, a boater on Jordan Lake came out while I was suffering in the heat and was struggling to keep going. Watching the map and waiting for me, he threw me a Gatorade and a candy bar. This was just the pick-me-up I needed and gave me the strength to continue. Another year, a paddler came out in the middle of the night to cheer us on as we passed through 'her' stretch of the river. Unlike most races where you can see your competition, you can go hours or even days without seeing another racer on the 650. These fans that come out to cheer us on make all the difference.

More information about the Alabama Scenic River Trail and the Great Alabama 650 can be found at AlabamaScenicRiverTrail.com and on the Great Alabama 650 Facebook page. Be sure to check out the tracker map and watch the Facebook page for updates on the racers during the race.


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Alabama's Covered Bridges

- - A Historic Use of Forest Products - -

By Al Jones, Senior Economic Development Representative, Alabama Forestry Commission

Once a common sight across the United States, covered bridges were favored for their practicality and cost-effectiveness. With lumber being more affordable than other building materials, these wooden structures flourished. The addition of covers helped shield the bridge decks from weathering, significantly extending their lifespan.Between the early 1800s and the mid-1930s, at least 74 covered bridges were constructed on public roads throughout Alabama to facilitate the movement of people, goods, and materials. Today, only 11 of those original structures remain - all in varying states of repair. Some have been carefully disassembled, relocated, and rebuilt at new sites. Remarkably, one Alabama covered bridge is still open to public traffic.

In the mid-1970s, my late father, William Jones, who worked for the Alabama Department of Transportation (ALDOT), was tasked with photographing and documenting the covered bridges still standing at that time. His work was later displayed at ALDOT's main office in Montgomery, honoring the craftsmanship and ingenuity of early bridge builders before the advent of modern construction materials. Sadly, four of the bridges he captured no longer exist:

- The **Tallahatchee Covered Bridge** in Calhoun County was relocated to private property in 1975 and is now presumed lost.
- The **Nectar Covered Bridge** in Blount County was destroyed by fire on June 13, 1993.
- The **Oakachoy Covered Bridge** in Coosa County was destroyed by fire on June 2, 2001.
- The **Lidy Walker Covered Bridge** in Cullman County collapsed in August 2001.

As we approach the 50th anniversary of my father's journey across Alabama, I sought and received permission from the Alabama Forestry Commission to retrace his steps and document the remaining covered bridges. This project serves as both a tribute to the state's rich heritage in forest products and a celebration of the legacy of these remarkable structures. With care and preservation, Alabama's covered bridges may continue to stand for another 50 years or more, offering both historical insight and scenic beauty for generations to come.

Coldwater Creek Covered Bridge | Oxford | Calhoun County

Completed in 1850, the Coldwater Creek Covered Bridge holds the distinction of being the oldest surviving historical covered bridge in Alabama. Measuring 63 feet in length, the bridge originally spanned Coldwater Creek in the rural Coldwater Community. In 1974, the bridge was retired from active use and replaced by a modern structure to accommodate growing infrastructure needs. Recognizing its historical significance, preservation efforts led to the bridge being relocated in 1990 to its current setting at the outlet of Oxford Lake. The City of Oxford maintains and preserves the bridge.

Gilliland-Reese Covered Bridge | Gadsden | Etowah County

Now spanning a small pond within Noccalula Falls Park, the historic Gilliland-Reese Covered Bridge was constructed in 1899 in Reece City. At that time, the 85-foot-long bridge crossed Little Wills Creek. Though its name was later misspelled, the bridge was originally named after Reece City. In 1966, the bridge was generously donated to the City of Gadsden by the Gilliland family. The following year, it was relocated to its current site and restored. Today, the bridge is preserved and maintained by Noccalula Falls Park.

Alabama Covered Bridges

(Continued from page 27)

Waldo Covered Bridge | Waldo | Talladega County

Constructed in 1858, the historic Waldo Covered Bridge stretches 115 feet across Talladega Creek. Located on private property, this bridge was originally built to provide access to a nearby gold mine during a time when mining activity played a significant role in the local economy. Unfortunately, time has not been kind to the Waldo Covered Bridge. By the 1960s, decades of wear and exposure to the elements had taken a serious toll on the aging structure. The Alabama Department of Transportation ultimately condemned the bridge, citing its advanced state of disrepair and the safety hazards it posed. Today, the bridge stands in a fragile and deteriorating condition, with no organization or governmental body responsible for its preservation or maintenance. Without urgent restoration efforts, the bridge remains at risk of imminent collapse.

