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The Alabama TREASURE Forest Association is dedicated to promoting good forest stewardship, educating others about responsible forest management and improving the forests of our state and nation. These lands are managed for many resources, including wildlife habitat, pine and hardwood timber, clean water, recreation opportunities and beautiful scenery. When utilizing a multiple-use management strategy, all of the benefits a forest provides are enhanced.

We are passionate about making our land better for the next generation. In a very real way, the future of Alabama's forests rests in the hands of landowners and like-minded individuals who support good forest stewardship. You can be a part of that effort. Purchase an "I'd rather be in the woods!" tag and support education and outreach efforts to raise awareness about the wonderful possibilities of sustainable land management.





A Publication of the Alabama Forestry Commission

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On the Cover: Little River Canyon National Refuge in Cherokee County Photo by Joe Watts

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











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Alabama's TREASURED Forests (ISSN 0894-9654) is published by the Alabama Forestry Commission, 513 Madison Avenue, Montgomery, Alabama. Telephone (334) 315-8019.

For address changes/new subscriptions, email: tfmag@forestry.alabama.gov

Bulk rate postage paid at Montgomery, Alabama.

POSTMASTER: Send address changes to: *Alabama's TREASURED Forests*,
P.O. Box 302550, Montgomery, AL 36130-2550.

The publication of a story or article in this magazine does not constitute the Alabama Forestry Commission's endorsement of that particular practice, product, or company, but is an effort to provide forest landowners of Alabama with information and technical assistance to make informed decisions about the management practices they apply to their land.

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Message from the STATE FORESTER

hile I don't do this often enough, today I am going to brag on the people who comprise the Alabama Forestry Commission. They are here to serve you in many capacities, whether developing a management plan, fighting a wildfire, organizing a landowner tour, installing fire lanes, or assisting in the cleanup after a natural disaster.

Our Forestry Academy is a great example of their dedication. The original version of this program for new employees ended in the '90s due to budget constraints. The re-instituted course gives our new employees consistent training in the "AFC way." These field and program employees spend a month in the fall and one in the spring at the Solon Dixon Forestry Education Center in Andalusia. In the fall they learn to conduct prescribed burns, fight fires, and safely operate our heavy equipment. In the spring, classes focus on forest management topics such as dendrology, measurements, map making, and management plan development.

Two groups of people make the Academy successful: the instructors and the students. The instructors are our veteran employees who want to continue to see the agency excel. They devote a considerable amount of time, away from home and family, to help our new recruits learn their jobs. While at the Academy this fall, I spoke at length with many of the instructors. Without exception, they were thankful for the opportunity to spend time with our 'newbies.' They understand that these new folks are the key to our future.

I realize from my own experience in learning to operate a bulldozer that this training is an exercise in patience for the instructor. I could occasionally see the frustration in my trainer's eyes, as I was a slow learner. Regardless of his hapless student, he stuck with me and helped me learn to operate the equipment safely and somewhat efficiently. That's the dedication our instructors demonstrate. Whether it's lighting fires or fighting fires, they are committed to training the next generation of AFC family members.

The students at the Academy are our newest employees who are eager to learn. These men and women give me hope for the future of the Alabama Forestry Commission. This younger generation is sometimes labeled as spoiled and self-centered, but that's not the case with our first- and second-year employees. They are dedicated to their jobs and ready to serve the people of this state. They too give up a great deal of time and are put in difficult situations. However, they understand the importance of learning to operate a bulldozer correctly, as it may one day save someone's life, or even their own.

Governor Ivey challenged the previous class during her keynote address at their graduation, "I want each of you to understand the importance of the job you are

about to undertake . . . It is imperative that we remain steady and ready to assist and educate landowners on issues such as fighting wildfires and conducting controlled burns." As she congratulated them for staying the course of the program she said,



"each of you demonstrated your grit, resilience, and dedication to protecting Alabama's forests." She understands the importance of the AFC's mission and the role our employees play to help Alabamians.

Forest landowners in Alabama can rest comfortably knowing that the employees of the AFC are getting great instruction from well-qualified people. We have an amazing group of men and women who are dedicated to serving Alabama.

Riel Octos

Governor Kay Ivey

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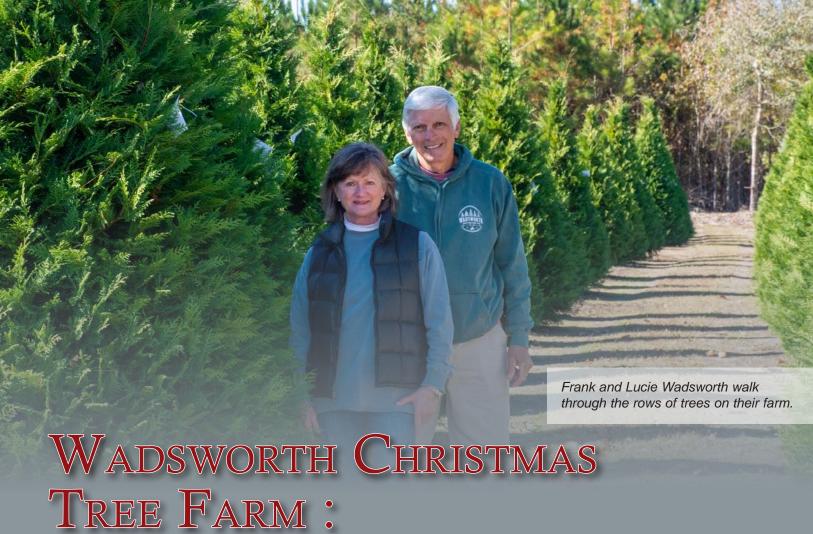
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The Alabama Forestry Commission supports the Alabama Natural Resources Council's TREASURE Forest program. Alabama's TREASURED Forests magazine, published by the Alabama Forestry Commission, is intended to further encourage participation in and acceptance 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 Timber, Recreation, Environment, and Aesthetics for a Sustained Usable REsource.



Investing in Family

By Cole Sikes, Communications & Public Relations Specialist, Alabama Forestry Commission

veryone knows that unmistakable aroma . . . Christmas trees. For many people it is a therapeutic sensory expereminisce upon dear memories. Even as you are readartificial re-creation is ever as pleasing as the real thing. Most importantly of all, Christmas trees are a sign that the holiday season has begun.

Located just outside of Wetumpka within Elmore County lies a treasured family business, Wadsworth Christmas Tree Farm. Frank and Lucie Wadsworth have been helping families find 'that perfect Christmas tree' for more than four decades. The Alabama and seems to only get bigger and better each year.

Frank gained his passion for Christmas trees in the 1970s when his father-in-law gifted him with approximately 2,000 Virginia pines in 1976 to plant on 2 acres of their property. After planting them, he began caring for the trees including pruning their branches by hand; however, Frank noticed that the health of his trees was declining. When he reached out for help from the Alabama Cooperative Extension System (ACES) office in

Elmore County, his local agent informed him about potential fungi and diseases that could affect the new trees. His agent also invited him to an ACES meeting in Auburn about owning and operating tree farms. He learned about recommended fungicides and pesticides to aid his 'crops' and began applying them, ultimately yielding positive results.

The Wadsworths sold their first Virginia pine in 1979 out of a 12' by 24' lean-to near the road where they housed their stock. The business gained popularity as well as growth each year, causing Frank to build more sheds to keep his trees for sale. "I said Frank jokingly. In the first several years of business they would sell anywhere from 50 to 200 trees. The Christmas tree from the road in 1985 and relocate it deeper into their 12-acre

Frank recalls that during that period, Alabama was home to hundreds of Christmas tree growers. It used to be a much more



(Continued from page 5)

common agritourism feature of the state compared to present day. The Wadsworths were also members of the Alabama Christmas Tree Growers Association. This group would meet annually to discuss growing techniques and the overall market for Christmas trees each year. As the number of Christmas tree farms dwindled, the association disbanded. However, the Wadsworths joined another group at the regional level, the Southern Christmas Tree Association, in which farmers from Alabama, Mississippi, and Louisiana practice the same information sharing as well as hosting events and tree competitions in each state.

Eight fields located on the 12-acre property are used to grow Murray cypress, Arizona cypress, eastern red cedar, and Virginia pine on rotation. It typically takes four to five years life span for each field to sell and replant, providing a steady business model for the family. They also order the popular Fraser fir species from North Carolina to sell as well, giving customers a wide variety to choose the perfect tree for their homes.

