

ALABAMA'S

TREASURED FORESTS

A Publication of the Alabama Forestry Commission

Issue No. 3 - 2023



ALABAMA
FOREST

Alabama TREASURE Forest Association

I'D RATHER BE IN THE WOODS




TIMBER, RECREATION, ENVIRONMENT, AESTHETICS, SUSTAINABLE, USABLE, RESOURCE

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.



TREASUREForest.org

ALABAMA'S
**TREASURED
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On the Cover:

Beautiful pines at Martin's Meadows in Monroe County, property of TREASURE forest landowner Jess Martin.

Photo by Michelle Barnett

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

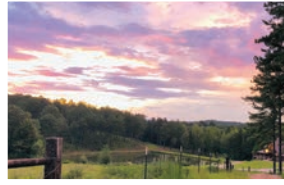


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The publication of a story or article in this magazine does not constitute the Alabama Forestry Commission's endorsement of that particular practice, product, or company, but is an effort to provide forest landowners of Alabama with information and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

Message from the STATE FORESTER

August 2 was a big day for the Alabama Forestry Commission. The picture below says it all! Several of our field personnel met at the AFC Central Shop in Autaugaville to pick up their new Caterpillar D-2 dozers ... 16 new dozers and transports. In fact, this is the first time in many years (more than 25) that the AFC has taken delivery of so many new dozers at one time.

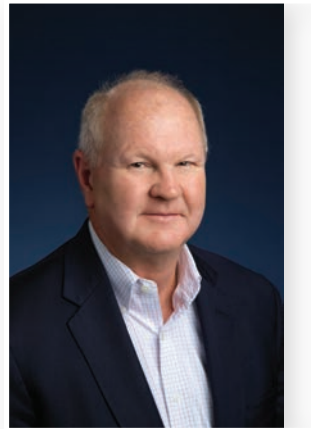
Why should you care? The single most important reason is SAFETY! These new dozers have many features that will keep the operators safe. Also, they are replacing machines that in some cases are almost 40 years old. You can imagine how far safety and operator comfort have come in that length of time.

These tractors are equipped with 'enviro-cabs,' which means they are fully enclosed and have air conditioning, so our operators aren't breathing smoke created by the fire they are fighting. On a 90+ degree day like we experienced this summer, a little AC goes a long way! It also means wasps and other flying insects can't get in the cab with our operator. Can you imagine how angry a nest full of yellow jackets are when you run over their home with a bulldozer? It's hard to abandon the cab of a dozer when it's being invaded by stinging critters!

Another advantage to a new tractor is that it is less likely to break down than a 30- to 40-year-old unit, making it a real plus for the operator and the job they are doing. It is frustrating, not to mention dangerous, to have a dozer break down on the backside of a 100-acre tract when there is a wildfire between you and the safety of the road. A newer unit is more likely to get the firebreak completed to prevent the fire from spreading.

So, I want to take this opportunity to say thank you to **Governor Ivey**, the **Alabama Legislature**, and the **U.S. Forest Service** for providing the money to purchase these machines. The Legislature gave us \$1.5 million in 2022 to combine with \$1.4 million in special grants from the Forest Service to purchase these tractors. We also received a grant from Governor Ivey that enabled us to buy 16 new transports to haul these dozers. Thanks also to organizations such as the Alabama Forestry Association and Alabama Farmers Federation for helping us to secure this money.

In case you are wondering, the dozers cost about \$210,000 each and the transports were about \$150,000. This means a new firefighting unit costs the AFC about \$360,000. Multiplied by 16, that's a lot of money. But it is a worthwhile investment to help protect your forestland as well as keep our men and women who work in the woods safe. As forest landowners, I'd ask you to be sure to thank your legislators. They need to know that you appreciate their efforts to fund the AFC.



*Rick Oates,
State Forester*

Rick Oates



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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 **T**imber, **R**ecreation, **E**nvironment, and **A**esthetics for a **S**ustained **U**sable **R**esource.

PONDEROSA FARMS

By Mollie Kate Erwin | Communications & PR Intern, Alabama Forestry Commission

Breathing clean, fresh air and enjoying God's creation, Winston and Karen Bryant feel truly blessed. They are the proud owners of Ponderosa Farms, a stunning piece of property sprawling across approximately 763 acres in Cleburne County. Ponderosa Farms has been certified as a TREASURE Forest since 1996, a Stewardship Forest, a Tree Farm, and most recently was named as one of the 2022 Helene Mosley Memorial TREASURE Forest Award winners.