Swann Covered Bridge | Cleveland | Blount County

Constructed in 1933, the Swann Covered Bridge spans the Locust Fork of the Black Warrior River. Measuring an impressive 324 feet in length, it holds the distinction of being the longest historic covered bridge in the state. Due to safety concerns following vehicular accidents that occurred at the site in 2018 and again in 2021, the bridge was officially closed to automobile traffic in 2022. The Blount County Commission is responsible for the bridge's ongoing maintenance and preservation efforts.

Kymulga Covered Bridge | Childersburg | Talladega County

Stretching 105 feet across Talladega Creek, Kymulga Covered Bridge remains in its original location, now within Kymulga Park. Constructed in 1861, it was purchased by the City of Childersburg in 2011 to ensure continued public accessibility. Since then, the City has taken on the responsibility of providing regular maintenance and care.

Old Union Crossing Covered Bridge | Mentone | DeKalb County

Originally constructed in 1863 to span Otter Creek near Lincoln, Alabama, the 90-foot Old Union Crossing Covered Bridge was relocated to its present setting on private property in Mentone in 1972. It now stretches across the West Fork of Little River. Today, it serves not only as a scenic landmark but also as a functional connection between the Shady Grove Horse Ranch and the nearby Cloudmont Ski Resort. Sincere thanks are extended to the staff of Shady Grove Horse Ranch for granting access across their property, which made it possible to capture this image. Ongoing maintenance and preservation of the bridge are carried out by its private owners.

Horton Mill Covered Bridge | Oneonta | Blount County

The Horton Mill Covered Bridge is a remarkable historic structure that spans the Calvert Prong of the Little Warrior River. Constructed in 1934, this 220-foot-long bridge stands approximately 70 feet above the water, earning it the distinction of being the highest covered bridge in the United States. For nearly nine decades, the Horton Mill Covered Bridge served as a vital passageway for motor vehicle traffic, remaining open until 2022. Today, the bridge is preserved and maintained by the Alabama Historical Commission.

Alamuchee-Bellamy Covered Bridge | Livingston | Sumter County
Originally constructed in 1861, the bridge measured 88 feet in length and was first built to span the Sucarnoochee River just south of Livingston. In 1924, it was replaced by a newer structure at its original location and subsequently relocated approximately five miles away to serve as a crossing over Alamuchee Creek. The bridge continued to function in this new location until 1958, when it was replaced once again by a modern bridge, left to deteriorate without maintenance. In 1971, it was relocated for a third time - to the campus of the University of West Alabama in Livingston. There, the bridge underwent a full refurbishment and was repurposed as a pedestrian bridge for students crossing over Duck Pond, where it remains in use today. The Sumter County Historical Society now oversees the preservation, maintenance, and upkeep of the bridge.

Clarkson-Legg Covered Bridge | Bethel Community | Cullman County
The Clarkson-Legg Covered Bridge is a historic 270-foot wooden structure that spans Crooked Creek within the grounds of Clarkson Covered Bridge Park. Originally constructed in 1904, it served for nearly six decades as a vital crossing for vehicular traffic until it was officially closed to vehicles in 1962. The Cullman County Commission oversees its ongoing maintenance and preservation.

Salem-Shotwell Covered Bridge | Opelika | Lee County
The Salem-Shotwell Covered Bridge now spans Rocky Brook within the Opelika Municipal Park. Originally constructed in 1900, the bridge measured 76 feet in length and crossed over Wacoochee Creek near the Salem community. In 1994, the bridge was closed to traffic and subsequently abandoned due to its deteriorating condition. By the time it was salvaged, the bridge had fallen into severe disrepair. In 2007, thanks to a dedicated restoration effort, the remaining viable materials were used to reconstruct a 43-foot section of the original structure at its current location. Today, the Salem-Shotwell Covered Bridge is maintained and preserved through the collaborative efforts of the Opelika Kiwanis Club and the City of Opelika.

Easley Covered Bridge | Rosa Community (Oneonta) | Blount County
Spanning a length of 95 feet, the Easley Covered Bridge crosses the Dub Branch of the Calvert Prong of the Little Warrior River. Originally constructed in 1927, the bridge served local traffic for over eight decades before being closed in 2009 for safety reasons. Following an extensive restoration in 2012, it was reopened and now holds the distinction of being the only remaining historic covered bridge in Alabama still open to vehicular traffic. The Blount County Commission oversees its preservation and ongoing maintenance.