Frank and Lucie enjoy seeing their family pitch in on the farm. They have three children, Jacob, Josh, and Carrie who love to help out by pruning trees, caring for the grounds, and simply enjoying the land as a whole. Jacob's wife, Hannah, and Josh's wife, Lauren, also lend a hand. It is truly a 'family business.'

Over the years, the farm has also hosted many schools from the tri-county area. Frank says that each class looks forward to



The team at Wadsworth Christmas Tree Farm work hard to meet the demand of the holiday season.

their annual visit because they get to leave the classroom and learn about the Christmas trees as well as take one back to their classroom. They also enjoy 'tree rides' through the property, playing on the playground, and exploring the seemingly endless rows of trees.



In 2020, the Wadsworths established a brand-new storefront in the form of a 72' by 40' decorative barn complete with gift shop, sales counter, and accessories such as Christmas tree stands and wreaths. You may even grab some hot chocolate for those cool fall mornings. When asked why he made the expansion he claimed that he wanted to invest in family. This mindset has been the basis of the farm ever since their start 45 years ago.

Today, the business continues to boom each season, selling approximately 1,500 to 2,000 trees every year. The heat of the season begins the weekend immediately following Thanksgiving in which Frank refers to as 'green Friday' because of the sheer number of trees that leave the farm. Last year, 350 trees were purchased during opening weekend while hosting numerous families, totaling more than 1,000 people.

Frank and Lucie recall children who came to the farm with their parents over the decades, who are now grown with their own families, who continue to pay them a visit each year, serving multiple generations. This tradition provides the drive for the Wadsworths to make the tree farm an enjoyable place to visit each holiday season.

The beauty of Wadsworth Christmas Tree Farm is not only the trees they provide for families in central Alabama, but also what can be accomplished when goals are combined with a landowner's dream. Patience and hard work are the recipe according to Frank and Lucie. There may be long working hours and some hardships along the journey, but their farm is a shining example of how wonderful things take time.



The storefront at Wadsworth Christmas Tree Farm has evolved in great detail since their start in 1976.



Alabama Forestry Commission

afety . . . it's almost a cliché. We all think about safety. We all understand safety. But do we practice safety, particularly on prescribed burns? Let's start with a little quiz. When you get into your car to go to town, you should a) buckle your seatbelt, b) text while driving, c) look at Facebook while driving, d) put on makeup while driving to save time. We all know the correct answer is 'a' but how many of us are guilty of b, c, and d?

Some of us burn on a regular basis, while others maybe every three to five years or more. In any profession, practice maintains proficiency. So, what can you do to be safe while conducting a prescribed burn? What are some things you can practice that ensure your safety? In this article, I will discuss several important rules that we as burn practitioners should always follow to stav safe.

As I remind our employees, a good employee is always learning. Burning is a science and rarely are all burns going to perform the same. Learning how to be proficient and fine tuning your capabilities begins with knowledge. So, let's look at a few important aspects of burning that will make you a safer and better prescribed burner.

Certified Prescribed Burn Manager

Alabama is a right-to-burn state and you are not required to be a certified practitioner. However, the Alabama Prescribed Fire Council and the Alabama Forestry Commission (AFC) host certified prescribed burning courses every year. This class meets the requirements of the Alabama Prescribed Burning Act by discussing fire behavior, methods, safety, burn plans, fire laws, and most importantly, smoke management. Looking more into the

Alabama law, it states that in order for a prescribed burn to have liability protection, it must be supervised by a Certified Prescribed Burn Manager. One of the best aspects of this course is networking with other burners and hearing their 'war' stories. You can find out more about this course by visiting the AFC website at www.forestry.alabama.gov, looking under the 'Protect' header, and selecting 'Burn Manager.'

Laws are Laws

Get a permit! Knowing and understanding a few laws before you burn can help you become a safer burner. You must obtain a burn permit before you conduct any prescribed burn over onequarter acre or within 25 feet of natural fuels, such as woodlands or grasses. Burn permits are free to the public, and you are not required to be a burn manager to obtain a permit. However, it is an advantage to have your burn manager certification so that you can go online to obtain your permit. This process is pretty simple and fast.

If you are not a certified prescribed burn manager, you must call in and talk to a dispatcher. Please remember when you call dispatch, they are extremely busy during certain times which may coincide with the time you are desiring a permit.

You will need to know the location of the burn, providing the coordinates in latitude and longitude, formatted in decimal degrees. These burn permits are utilized by our staff to record where planned fires are supposed to be located. Otherwise, fire departments or our crews will show up to suppress the fire! Having a correctly-filed permit saves everyone a lot of headache.

Controlling the Fire

You should always have a control line established around the fire area. This can be a line installed by a bulldozer or farm tractor with a disk. Backpack blowers and rakes may be used where equipment is limited. A good burn always has a safe anchor point and a well-established backfire to control the fire.

State law also requires the burner to have adequate manpower and suppression efforts to control the permitted fire. This will depend on the site and the complexity of the burn. Terrain, fuels, and weather all play into what you will need to safely conduct a burn. Along with topography, fuel arrangement, winds, and humidity greatly determine what you will need to stop a fire that is out of control. A nice square 40-acre tract that is flat-to-gently rolling with humidity in the 30-40 percent range and winds less than 10 mph will be fairly simple to control with light suppression equipment. Always have a backpack blower and an ATV with a water tank on site for fast reaction response to a jump. However, when the wind ramps up to 20 mph and humidity drops into the 20s, this equipment will not be sufficient. You will need a larger water source with a sticking agent, and maybe a farm tractor with a disk or a small bulldozer. The larger the burn, the more personnel you should have on site to monitor the burn and set active fire.

Don't Go Anywhere

You must always stay with your fire *as long as it is burning*. This is when most of our calls come in, to suppress what was a prescribed burn that is now a wildfire because it has escaped its control lines, or a passerby noticed no one was with the fire. Please note that it is a good idea to notify the fire department covering the area of your intentions of burning and how to call you. Often, you may have a burning stump in the interior part of the stand that will be visible once night falls and appear to be a 'raging' fire to a bystander. Make sure you can be reached or found.

Mop-Up

This is a term we use in the wildland fire world, but you can save yourself a lot of work and maintain your safety measures by ensuring smoldering stumps and piles along the fire break are smothered in dirt so the fire can't escape. Also, cut down or push over any dead trees (snags) that could catch fire, fall over, and set fire across your firebreak.

Protect Yourself

Although expensive, fire-retardant clothing is always best to wear when conducting burns. If you do not have this nonflammable material, you should wear all cotton pants and shirts. Long-sleeves are preferred. Anything with spandex or polyester can melt to your skin if you get too close to the flames or end up trying to fight a fire. If you do a good bit of burning, invest in a good quality set of fire clothing to protect yourself. Also, leather gloves, a hat, and safety glasses are key components of safety wear that protect you from the worst elements of fire.

I Love it When a Plan Comes Together

Always have a plan when conducting your burn. Communication is key and knowing the number to call in an emergency should be a crucial part of your plan. Also, sketch out a rough draft of the property and list an ignition plan to carry out your burn. Communicate this information to all personnel on your burn so that everyone has a clear understanding of certain points along the tract in case you need to tell someone where to go. "Over by the mudhole" is not a good reference point. Define your reference points on the map so if there is a jump you can report "between point C and D before the creek." List your planned weather conditions and obtain the weather on the tract at the time of the burn.

There's an App for That

I always like to leave you with some tools you can use to be a safer burner. The web and smartphones have provided us with a wealth of knowledge to help plan and conduct a safe fire. Visit the AFC website; under the header Protect, select Fire Weather Resources to find a few sites to gather weather data. Learn how to obtain a spot weather forecast for your burn by getting a more accurate forecast for the area from the National Weather Service (NWS). When using the NWS website, ensure you are looking for weather for your correct location. It will discuss weather per the county reporting zone. A simple search in Google Play Store or Apple Store will give you other options on apps to determine weather.

We should not only talk about safety, but also ensure that we are practicing it. That includes paying attention to what we are doing, as well as how we are doing it. When I read about accidents concerning boating, aviation, and firefighting, in many instances an accident is built on a trail of compounding errors. When we don't think and plan for safety, that is when it often rises and bites us. Stay safe.



AFC Training & Safety Director Brad Lang consistently checks his fire lanes during a prescribed burn.