As a young child, Winston recalls always loving the outdoors. He enjoyed hunting and fishing, things he still enjoys doing today. He is a fifth-generation farmer, so a love for the land is in his blood. Owning and managing property has been a passion of Winston's since he was a boy, when his father instilled in him the importance of good stewardship by purchasing a family farm. This passion has evolved in the past 30 years of the Bryants' lives since they purchased 310 acres in 1992, where they currently live, adding to the farm over the decades.

(Continued on page 6)

Ponderosa Farms

(Continued from page 5)



Winston & Karen Bryant



Wildlife food plot

ing students from Pleasant Grove Elementary School, designed to teach the importance of private forest land and multiple-use management of forest resources. They also hosted a Future Agriculture Leaders of America program with ag students and faculty from Auburn University. Winston and Karen are encouraged when they see young people showing an interest in learning about the forests, and they hope to pass on a love of the land to future generations.

The primary TREASURE Forest management objective for Ponderosa Farms is to improve the value and productivity of the timber. The property consists of ten different stands of loblolly totaling almost 700 acres. These trees range in age from new seedlings planted in the past year, up to 35 years old. All plantations were planted on 6x10 spacing, following clearing with aerial sprays and site prep burns.

They have now completed two thinnings and have also implemented a prescribed burn program. Approximately 100-200 acres are on burn rotations, a forest management practice which he learned from Alabama Forestry Commission employees many years ago. He credits Cleburne County Forestry Specialist James Parker and Forester/Choccolocco Work Unit Manager Paul

When asked why he chooses to take care of the land, Winston shares something that resonates with many outdoorsmen, “There’s something about walking through the forest.” He continued, “I know it belongs to God and I’m only here for a little while. It’s only mine temporarily, but there’s something about it . . . the satisfaction that I get from plowing a food plot, planting trees, harvesting trees, and just walking across the land.”

A particular area on the property that Winston and Karen enjoy frequently is the scenic view from Kemp Mountain. They love to go up there in the evenings and watch the sunsets. He says, “It helps put life into perspective.”

The Bryants feel that what they have discovered on this land is valuable and love to share it with others. Friends and family are always welcome on the property, along with members of a small local hunting club, as well as church groups, Boy Scouts, and many students from the area. ‘Classroom in the Forest’ events have been held at Ponderosa Farms for the past 20 years welcom-





Williams as being the best of the best and says he has learned a lot about burning and reforestation from them.

Their secondary forest management goal is improving the quality of habitat for a variety of woodland wildlife species by increasing the diversity of cover and available food. Located in mature pines, they have 16 food plots on site, half of them being for quail as the farm is a commercial preserve from October through March. Planting a sorghum-sudan grass and sun hemp mixture, the food plots serve a dual purpose as both a source of food and also cover because the quail are pen-raised. The other half of the food plots are for deer and turkey, planted in iron and clay cowpeas during the summer, with wheat, oats, rye, and clover during the fall. He has also planted sawtooth oaks and persimmon trees. "I enjoy hunting and fishing on the place, but I enjoy disking food plots and bush hogging just as much," Winston says. "It's just a labor of love that I've been blessed to have for all these years."

More than 2.5 miles of streamside management zones are maintained on the property, as well as more than 5 miles of roads and riding trails. Bryant says he has also built gates and a hunting cabin, loving every minute of it.

Classroom in the Forest

The future at Ponderosa Farms is certainly bright. Winston plans to keep improving his land through various projects such as fencing in a plot for a small herd of cows. He does, however, plan to keep the focus on timber for most of the property. "We're not going to be cattle farmers," he said. "I enjoy watching the timber grow . . . The majority of the property is going to continue as planting, burn rotations, thinnings, harvests, and replanting."

The Bryants are hopeful to pass the property on to their children. Winston has been preparing them by educating them about forest management practices. He prays the spirit of community and fellowship will continue to be fostered by future generations, and that everyone who visits Ponderosa Farms will share in his love of the land. 🌲



Food plot for quail

FIRE WEATHER IN ALABAMA

By Ethan Barrett | Fire Analyst | Alabama Forestry Commission

Fire on the landscape is a common occurrence in Alabama, with close to one million acres of beneficial fuel reduction burns conducted annually. At the same time, the Alabama Forestry Commission responds to nearly 2,000 wildfires for 30,000 acres on average each year. The challenge we face as an agency is how do we improve fire fighter safety, as well as facilitate a more effective prescribed burn program? The answer is to focus on the most ever-changing variable affecting both, fire weather.