Alabama Stands Out at German Industry Fair

By Jennifer G. Williams
Reprinted with permission from
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Photo by Rainer Jensen

In a powerful display of collaboration and economic ambition, a delegation from Alabama recently traveled to Germany to participate in LIGNA, a world-leading trade fair for the woodworking and forestry industry. Held in Hannover every two years, LIGNA draws thousands of exhibitors and visitors from across the globe.

This year, Alabama stood out as the only U.S. state with a dedicated presence, highlighting the state's growing reputation as a global player in the forestry and manufacturing sectors.

Representatives from the state attended the last show two years ago after a decades-long absence. That outing was successful enough for the state to return this year with a "Dream Team" of sorts, representing a cross-section of public and private interests. Members of the Alabama Department of Commerce, Alabama Forestry Commission, Alabama Industrial Development Training (AIDT), and even representatives from the state's utilities sector came together to promote Alabama's strategic advantages.

Their goal was twofold: to forge new international business connections and to demonstrate why Alabama is, increasingly, the place to do business.

Bringing Alabama to the Global Marketplace

"European business is very important to the state and its business environment," said Nick Shaver, Business Development Specialist with the Alabama Department of Commerce. "We are here at the show to not only expand our relationships with companies that already do business in the state but to identify and cultivate companies that would do well to make the move to Alabama."

The primary targets for connections at LIGNA are in the forestry industry, said Shaver, since that is a large part of the state's strategic plan. "It's a legacy industry…one in which we think we can continue to be successful. Even though we're cutting down a lot of trees, we have the availability of resources that these companies will need to be successful in our state."

"Alabama has more than 23 million acres of timberland," said Al Jones, Senior Forest Economic Development Representative with the Alabama Forestry Commission, "93 percent of which are privately owned." And even with the current $36 billion annual forestry industry, the state's forests still grow an average of 2.5 percent a year — an advantage that other states simply can't compete with, he added.

The state has long been an attractive destination for wood product manufacturers, but recent years have seen a surge in interest from international firms looking for stable, business-friendly environments in the United States — and Alabama is making sure it stays top-of-mind.

And while the forestry industry is primarily being targeted at LIGNA, other industries are taking notice of the state, as well, said Shaver. "It's been interesting here with the technology and advanced manufacturing companies we've spoken with...it presents some unique economic development opportunities for us as a state."

Public-Private Collaboration at Its Best

What set Alabama apart at LIGNA was not just the quality of its pitch, but the strength of its collaboration. The booth served as a hub where economic developers, trade specialists, and utilities experts worked in tandem to answer questions, share materials, and engage in targeted outreach.

"The great thing is, everybody wants to be here; everybody thinks this is a great idea; everybody thinks that working together as a team, we're going to make more progress," said Jones.

Questions asked at the show ranged from "What type of trees do you have?" and "What type of workforce is available?" to "What type of sites are available?" and "What do the shipping logistics look like in the state?"

"What we're really trying to do is drive investment," said Joel Watts, Senior Project Manager, Economic Development with Alabama Power. "Bring new jobs, bring new industry to the state that's going to help the overall good of the state of Alabama. Obviously, the end benefit of a new customer coming into our service territory is a new customer that is going to need electrical service."

"But once they say yes, we want to come to Alabama, okay, where is the best site for them?" he said. "And that's been the biggest challenge in Alabama — trying to identify new sites that will work well for these companies. wanting to locate here."

Driving economic development, increasing jobs, bringing new jobs, bringing investment to the state is the ultimate goal, he added. "And for this industry sector in particular, it's opportunity that we can bring throughout Alabama, but even more particularly in rural Alabama."

Vince Perez, Director of Economic Development for Southeast Gas, says many visitors were intrigued by the low cost of utilities available in the state. "Compared to what they may be paying here in Europe, it is a really positive selling point."

Alabama Industrial Development Training (AIDT), the state's renowned workforce development agency, played a key role in promoting Alabama's workforce training capabilities. Known for its customized, industry-specific training programs, AIDT helped reassure European manufacturers that Alabama not only has the resources and infrastructure but also the talent pipeline necessary to support growth.