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Growing the Next Generation

By Joel Bartlett, Forestry Specialist, Marion County Alabama Forestry Commission

couple years ago I received a phone call from Tom McRae, a gentleman whose family I've had the pleasure of knowing since long before beginning my career with the AFC. More than 22 years ago, I coached his son, Jason, in baseball. The reason for the call was that he needed advice on 52 acres of cutover timber that had recently been chemically site prepared. He explained that it was actually Jason's tract of land, so he wanted to take the lead on it.

Although this was Jason's first replanting project – what might seem like an expensive and time-consuming project for most 30-year-olds – he welcomed the challenge. His parents, Tom and Helen, had always instilled a strong work ethic in Jason. Growing up on the family farm, he enjoyed hunting deer and turkey from a very young age. He was also required to help with daily chores. With guidance from his father, he learned the importance of timber management and being a good steward of the land. Thinning, prescribed burning, and harvest plans were some of the forest management practices they utilized to benefit from the farm's investments. Following high school, Jason attended the University of Alabama. After receiving his degree in Civil Engineering, he moved to Texas and worked as an engineer at Halliburton. Now back in his hometown of Hamilton, Alabama, he works for the Alabama Department of Transportation as a project engineer. Along with his wife, Brittany, and their son, Henry, Jason is back on the family farm raising cattle and growing pine trees.

After a failed attempt at chemically site preparing the tract and burning less than an acre, Jason made the decision to purchase a used bulldozer. Utilizing the straight blade on the dozer and running the blade 6 to 8 inches off the ground, he pushed the vegetation down enough without removing the topsoil for the planters to gain access to plant trees. In many cases, this activity increases hardwood competition, therefore a chemical herbicide release was planned for that next spring after the trees were planted.

Finally, after missing two planting seasons, the loblolly pine tree seedlings went into the ground in March of 2018. That following spring, an herbicide release was sprayed to limit hardwood competition. Today, after three growing seasons, the trees are thriving. Jason's persistence is paying off.

Educating the younger generation about the essentials of good forest management is so important. Jason had learned from a young age the value of sound forest management and investing in this renewable resource. Here on this Alabama property, the McRae family now spans over three generations from Jason's father to his son, Henry. There will come a time when Jason will inherit what his father has worked so hard for. With the knowledge he has obtained from hands-on experience, he has already inherited a whole lot more than just land.



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Trees Provide a Welcome Break from Stress

By Dale Dickens, Urban Forestry Coordinator and Katie Wiswall, Urban & Community Forestry Partnership Coordinator, Alabama Forestry Commission

or most of the past two years, we have experienced COVID anxiety, peaceful yet stifling isolation, and the advent of Zoom fatigue. This article encourages you to think about what a simple *treasure* we have . . . in trees. Even this edition of *Alabama's TREASURED Forests* is made from paper; paper that comes from trees. Trees provide shade from summer sun and have a beauty that is natural and uniquely their own.

Tall stately trees all around Alabama capture particulates, clean the air, hold the soil that purifies our water, and provide many other benefits, day in and day out. Research shows that simply sitting and looking at trees reduces blood pressure, as well as lowering the stress-related hormones cortisol and adrenaline. Trees are an amazing creation. They should be celebrated for the way they improve our lives. Fortunately, insightful people in our past recognized the fact that trees should be planted, protected, and acknowledged for the benefits they provide.

In 1854, J. Sterling Morton and his wife were new residents in the Nebraska Territory and missed the trees they had enjoyed in Detroit. They missed the calming effect of trees. They missed the simple utility of trees where they slowed the winds to save their soil and yielded fuel for stove and hearth. To ease this longing and better their community, the Mortons began writing news articles and holding small tree planting events. Over the course of years, their efforts led to the organization of what is now known as the first "Arbor Day," which was held on April 10, 1872, in Nebraska. It was a great success from the start with more than a million trees planted. Arbor Day has continued to grow in popularity and is now celebrated in all 50 states by tree plantings, community events, and seedling distributions.

Alabama is no exception, celebrating Arbor Day since 1887, and in recent years distributing 40,000 seedlings of various native tree species annually. While we continue to celebrate national Arbor Day with the rest of the nation, now observed on

the last Friday in April, this is not the best time to plant trees in Alabama. Four organizations made a request to the Alabama legislature to create an "Arbor Week" allowing more time for civic celebration of trees and moving the dates to a time more appropriate for planting. Those organizations were the Alabama Forestry Commission, the Birmingham Beautification Board, the State Board of Education, and the State Garden Club. In 1975 the Alabama Legislature responded to their request by passing a legislative act creating Alabama's "Arbor Week" to be held during the last full week of February, which is a great time to plant trees.

The celebration of Arbor Week continues today. In 2022, communities across Alabama plan to gather for tree events centered around Arbor Week, February 20-26. The pictures in this



At the 'Hoops for Trees' event in Auburn at Sam Harris Park, 21 trees were planted by students from Auburn University and other groups.









article from past Arbor Weeks show examples of what may be expected. There were more than 48 events across the state in 2021. They included traditional tree plantings, seedling distributions, tree poster contests, students reading essays on trees, and proclamations read at public events. The weather was cool and clear for most gatherings, giving masked crowds ample room to admire the trees and share the benefits of being outdoors.

Arbor Week 2021 did have one twist, thanks to the COVID-19 restrictions. The recommendation for public distancing caused an increase in the number of 'drive-through' seedling distributions. Drive-through distributions, where citizens remain in their cars and are handed their tree seedlings by masked volunteers, were seen in Gulf Shores, Springville, Gardendale, and Robertsdale. While this method requires additional planning, it worked so well that several cities may adopt this as their 'new normal.' It will be interesting to see if the drive-throughs persist after the viral threat passes.

Arbor Week is enjoyed every year in Alabama. It is a time to plant trees, walk the natural areas within our communities, and step back to marvel at the beauty that a single tree, or a full forest, bring to our everyday routine. Take a step outside to a place where you see trees, and may their beauty inject a moment of calm in these trying times. If your day is stressful, take time to admire one of God's finer creations, the tree.



People arrive early for their tree seedlings on a foggy morning in Orange Beach.



AFC Forester Jamie Segroves delivers a new tree to a local citizen during a 'drive-through' seedling distribution at the Troy Sportsplex in Pike County.

See #HealthyTreesHealthyLives for more information on tree benefits to human health.





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By Cole Sikes,

Communications & Public Relations Specialist, Alabama Forestry Commission

estled among the rolling hills and towering timber of Coosa County lies the community of Weogufka. This area is known for its scenic views, winding roads, and peaceful southern charm. To the average passerby, it may seem like just another town to pass through on the way to your next destination. If you happen to stop and gaze across its hilltops, it is likely that you will spot a one-of-a-kind landmark with a story to tell. Even though Weogufka has a population of approximately 300 people, this historical hamlet has much more to offer than what meets the eye.

Just southwest of the town of Weogufka is Flagg Mountain, a significant physical feature on the Alabama landscape located within Weogufka State Forest. This property consists of 240 acres of upland hardwood, some impressively massive and mature longleaf pines, and an abundant variety of wildlife. It belongs to the state of Alabama and is managed by the Alabama Forestry Commission (AFC), the state agency tasked with protecting the state's 23 million acres of timber land. This ownership includes the prized beacon of this forest, the Flagg Mountain fire tower, perched atop Flagg Mountain which is elevated at more than 1,100 feet above sea level. The structure is a

living piece of history with walls more than two feet thick made of pure stone and earth gathered from the surrounding forest. This gentle giant was once used as a critical part of protecting not only Weogufka State Forest, but also forests across the entire state.

The tower and the state forest date back to the 1930s when the property was acquired by the state with aspirations of building a new state park. When the Great Depression hit the United States, jobs were nearly impossible to come by. In an effort to inject jobs back into the economy, President Franklin Delano Roosevelt established several federal workforce programs. One of these was known as the Civilian Conservation Corps, or the "CCC." The organization's main objective was to construct housing, buildings, monuments, and other necessary structures at the time. Composed of 216 men from New York and New Jersey, CCC Company #260 was tasked with creating a state park in Weogufka.

Original plans for Weogufka State Park contained picnic areas, a beach beside Weogufka Creek, swimming pools, 11 cabins for housing, a caretaker's home, and an observation tower where visitors could see for endless miles in a 360-degree view

from the fire tower cab. Using local stone and native longleaf pine, CCC workers constructed the massive lookout tower and five log cabins. However, the project ended in 1935, and construction was never completed.