Historically, firefighter injuries and loss of controlled burns are tied to a sudden unpredicted change in the weather. The AFC began by installing Remote Automated Weather Stations (RAWS) in gaps across the state where stations did not exist. Currently no one is further than 50 miles from a weather station dedicated to hourly fire weather data. Anyone can access this data by visiting <https://mesowest.utah.edu>.

Although hourly data is great, we started exploring the feasibility of real time data for both our firefighters and the certified burn managers across the state. To reach different user bases, we are assessing two different applications. For our wildland firefighters, we are in the process of testing AirTalk for RAWS. When critical fire weather thresholds are met, the station will send automated warnings across the agency radio system, alerting everyone to changing conditions. For other burners who do not have access to

our radio system, we are testing FTS360. It functions similarly to AirTalk but sends out weather alerts by email and text to subscribers.

Now that we could understand what the weather was doing, next we had to determine the parameters of critical fire weather in Alabama. Critical weather conditions in DeKalb County are not the same set of conditions that are considered critical in Baldwin County. We had to start looking at the other variables that affect fire spread which include slope, fuel type, and their interaction with the current weather. To achieve this strategy, the agency decided to add a Fire Analyst position to the Forest Protection Division, dedicated to evaluating this interaction of variables and establishing critical weather criteria across the state.

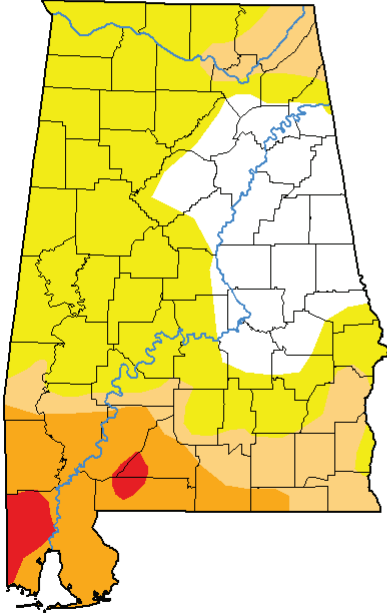
Another tool we are now utilizing is the National Fire Danger Rating System (NFDRS). With NFDRS, we add another component to our analysis, the past. We look at the weather conditions at the time historical fires occurred. NFDRS takes the time, location, fuel type, and size of the wildfire we responded to and matches it with the weather conditions of that day.

These fire variables are matched to the temperature, relative humidity, wind speed, direction, and fuel moisture to create a statistical model of weather parameters of an area. It then assigns a value to the current day based on these models. We call these staffing days, and they range from one to five: one being 'little to



Baldwin County wildfire

U.S. Drought Monitor
Alabama
 September 2023



September 26, 2023
 (Released Thursday, Sep. 28, 2023)
 Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	21.58	78.42	30.60	16.04	2.30	0.00
Last Week 09-19-2023	22.71	77.29	24.40	10.86	2.30	0.00
3 Months Ago 06-27-2023	75.65	24.35	5.72	0.00	0.00	0.00
Start of Calendar Year 01-09-2023	55.18	44.82	17.97	0.91	0.00	0.00
Start of Water Year 09-27-2022	67.58	32.42	0.00	0.00	0.00	0.00
One Year Ago 09-27-2022	67.58	32.42	0.00	0.00	0.00	0.00

Intensity

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

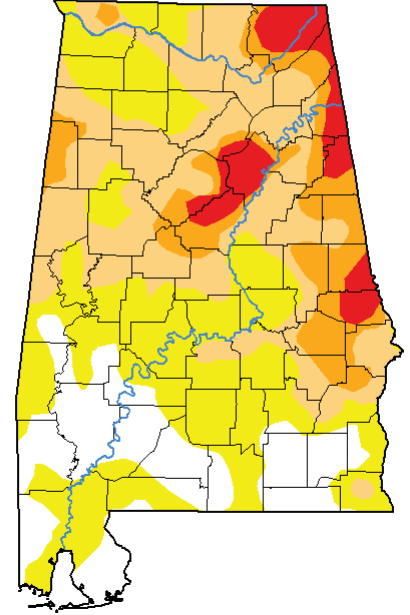
Author

Richard Heim
 NCEI/NOAA



droughtmonitor.unl.edu

U.S. Drought Monitor
Alabama
 September 2016



no chance of fire activity,' and five being 'a high likelihood of occurrence.' This system helps to enhance firefighter situational awareness, especially if no one is familiar with how local weather factors influence fire behavior in a given area. It also helps us decide if we can safely and effectively conduct a prescribed burn.