"You want a vision, an economic development…you must have a workforce attached to it," said Bobby Jon Drinkard, AIDT Assistant Director. "Because here's the thing: Incentives will run out. That good deal you got only lasts for 10 years. It's going to run out. But what will be sustainable and what will make a company proud? A well-trained and sustainable workforce. And we have it here in Alabama."

"We let these companies know that if they come to Alabama, they will get support from AIDT through recruitment, assessments, and training — at no cost to them. That's a powerful benefit."

All of this, combined with the state's strategic location, access to rail and river transportation, and the Port of Mobile, selling the state to international companies has proven to be easier than one might think.

"There have been plenty of times where we kind of went into a meeting thinking we would have to sell the state, and the people we are speaking with are like, 'No, no, we know about Alabama.' So whether it's short-term or long-term, there's definitely interest there," said Shaver.

Global Interest, Local Impact

While the team's presence in Germany was focused primarily on international outreach to those in the forestry industry, the implications are deeply local. New business relationships formed at LIGNA have the potential to drive job creation, support rural communities, and strengthen supply chains across Alabama in various industries.

"Our single goal here is to make sure Alabama is visible and that the value proposition is presented to companies, from sawmills to equipment manufacturing," says Thomas Tyson, PowerSouth Energy Cooperative's Economic Development Representative. "We've had good conversations with several companies and people from different countries, making those connections and selling Alabama to people that may not be familiar with us."

"Because with everything going on — with tariffs and everything — a lot of companies are kind of rethinking and saying maybe we should have a presence in the United States," he added. "The unknown is what's scary, but we feel the timing is right. We want to have these conversations now so that Alabama is on their minds when they are looking to expand."

To that end, Alabama employs a 'secret weapon' in Christoph Doerr, the European Office Director of the Alabama Department of Commerce. "Christoph lives in Stuttgart, Germany, and helps not only with the communication side of things, but also with telling European businesses about doing business in Alabama," explains Shaver. "He owned a German company in Alabama for several years and can speak from firsthand experience about locating in our state."

Alabama's proactive international engagement strategy is part of a broader push to attract high-quality, long-term investments in industries that align with its natural assets and workforce strengths. By positioning itself on the global stage, the state is making clear that it's not just open for business — it's ready for the future.

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TREES OF ALABAMA

Blue Ash

(Fraxinus quadrangulata)

By Greyson Matthews, FIA Forestry Management Specialist, Alabama Forestry Commission

Blue ash (*Fraxinus quadrangulata*) is a deciduous hardwood tree native to North America, particularly in the Midwest and parts of the central United States, but also occurs in isolated populations in north Alabama. In the Southeast, blue ash will most commonly be found on dry, rocky slopes in mixed hardwood forests.

Blue ash is most easily identified by its square-shaped stems, which are a feature unique to this species. Other ash trees will have rounded twigs, while the twigs of blue ash will have four distinct, flattened sides. This distinctive characteristic is where this tree gets its name, *quadrangulata* meaning four-angled in Latin. The common name, blue ash, gets its name from the blueish-gray tint of the inner bark.

The leaves of blue ash closely resemble the leaves of other ash trees common in Alabama, such as green ash and white ash. Blue ash has pinnately compound leaves with opposite leaf arrangement. It will have seven to eleven leaflets, most commonly nine. The bark is gray and has scaly ridges with somewhat flattened plates. This tree will produce an oblong-winded [curved] seed, known as a samara, which is dispersed by wind. Blue ash typically grows to a height of 50 – 70 feet in its native range; however, it will be smaller across most of the Southeast.

The wood of blue ash is used similarly to other ash trees, with baseball bats being one of the prized products of the dense wood. Blue ash also plays an important role in biodiversity. This species is more drought-tolerant than many other ash trees and can grow in rocky, compacted soils where many other species couldn't survive.

All ash trees, including blue ash, are highly susceptible to the emerald ash borer, an invasive, bright, metallic green beetle that has caused widespread devastation to ash trees across North America. First discovered in Michigan in 2002, the emerald ash borer has rapidly spread and become one of the most destructive forest pests in recent history. The emerald ash borer targets ash species, feeding on the tree's cambium layer. Adult beetles lay their eggs on the bark of ash trees, and the larvae burrow into the tree once they hatch. Infested trees weaken, become stressed, and eventually die, often within two to three years after infestation. More information on the emerald ash borer can be found on the Alabama Forestry Commission website under Forest Health/ Insects and Disease.

Photo by Rob Routledge, Bugwood.org

Photo by Richard Webb, Bugwood.org