The Alabama Forestry Commission, approximately one decade after being established as a state agency, took ownership of the new property and utilized it for protecting Alabama's forests. For more than 40 years, the tower was used as a lookout point to spot forest fires in the 'pre-airplane' era of wildfire detection. On a clear day, Flagg's elevated views allowed forest rangers to see across seven counties. Because of its sheer height, the structure was also used as a radio relay for the AFC's radio communications for all of north Alabama.

After the AFC began utilizing aircraft for wildfire detection, the tower became obsolete and was decommissioned in 1989. The land and tower were leased out to a volunteer organization which began restoration work on the grounds. In 1998, the tower was listed as number 250 of 1,000 fire tower lookouts on the National Historic Lookout Register because of its aesthetics and historical value, an accolade it shares with only one other lookout location in Alabama.

Today, Flagg Mountain is not just for sightseers, but is also a popular point on hikers' maps. The 335-mile Pinhoti Trail begins at Flagg Mountain and concludes at Springer Mountain in north Georgia. The Pinhoti is a section of the larger-in-scale Eastern Continental Trail beginning in Key West, Florida, and concluding in Newfoundland.

With such an important footprint on the hiking community, it was recognized that the mountain needed to be protected for future generations of trekkers and other enthusiasts who want to appreciate Flagg's summit. The AFC and the Alabama Hiking Trail Society (AHTS) formed an agreement in 2003 to maintain the trails so that they stay clean and accessible. There is also a local caretaker that serves as the liaison between hikers and other recreational enthusiasts.

Thanks to great partners, exciting things are happening on Flagg Mountain right now. The Conservation Fund, Alabama Trails Foundation, and the Alabama Legislature have been instrumental in raising funding of these vital projects, making the state forest, tower site, and cabins an exciting destination in Coosa County.

The interior of the tower has been closed to the public for many years due to the unsafe condition of the stairs and cab at the top of the tower. Renovation of the tower staircase is underway which will once again allow the public to climb to the top, and view Alabama's Capitol dome on the horizon to the south and Mount Cheaha to the north through the 360-degree glass windows of the restored tower cab.

A one-half mile ADA (Americans with Disabilities Act) accessible trail has been constructed, along with a 15-vehicle parking lot near the top of the mountain. The concrete pathway, with numerous switchbacks and a low grade, will make the base of the tower wheelchair accessible. Well-placed benches along the trail will also allow people to sit and view the scenery as they make the hike.

Other additions are in the works at Flagg Mountain as well. These improvements include bringing city water to the top of the mountain, allowing the construction of a new bathhouse adjacent to the cabins and restroom facilities near the tower and new parking lot.

"The Alabama Forestry Commission considers conservation education and outdoor recreation an important part of its mission," said Rick Oates, State Forester of Alabama. "As the land managers for Weogufka State Forest, the AFC believes partnerships that aid projects such as this trail construction are vital to the future of outdoor recreation and help the public enjoy Alabama's forests. The agency appreciates the opportunity to work with conservation and trail groups to make these muchneeded improvements at Weogufka and other state forests."

Additional partners in this project include the Alabama Legislature, Alabama Hiking Trail Society, Friends of Flagg Mountain, University of Alabama Center for Economic Development, Coosa County Commission, and The Nature Conservancy.

Weogufka State Forest is open daily. However, until the new construction is completed, the tower site is off limits to the public. Current projects are anticipated to be finished in 2022. Overnight camping and social events at Flagg's cabins are available, but reservations must be through the caretaker in advance.



ALABAMA'S WONDERFUL COLORS OF FALL

By Coleen Vansant,
Public Information Manager,
Alabama Forestry Commission,
and Michael Aspinwall, Assistant
Professor, Tree Physiology &
Ecophysiology,
Auburn University School of forestry
& Wildlife Sciences

uring the months of October and November each year, one of the most anticipated events in our state occurs: the beautiful palette of fall color that graces the hills and valleys of Alabama.

Have you ever wondered what causes leaves to shed their bright greens of summer and put on the flashy and brilliant yellows, oranges, reds, and purples of fall? Or why autumn colors one year are brighter and last longer than the colors of another year?

The shifting rhythm of day and night triggers the change in leaf color. As the days grow shorter after the summer equinox in June, a chemical clock inside a tree is awakened, releasing hormones which restrict the flow of water and sugars to each leaf. The movement of water and sugars eventually ceases as autumn progresses, and chlorophyll – the pigment that gives leaves their green color in the spring and summer – disappears.

Chlorophyll plays an important role in one of the most important processes in trees — photosynthesis. During photosynthesis, chlorophyll pigments absorb energy from sunlight. This energy is used to power the conversion of carbon dioxide from air into sugar. The sugars produced by photosynthesis provide most of the energy necessary for trees' growth and metabolism. In the fall, chlorophyll breaks down allowing other pigments (carotenes — orange color, xanthophylls — yellow color, and



anthocyanins – red color) to become more visible. The relative amount of these different pigments creates the spectrum of colors we see during fall.

Weather conditions during summer and fall influence the colors we see. Rain, hot days, and dry spells during the summer can determine when chlorophyll starts to disappear, and how long green, yellow, orange, red, and purple tones last during fall.

Temperatures during fall can also determine color intensity. A lot of sunlight, combined with low temperatures, can produce brighter reds but shortens their duration. An early frost can stop the show entirely when the ice places weight on the leaves causing them to fall from the limbs. A summer drought can stress trees resulting in early dropping before they have a chance to develop any color at all. A combination of rain and overcast days tends to intensify fall color. Some of the best and brightest shows of fall color follows a growing season with a lot of rain followed by a dry spell. Therefore, fall leaf color changes from year to year.

SEEING ALABAMA'S SHOW OF FALL COLOR

There are many places in Alabama to take in the dazzling display of fall color, whether you want to take a hike or see the dazzling display from your vehicle. Listed here are just a few you might want to check out: Bankhead National Forest and Sipsey Wilderness Area in Winston and Lawrence Counties, the Natchez Trace Parkway in Colbert and Lauderdale counties, Noccalula Falls in Gadsden, Little River Canyon in DeKalb County, Cheaha State Park in Cleburne County, Flagg Mountain in Coosa County, Palisades Park and Rickwood Caverns State Park in Blount County, Oak Mountain State Park in Shelby County, Monte Sano State Park in Huntsville, Cherokee Rock Village in Cherokee County, Hurricane Creek Park in Cullman County, Dismals Canyon in Marion County, Russell Cave National Monument and the Walls of Jericho in Jackson County, Guntersville State Park in Marshall County, and Natural Bridge Park in Winston County.

To determine *when* Alabama's fall colors will peak each year, visit https://alabama.travel/trail-details/fall-color-trail

While you're out admiring the beautiful fall leaves, the following color list will let you know what species of trees you might be enjoying. It can also be a guide of what species to plant on your own property.

SCAN HERE FOR A
MAP OF FALL
COLORS IN ALABAMA



YELLOWS:

- beech
- birch
- chestnut oak
- elm
- ginko
- hackberry
- hickory
- · locust
- persimmon
- sawtooth oak
- willow

ORANGES:

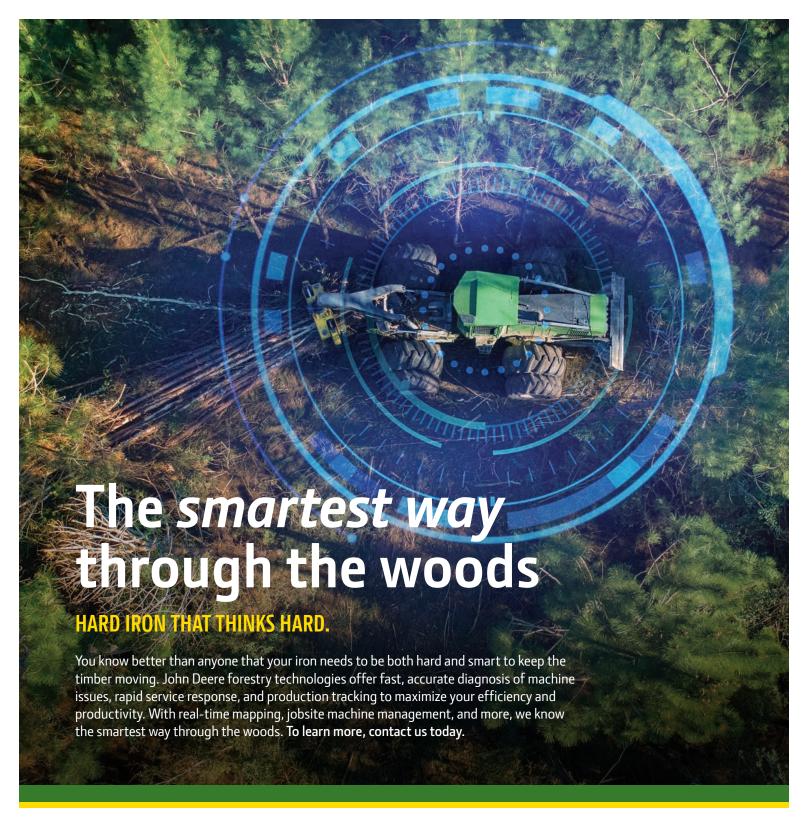
- northern red oak
- sassafras
- southern red oak
- bald cypress

GOLDS:

- ash
- buckeye
- willow oak
- yellow poplar

REDS:

- black cherry
- black gum
- dogwood
- red maple
- scarlet oak
- sourwood
- sweetgum
- white oak







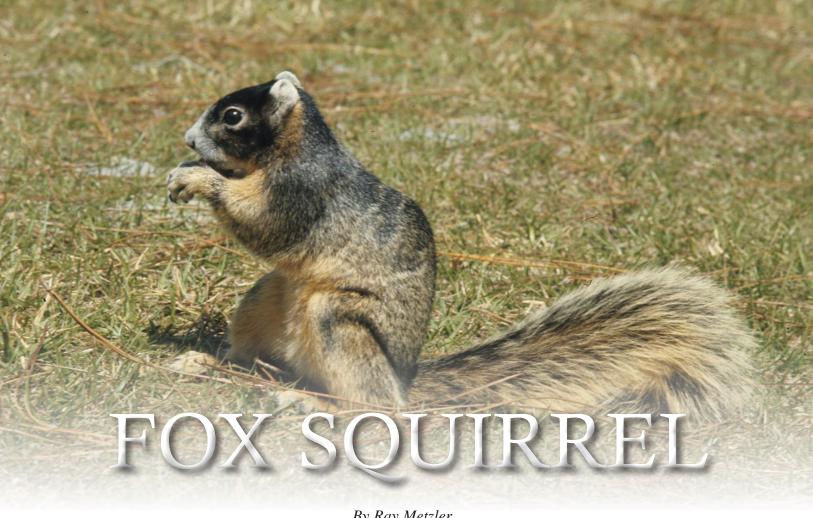
6801 McFarland Blvd West Northport, AL 35476 205/339-0300

2149 Pelham Parkway Pelham, AL 35124 205/988-4474

66 Industrial Park Dr. Monroeville, AL 36460 251/575-7111 4308 Water Trail Graysville, AL 35073 205/988-4472

2255 Hwy 21 South Oxford, AL 35203 256/831-0921 25135 One Aviation Way SW Madison, AL 35756 256/233-1914

3540 Wetumpka Hwy Montgomery, AL 36110 334/277-7260



By Ray Metzler
Threatened & Endangered Species Specialist, Alabama Forestry Commission

mall game hunting with my father was a cherished part of my childhood that provided many memories. I can't seem to recall the first squirrel I shot while hunting, but I can vividly remember the first squirrel I missed. For some reason, the vision is burned into my mind of that squirrel easing out onto a low limb and stopping within easy shotgun range, then running off after my shot.

The largest tree squirrel in Alabama (up to 2.5 lbs.), the fox squirrel is nearly twice the size of the more common gray squirrel. Fox squirrels, along with gray squirrels, eastern chipmunks, southern flying squirrels, and woodchucks belong to the family *Sciuridae* and are closely related to mice and rats. Like all rodents, fox squirrels have four incisors (two upper and two lower) with indeterminate tooth growth. Unlike our teeth, these incisors don't have roots, and they never stop growing. For this reason, squirrels and all rodents must gnaw and grind their teeth against each other to keep them from growing into the opposite jaw.

Coloration of the fox squirrel varies greatly, both locally and regionally. Ten subspecies in the United States (two occurring within the state) are recognized and are typically divided into two distinctive but intergrading [gradually merging] coloration groups. In Alabama, the upper parts of their body are usually gray but may have a reddish or rust colored shading. Their belly coloration can vary greatly from white to reddish or orange. A black facial mask around the eyes and nose are often present, along with white tips on the ears and nose.

Fox squirrels are found throughout eastern North America from the southern tip of Florida northward to the Great Lakes region and Canadian border, except for the New England region. Populations are scattered throughout Alabama, typically at much lower densities than the more common gray squirrel. Habitat selection varies greatly, but in Alabama, fox squirrels are most often seen on dry upland sites in areas of mature pine-oak forest with open understories. Fox squirrels prefer more open habitat and spend more time foraging on the ground than gray squirrels. They may also be encountered in fields quite far from any trees. Parks, golf courses, and residential areas may support fox squirrel populations throughout its range. Just recently I saw a fox squirrel near Pike Road, Alabama, in an area dominated by cow pastures and fence rows with scattered hardwood drains.

The diet of a fox squirrel is quite diverse and varies seasonally. Hard and soft mast from pines, oaks, hickories, beech, walnut, dogwood, maple, grape, persimmon, and cherry are readily consumed when available. Other fruits, fungi, and insects are also eaten when the opportunity arises.

They are typically solitary except when breeding. In Alabama, two litters of two to five young may be born after a gestation period of about 44 days. The first litter is typically born between late January through March, with a second litter from older females being born in July or August if food availability is high. Fox squirrels use tree cavities and leaf nests both as shelter and for rearing young. Cavity use is greatest during winter and

(Continued on page 20)

FOX SQUIRREL

(Continued from page 19)

spring, especially in north Alabama where protection from colder temperatures is needed. Leaf nests are more commonly used in the warmer southern portions of the state.

Young fox squirrels are born blind and hairless, open their eyes after four to five weeks, and are weaned at eight to nine weeks of age. They may remain with the adult for up to another month after weaning.

Hunting mortality is generally not thought of as a major factor in controlling squirrel populations. However, intensively-hunted populations, especially isolated fox squirrel populations with little opportunity for recruitment from outside areas could be vulnerable to overharvesting. In Alabama, no distinction is made between hunting regulations for fox and gray squirrels on private lands. Regulations on public lands may vary significantly and hunters should be aware of these differences.

Many hunters prize the fox squirrel as a trophy because of its size, coloration, and the fact its population densities and distribution are much more limited than the more common gray squirrel. I am certain there are many taxidermy specimens around the state on display. I am one of those who believed a fox squirrel taxidermy display would be a nice addition to my office. Although I have seen many fox squirrels in the woods, I don't recall ever seeing one while squirrel hunting. Needless to say, I don't have a fox squirrel taxidermy display in my office.



Figure of a typical rodent jaw showing the 'rootless' incisors with 'rooted' molars.

Incisors grow continuously while the molars quit growing after they reach a certain size.





By Juan N. Merriweather, Forester/Work Unit Manager, Alabama Forestry Commission

Ever wonder what can fit into 300,000 square feet?

- Two football fields
- 3.1 million large pizzas
- 40,984 standard-size refrigerators

ack in 2017, Georgia-Pacific (GP) announced a substantial investment of \$100 million into a new 300,000-square-foot lumber facility in Talladega, Alabama. After just nine months the mill was constructed and became operational in 2018. From the time Georgia-Pacific was founded in 1927, they have not stopped growing. The lumber company started in a single building in Augusta, Georgia, and now has more than 300 locations around the world.

Despite the massive size of the new Talladega mill, the electrical usage produced (per mbf) is a 25-44 percent improvement from a much smaller and older facility. The new mill also houses three kiln lines that are 25-30 percent more energy efficient than batch kilns in older facilities. In addition to the kilns, there is a warehouse that holds up to 4 million feet of lumber.

The mill operates with 225 employees and produces dimensional lumber (2x4, 2x6, 2x8, 2x10, etc.) With all the lumber being produced, there's no question that a considerable number of employees are needed to run the mill. After all, each day the new facility receives an average of 150 log trucks, 54 chip

trucks, 17 sawdust trucks, 18 bark trucks, 14 shaving trucks, and 50 lumber trucks.