In our mission to protect and sustain Alabama's forest resources, the Alabama Forestry Commission strives to 'stay ahead of the flames' utilizing innovative technology. The enhancements to our firefighters' situational awareness today could pay dividends for the state's citizens in the future. 🙏

Lowndes County wildfire



5 FORESTRY

“Rules of Thumb”

By Ed Lewis | Forest Management Specialist | Alabama Forestry Commission

A saying of unknown origin, but attributed to Mark Twain, goes like this, “*All generalizations are false, including this one.*”

Although that statement is ‘generally’ true, there are many generalizations used in forestry that do have some basis in fact and that foresters have trusted over time. The intent here is to mention a few of these, the reasoning behind them, and hopefully stir up some conversation about other generalizations that may be published here in the future.

“The color of fire ant mounds in the Blackbelt can tell you what species of tree to plant.”

Hardwoods are ‘generally’ better suited to soils that exhibit low acidity (that is, they have a higher pH, are more alkaline/basic than acid), while most pine species are better suited to soils that are more acid (with a lower pH) in nature. Fire ant mounds in the Blackbelt ‘generally’ are one of two colors: gray or reddish orange. Where fire ant beds are a shade of reddish orange, the soil has what is called an ‘acid cap,’ meaning an iron-containing clay is found near the top of the soil. That soil is ‘generally’ more acidic, and pines are likely to be a reasonable choice to plant. If the fire ant beds are gray, pines may grow there, but will usually exhibit a chlorotic, yellow shade in their needles. Hardwoods are ‘generally’ the better choice to plant in these gray Blackbelt soils.



Ant mound

Photo by Erich G. Vallery, USDA Forest Service, Bugwood.org

“If you stick with Blackbelt soils in the summer, it will stick with you in the winter.”

Anyone in Alabama that has ever driven on bare Blackbelt soils may be acquainted with this idiom. It refers to the easily drivable nature of Blackbelt soils when they are dry in the summer, and the glue-like, slick-natured stickiness that they exhibit when they are wet, which can last almost all winter. When saturated, Blackbelt soils collect on the heels and soles of your boots to make you grow inches taller! These soils are ‘generally’ not a good place for a logging crew to be during the winter!

“Palmettos indicate slash pine sites; the lack of palmettos indicates sand pine sites.”

Where deep, droughty or sandy soils are found (generally) in south and southwest Alabama, sand pines ‘generally’ grow well due to the low water table, among other conditions. When palmetto is found on the edges of those deep sandy soils, the available water is ‘generally’ thought to be close enough to the surface to support slash pine. Plant either species across that imaginary line, and the slash will grow poorly due to the lack of water, and the sand pine will grow poorly (or even die) due to the wet nature of that soil.

“Logging equipment will sink into the soil in direct relationship with the depth of gallberry on the site.”

Gallberry (*Ilex glabra*) seems to grow best in flatwood environments and there seems to be a relationship with the ability of these plants to put in deeper roots in soils that have deep organic layers. The deeper the roots can penetrate, the taller the plants can become, and the ‘boggier’ the soil tends to be. Therefore, the taller the gallberry, the more likely it is that logging would be prohibitive in wetter weather.