Georgia-Pacific employs a large portion of the workforce in Talladega, with a total of approximately 2,300 employees across the state. GP directly pays \$214 million on average each year in direct wages to employees in Alabama. The company is also responsible for creating an additional 8,600 indirect jobs. The construction of the new facility has an estimated impact of \$26 million to the City of Talladega.

In addition to creating jobs for many residents, Georgia-Pacific also gives back to the local community. GP and Talladega County, the City of Talladega, and the State of Alabama have a strong partnership. In February 2020 before the pandemic, the company donated \$20,000 to Talladega College, the oldest private HBCU (Historically Black Colleges and Universities) in Alabama. This generous donation was put towards the restoration of the Amistad murals which traveled around the country on display before they were returned and exhibited at the Talladega College Library.

Georgia-Pacific is a company that has thrived during this pandemic. It continues to offer opportunities to be employed in the forest industry not only in Talladega, but also across the globe. These jobs are the backbone of our economy and have been for nearly 100 years. The Talladega Mill is a symbol of old times with a new spin, taking raw materials from growth to finished product.

A Tale of MILLS



Fire destroyed this Scotch Plywood veneer mill in January 2021, but a new state-of-the-art mill with increased production and efficiency should be completed and production resumed by the spring of 2022. Now in its 56th year, Scotch Plywood not only produces a quality product but also continues to be vital to the local economies across two states, employing hundreds of people in both Alabama and Mississippi.

By Anthony Vachris

mill fire is a devastating event on multiple levels and the January 6 [2021] fire that destroyed the Scotch Plywood Company's facility in Waynesboro, Mississippi, was no exception. The fire occurred while the mill was in operation, and every onsite employee, many of whom helped fight the fire, was accounted for and found unharmed.

Except for a few pieces of equipment saved by the firefighters, the blaze resulted in a total loss of the mill, one of three Scotch owns. But before the smoldering embers cooled, leadership was moving forward. Aside from the concern for employee safety in Waynesboro, the group had to come to terms with the disruption in production of one mill and the logistical challenge of boosting production in another.

The company needed to consider employee retention and maintaining relationships with landowners and customers, and

what it would mean to not have a mill in eastern Mississippi to serve that part of the industry. Within 18 hours, company officials decided to rebuild at the same Waynesboro site and keep production moving by ramping up production of its Beatrice, Alabama mill. Timber would be shipped an additional 120 miles from Mississippi east to Alabama. Employees would be bussed to and from work, daily.

From the first days following the fire, the mission of the company was clear: to keep employees working, timber moving, land management intact, customers satisfied, landowners' return on investment unaffected, and to ensure that every employee got home to their families.

"Our greatest investment is in our people," said Buddy Douglas, plant manager for Scotch Plywood. "They make it happen."

For the plant managers of Scotch, the well-being of employees and their families, and the future of the surrounding community outweighed the potential risks and logistical struggles. Running a mill round-the-clock, they knew, would involve reducing some of the regularly scheduled maintenance that is vital to a mill running at its normal production hours. The challenge is managing costs.

Not pushing the Beatrice mill to its maximum output was not an option, not with Waynesboro employees needing to work to support their families. With two charter busses, 12-hour days, and 12,000 tons of logs processed weekly, the Beatrice mill has continued to thrive.

Scotch Plywood is more than just a place to sell timber, which is why there was a natural concern for landowners across the region following the Waynesboro fire. Beyond taking the trees and processing them into plywood, Scotch is an end-to-end solution for landowners.

In addition to owning a plywood business, the Scotch Companies and their owners manage 460,000 acres of land in Alabama and Mississippi. In total, the group oversees 24 logging crews, employs 28 foresters and technicians, and manages multiple wood dealerships.

Through its land management company, Scotch provides forestry expertise that many companies don't offer. With the loss of Waynesboro, it was possible that Scotch would be too focused on its Beatrice mill to continue to service landowners from Waynesboro. For generations, Scotch has helped large landowners not only sell and market their timber but has provided expertise in site preparation, seedling genetics, burning, thinning, logging, road building, land acquisition, and applying management best practices to ensure the land is cared for.

Therefore, a major priority for Scotch was to reassure these landowners, many who have been with Scotch from the original handshake, that they were committed as always. As a complete solution for its large landowner partners, Scotch has deep expertise with boots on the ground when it comes to how well it knows the market, and how many vendor relationships it maintains around the region.

For David Hall, President and CEO of Hall Timberlands, Scotch's response to the fire at Waynesboro confirmed what he already knew about the type of people at the company. As the largest landowner for Scotch in Mississippi, his family has been trusting Scotch to manage his family's land and timber since 1976, and for the longest time did so without a formal contract.

"These are two family-owned businesses, and we have a seamless relationship with Scotch," Hall said. "We see ourselves as an extension of their operations and vice versa. We buy land knowing that Scotch will handle the management aspect of it and get it to the Alabama mill until Waynesboro is back online."

Because 60 to 70 percent of Hall Timberlands' cuts go to Scotch, it was important for Hall to stay in the loop on everything that was happening with both the Waynesboro and Beatrice operations. "Sure, many might have considered alternate outlets for their timber," Hall said. "But with Scotch, we have the security of knowing that the ROI is coming."

Another large landowner in Mississippi, Harry Haney, has also enjoyed a long-term partnership with Scotch Land Management that began in the mid-1980s with a word-ofmouth contract. Together, the two companies have developed tremendous trust for each other and have worked on annual harvests of Haney's 43-year-old plywood logs.

In addition to forest management, Scotch has assisted Haney with the purchase of approximately one-third of his current land inventory. "A landowner needs a land management company they can trust," Haney said. "They didn't hesitate to reassure me that they would rebuild."

Because of its economic impact, Scotch Plywood, like many mills across the Southeast, has a huge effect on the surrounding region. In the case of Waynesboro, Mississippi, it is estimated that Scotch's influence stretches upwards of 100 miles in every direction from where it will emerge from the ashes.

The decision to renew and retool the facility will have enduring implications beyond the employees who will by the second quarter of next year have resumed their shifts in Waynesboro. The eastern Mississippi region also is home to truckers, gas station owners, truck service companies, and retail outlet managers who depend upon the supply chain economy to help them raise their families in this area of the

Indeed, in just 18 hours after a total loss, the resilient leaders of the Scotch Plywood Company weren't merely deciding to rebuild a single mill, but an entire way of life for many who call this area home.





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THE JIMMERSON BLUFF SHELTER

By Coleen Vansant, Public Information Manager, Alabama Forestry Commission

labama is one of the most beautiful and diverse states in the nation and Alabamians can spend hours telling you how special it is. One of the great resources features that makes our state so unique is our rich Native American history.

The earliest humans left evidence of their habitation across the state and most property owners have a box or fruit jar filled with arrow points, spear heads, pottery sherds, or hide scrapers. In my 35 years with the Alabama Forestry Commission, I've visited dozens of TREASURE Forests from one end of the state to the other, and I can't remember a single landowner that didn't have a collection of cultural artifacts they've collected from their property over the years.

The TREASURE Forest of Jimmy and Sue Jimmerson in northeast Alabama is rich in native culture and history. Their more than 140-acre farm has revealed multiple artifacts proving that prehistoric man visited and made their home there, thousands of years before modern man gazed on the beautiful hills and valleys of Cleburne County, Alabama.

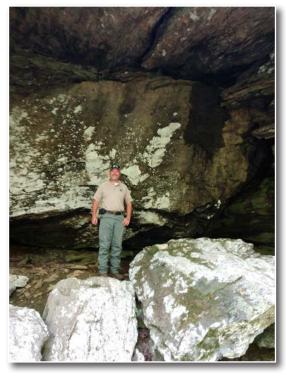
The Jimmerson property, near Borden Springs, is located just a couple of miles south of what is historically the boundary of the Creek and Cherokee nations. In 2012, the Jimmersons invited a Cultural Resource Specialist with the USDA Natural Resources Conservation Service (NRCS) to visit the farm and evaluate several Native American cultural features. A couple of instructors and about 15 students from Auburn and Troy universities spent a weekend doing small excavations on the property.

The most interesting Native American site on the Jimmerson property is a rock shelter where evidence has been found that prehistoric man was part of the environment as far back as 7,000 B.C. This shelter is an approximately 12-foot-wide rock overhang that sits 40 to 50 feet high up on a bluff overlooking Wallace Creek. Even though previous owners had allowed digging to take place decades earlier, the team was able to identify several artifacts that were used to date the use of the shelter.

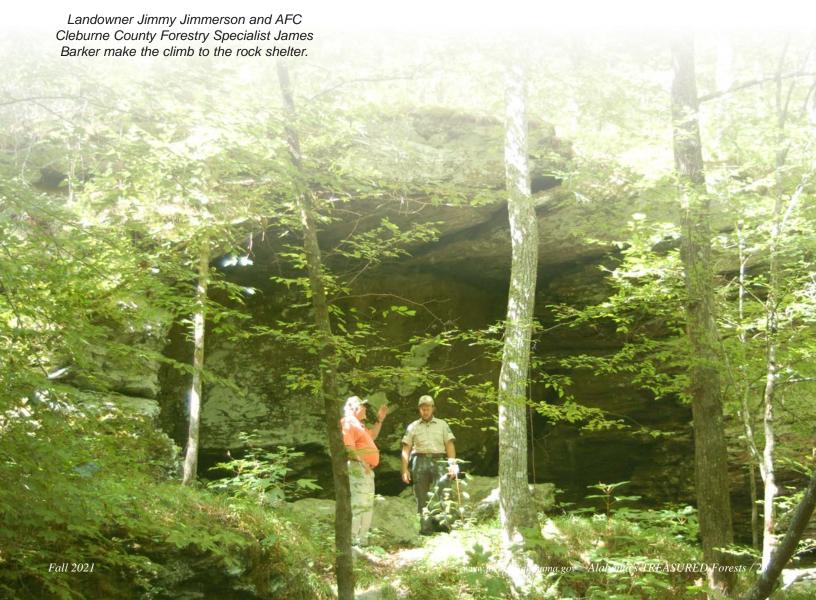
Inside a couple two-foot-square trowel test areas, each three inches deep, they found flint flakes, flecks of charcoal, two pieces of graphite, an Etowah Complicated Stamped pottery sherd, and a plain sand-tempered potsherd. From the existence of the Etowah sherd, they were able to date the site from the Mississippian period of circa A.D. 1150-1350. This style of pottery is well known from the Etowah mound archaeological site at Cartersville, Georgia.

The archaeologists believe the Jimmersons' bluff shelter was used as a camp site by prehistoric man. Hidden in a food plot on the property, the group discovered artifacts indicating aboriginal use that spanned thousands of years. Some of the artifacts uncovered were 115 chert and quartz flakes, 18 projectile points and fragments, as well as a sharpening stone. Of the points recovered, only two were able to be dated by archaeologists. One was a Middle-Late Archaic Limestone point (4000 B.C.-1500 B.C.) and the other a Late Woodland Hamilton point (A.D. 600-1000). Following the excavations, an archaeological report was prepared and submitted to the Alabama State Site File (ASSF) at Moundville.

To discover more about archaeology and Native American artifacts in Alabama, visit the Alabama Historical Commission's website at ahc.alabama.gov.



AFC Work Unit Manager Paul Williams explores the Jimmerson bluff shelter.





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FORESTS FOREVER

26 / Alabama s

Fall 2021

ALABAMA

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ALABAMA



By Darci DeBrunner, Forester, AFC North Alabama Management Specialist

tale full of ups and downs, but through the perseverance of all parties, the Alabama Forestry Commission (AFC) succeeded in purchasing a new addition to Little River State Forest. This purchase is a chance to expand and grow a state forest that is expecting big plans in the future, and it couldn't have happened without support from the USDA Forest Service, the Forever Wild Land Trust, and the Conservation Fund.

The Forest Legacy Program was established in 1990 by the Forest Service with the goal of protecting environmentally important forest areas that are threatened by conversion to nonforest uses, as well as to promote protection of important scenic, cultural, fish & wildlife, and other ecological values. The program is only successful with the help of partners.

With the last success happening in 2012, it had been several years since Alabama received funding for a Forest Legacy Project. The Coastal Headwaters project is an initiative between the Conservation Fund and Resource Management Service (RMS), and led to the Conservation Fund approaching us in 2017 about acquiring part of the project area using the Legacy program. The goal of this project is to create a landscape-scale working longleaf forest in Lower Alabama/Florida Panhandle.

The Alabama Forestry Commission was awarded two grants to work towards conserving land that RMS was putting forward under the initiative. Originally designed as a conservation easement, the project was converted to a fee simple acquisition. The Alabama Forever Wild Land Trust partnered with the AFC in acquiring 2,885 acres that were added to Little River State Forest. The property runs along the boundary of Little River with beautiful hardwood bottoms in the area. A unique feature of this

area is a 40-acre cypress swamp named Mystery Worm Pond (pictured).

The process doesn't stop with acquiring the land. A few months after the acquisition was made, a management plan was created by AFC employees in Monroe and Escambia counties to work towards the long-term goal of the project, restoring long-leaf in its natural area. In the immediate future, two stands will be planted in longleaf, with the rest of the pine acreage following later. The remaining pine stands will be converted to longleaf as harvests mandate.

Plans are being made to improve and create recreational opportunities on Little River State Forest. An expansion of the state's public hunting program will encompass the property with it becoming a Special Opportunity Area (SOA). An SOA is typically smaller than a Wildlife Management Area, with hunters entering drawings and needing to be selected in order to hunt on the SOA property. This selection process was created with the goal to reduce hunting pressure and increase the quality of the hunt.

To work in conjunction with the public hunting program, future plans involve creating a quality camping area in the state forest park-like area. RV hookups are expected to be available in the camping area near the lake. The Division of Wildlife & Freshwater Fisheries is working with the Alabama Forestry Commission to create a plan to improve the lake for fishing and other water recreational activities.

We're excited about the future of Little River State Forest. These acquisitions and improvements will help contribute to protecting and enhancing Alabama's beautiful forestland. The expansion assures that nature and its benefits can be enjoyed not only by everyone today, but also by generations of tomorrow.



and Ray Metzler, Threatened & Endangered Species Specialist, Alabama Forestry Commission



he white fringeless orchid (*Platanthera integrilabia*), also known as the monkey-faced orchid, is a 2-foot-tall plant with a single green stem. This elusive perennial's elegant white flowers gather in a loose cluster at the end of the stem, blooming in late July through September. It was placed on the federally threatened list on October 13, 2016. Growing exclusively in forested areas with wet, boggy soils, the plant requires an independent relationship with a specific fungus to attain nutrients. Plant populations are threatened mostly by road construction and mowing, as well as residential and commercial development.

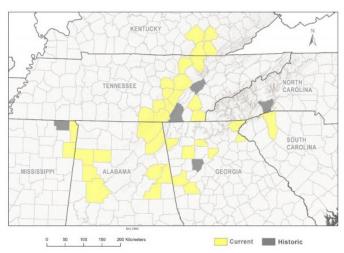
A U.S. Fish & Wildlife Service fact sheet indicates that white fringeless orchid is known or presumed present at 80 sites from 36 counties in six Southern states: Alabama, Georgia, Kentucky, Mississippi, South Carolina, and Tennessee. Populations once found in North Carolina (in Henderson and Cherokee counties) have now disappeared. In Alabama, there are 14 known sites located in nine counties (Calhoun, Clay, Cleburne, Dekalb, Fayette, Jackson, Marion, Tuscaloosa, and Winston).

Tony Avery, retired Work Unit Manager for the Alabama Forestry Commission in Marion County, first learned about the white fringeless orchid when a specimen was brought to the Marion County AFC office in the late 80s or early 90s. This is his account of the discovery of the plant in Marion County. "Bill Buston was doing a prescribed burn in the area. A student from Itawamba Community College assisting with the burn found the flower and knew its name. One of our rangers at that time brought it to the office and we planted it on our nature trail. After a little research, I came to realize that the plant was of 'special' interest because it was an orchid and somewhat rare. I also learned it was very site specific. While I was not sure of the exact location where the original plant came from that we planted on the nature trail, I did know where to look for that type site in Marion County. I made a visit to this particular place and sure enough, the plant was there. Over the years I have taken several groups to visit this site. The plant has also been discovered on at least two more sites in Marion County."

On August 5, 2021, Tony and I, along with Robert Clement, Johnnie Everitt, and John Wesley Nichols of the Alabama Forestry Commission ventured back to a site where Tony's neighbor had found the orchid on his property. This property is adjacent to the original property where he first discovered the orchid. After walking along in the swampy area, Tony spotted six white fringeless orchids not in bloom. With a little more searching, we found three more plants totaling nine in all. Johnnie Everitt also found the rare yellow fringed orchid (*Platanthera ciliaris*) which has not been previously cataloged in Marion County. Making a return visit on August 10, 2021, with Ray Metzler, AFC Threatened & Endangered Species Specialist, we found an additional eleven white fringeless orchids, most of which were in bloom.

PROTECTIONS PROVIDED FOR PLANTS BY THE ENDANGERED SPECIES ACT

Endangered Species Act (ESA) protection afforded to plants depends on its status (endangered or threatened). The prohibitions apply equally to live or dead plants, their progeny, and parts or products derived from them, except that clearly labeled



Counties currently and historically occupied by white fringeless orchid.

seeds of cultivated origin of threatened plants are exempt. The following is a simple summary of ESA rules for endangered versus threatened plants:

ENDANGERED PLANTS - IT IS ILLEGAL TO:

- Import or export (into, out of, or through the U.S.)
- Remove and reduce to possession from **federal** property
- Engage in interstate or foreign commerce
- Maliciously damage or destroy on **federal** property
- Remove, cut, dig up, damage, or destroy on private property in violation of any law or regulation of any state including state criminal trespass law

THREATENED PLANTS - IT IS ILLEGAL TO:

- Import or export (into, out of, or through the U.S.)
- Remove and reduce to possession from federal property
- Engage in interstate or foreign commerce

Many of our nation's threatened and endangered plant species have suffered population declines as a result of habitat loss. The remaining habitat for some of the threatened or endangered plant species is often unique and of limited quantity. It is not prohibited by the ESA to destroy, damage, or move protected plants unless such activities involve an endangered species on federal land or if the action occurs in violation of state laws. If a person wishes to develop private land, with no federal jurisdiction involved, in accordance with state law, then the potential destruction, damage, or movement of endangered or threatened plants does not violate the Endangered Species Act. However, many private landowners, especially those who adopt good stewardship practices, choose to protect known populations of threatened or endangered plants due to their rarity or unique habitat qualities.

Hydric soil conditions in orchid habitat typically limits development or agricultural/forestry activities. Limiting soil disturbance up slope from the orchid's habitat would minimize opportunities for changes to the hydrology. Logging or land-clearing activities above the habitat are still possible, but thought should be given to road, skidder trail, and fire break construction/placement activities as to minimize changes to soil hydrology.

AFC COASTAL PROGRAM

Enhancing Gulf Waters Through Forested Watershed Restoration

By Ryan T. Peek, AFC Coastal Program Manager, Alabama Forestry Commission and Will Brantley, Assistant State Forester

he Alabama Forestry Commission (AFC) works with forest landowners around the state through its three-pronged mission of forest protection, forest management, and forestry-related education. Connected with this mission, the AFC encourages utilization of forestry Best Management Practices (BMPs) for water quality when conducting management activities on forests. These BMPs serve as a means to protect and enhance water quality which is important since forests cover approximately 70 percent of the state's land area. Decades of research (*Jackson et al.*, 2004; *Lockaby et al.* 2013) show that forests provide the cleanest and most stable water supply compared to other land uses (*Giri et al.*, 2016; *Brogna et al.*, 2018). Lasting improvements to water quality and quantity cannot be achieved without addressing the management needs of coastal forested resources.

The agency established the AFC Coastal Program as a new and innovative initiative to provide extra focus on enhancing water quality in the watersheds connected to coastal Alabama. Supported with funding from two primary sources: 1) a Gulf of Mexico Energy Security Act (GOMESA) grant and 2) the Resources and Ecosystems Sustainability, Tourist Opportunities,

and Revived Economies of the Gulf Coast States Act (RESTORE Act) Enhancing Gulf Waters through Forested Watershed Restoration project. This program will allow the agency to allocate additional resources to maintain and improve forests in the Alabama coastal counties and associated watersheds. It will also provide financial and technical assistance for forest landowners to aid in better management of their forests.

This program will help create a healthier Gulf of Mexico through more engaged forest landowners. The idea is that a healthy Gulf stems from healthy estuaries, healthy estuaries depend on healthy watersheds, healthy watersheds flow from healthy forests, and healthy forests require engaged landowners. Some anticipated environmental benefits from this program include improvements to water quality and quantity, enhancement of threatened and endangered species habitat through professional forest management, avoided land use conversion, and increased forest cover. What this means for Alabama communities and forest landowners on the coast is that there is more opportunity for them to seek professional advice about managing their forests (including urban forests), more opportunity for the AFC to conduct or participate in landowner outreach programs

The GOMESA funding was made possible with support and approval from Governor Ivey and Commissioner Blankenship with the Alabama Department of Conservation & Natural Resources (ADCNR). The RESTORE project was included in the Gulf Coast Ecosystem Restoration Council's recent Funded Priorities List 3b as a collaborative effort among the state forestry agencies in Alabama, Florida, and Mississippi; USDA; the American Forest Foundation; the National Fish & Wildlife Foundation (NFWF); the U.S. Endowment for Forestry and Communities; and The Nature Conservancy. Governor Ivey and ADCNR Commissioner Blankenship were also instrumental in making the RESTORE project a reality through their support and leadership.

on the coast, access to special assistance to control invasive species, and much more.

We are excited about this new coastal program and the benefits that will accrue to the coastal watersheds. For more information, please contact the AFC Coastal Program office at (334) 399-0301.

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By Shannon Anderson Forest Inventory & Analysis Forester, Dale County, Alabama Forestry Commission

hile walking through the woods, have you noticed that the air suddenly smells like bell peppers? Your feet have probably crushed the leaves of the pawpaw, or *Asimina triloba*.

A species from the Annonaceae family (the custard apples), the pawpaw is a small tree or shrub that can grow to 25 feet in height. It frequently reproduces by root sprouts, which form clumps of single stems. It inhabits moist, but occasionally dry, well-drained soils of the Eastern United States, especially along floodplains in the Piedmont and upper Coastal Plain but occasionally in mesic hardwood forests in the mountains. (On the moisture scale, *mesic* falls in the middle between *hydric* (very wet) and *xeric* (very dry). *Mesic* sites tend to favor vigorous plant growth.)

The pawpaw has a light brown, slender twig. New twigs have a rusty red pubescence, meaning the twigs contain soft, downy hair. Its terminal bud is 1/2 inch long, naked, purplish brown and fuzzy, and appears flattened and often curved. Its lateral buds are triangular and covered with rusty-pubescent scales. The flower buds are placed so close as to coincide, have spherical form, and are also rusty pubescent. The bark is mostly smooth and dark brown, accompanied by gray blotches with warty lenticels (raised pores on the stem that aid in gas exchange).

The light green leaves of the pawpaw are simple, alternately arranged, obovate (meaning generally oval but narrower at base), and 6 to 12 inches long. Young leaves are covered with a rusty pubescence on the underside, though they become more glabrous (smooth and without hair) with age. Leaf scars are crescent- to horseshoe-shaped and have five bundle scars arranged in a V. The leaves contain a chemical that repels most insects, although

the larvae of the zebra swallow-tailed butterfly exclusively feed on them.

The pawpaw is monoecious, meaning individuals contain both male and female reproductive organs. (In dioecious plants, an individual contains either male or female organs). Appearing in March to April with or slightly before the leaves, the pawpaw's purplish brown flowers are broad bell-shaped, 3/4 to 2 inches across. The flowers have six petals, the outer row of three twice the length of the inner three.

The fruit of the pawpaw is a large berry that is oblong to cylindrical and grows to 3-5 inches long. In the summer, the fruit is green with dark gray spots and matures to yellow to dark brown to nearly black in the fall. Edible – though some may experience mild intestinal discomfort – and apparently very nutritious, its sweet, fleshy pulp tastes like a cross between bananas, pineapples, and mangoes. It can be consumed raw or cooked. See below for a pawpaw recipe. If you attempt to make it, let me know how it goes!

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URL to pawpaw cream pie recipe: https://hort.purdue.edu/newcrop/ksu-pawpaw/cooking.html

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