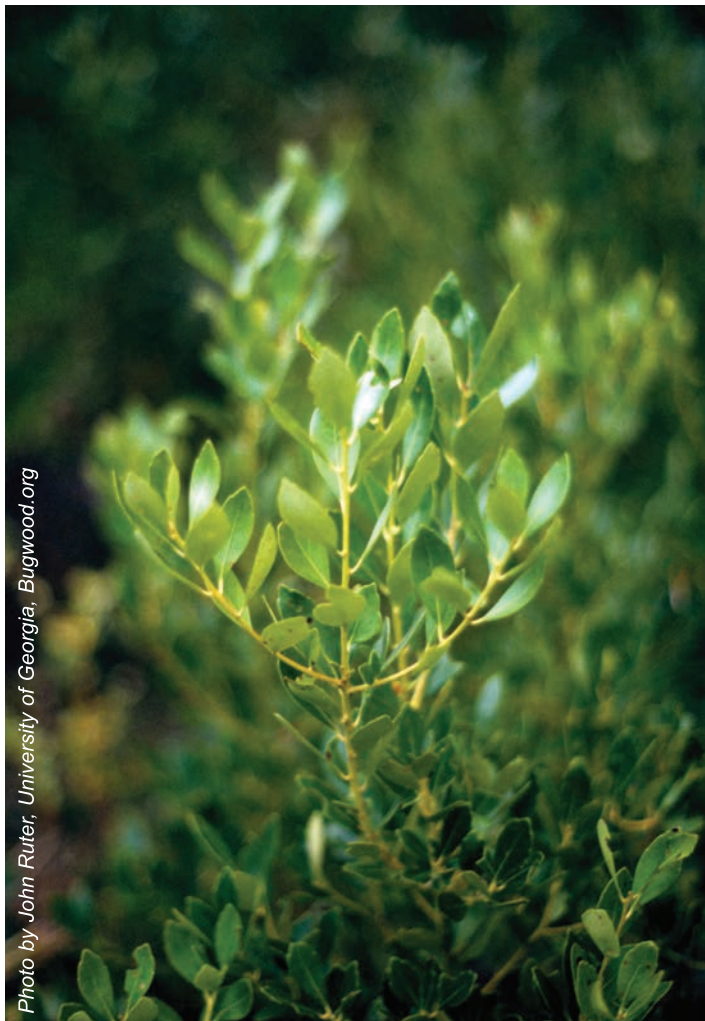


Photo by John Ruter, University of Georgia, Bugwood.org

Gallberry plant

“Persimmon seed can predict the severity of winter weather.”

When common persimmons (*E. Diospyros virginiana*) are ripe, the seeds can be split down the middle and an interesting visual appears. The embryo of the would-be-future persimmon tree will show one of several shapes: a spoon, a fork, or a knife. The tale is that the appearance of a spoon indicates a winter with snow so deep you can shovel it; a fork indicates that the snow will be so dry you can sift it; and a knife indicates the prediction of cold, cutting winds.

I don’t know if this is true or not, but I’m told that Japanese persimmons will either show chopsticks or that they will only predict the weather in Japan. To tell the truth, I’m not so sure about the common persimmon’s ability to predict the weather either.

That is the short list of five forestry ‘Rules of Thumb.’ If you know of any others, please let us know! Email: Edward.Lewis@forestry.alabama.gov 📧



Photo by HeungSoon

Persimmon fruit and nut halves



Not all classrooms have four walls



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REX LUMBER Comes to Troy

By Jacob Bolin / Forester / Alabama Forestry Commission

The McRae family has an extensive history in the lumber industry dating back to the early 1900s around the areas of Quitman, Mississippi, and Halsell, Alabama. In the mid-1920s, they started Rex Lumber Company with a newly constructed mill in Graceville, Florida. With more than 50 years in Graceville, the business was successfully passed down to the third generation. After eventually selling the Graceville plant in 1980, the family started up a new sawmill under the name of North Florida Lumber, Inc. in Bristol, Florida, along with sister companies North Florida Woodlands, its purpose to procure timber, and Apalachee Pole Company, a utility pole manufacturer started up in 1986.

The family eventually purchased back the Graceville location in 2001, reviving the Rex Lumber name for both Graceville and Bristol. The company has continued to grow with the purchase of an existing mill in Brookhaven, Mississippi, in 2009, and the decision to build a greenfield mill in Troy, Alabama, in early 2018.

The mill in Troy, with much support from the state of Alabama and Governor Ivey, began construction in 2018 and operations in 2019. Troy is a state-of-the-art facility with 175 direct employees. The mill is on track to consume more than one million tons of southern yellow pine logs annually and will produce approximately 300 million board feet per year once all capital projects are complete! The mill manufactures dimension lumber from 8 to 20 feet long, in sizes 2x4, 2x6, 2x8, 2x10, 2x12, 4x4, and 4x6.

A gigantic 32-ton circular crane is used to unload logs from each truck to prepare for the process to convert logs into lumber. The logs are loaded onto the log deck, debarked, and scanned to optimize length, then individually cut into 20', 18', 16' and so on. Defects are cut out such as catfaces, crooks, or crushes. The perfected log then makes its way through the sawmill to be cut into the various dimensions of lumber. The lumber market and customer commitments will determine the product mix that is produced.

(Continued on page 14)

REX LUMBER COMES TO TROY

(Continued from page 13)

Out of the sawmill, rough green lumber is stacked by size and length to be placed in the three continuous kilns that efficiently dry the wood with temperatures reaching an astonishing 240 degrees! Kiln drying prevents any mold from growing and perfects the board for the next step. Sawdust, a by-product of the sawmill process, is used in the burner of the kilns to dry the lumber. Nothing goes to waste in Rex's lumber manufacturing operation; if a by-product is not consumed on site, a customer purchases chips, bark, and shavings.

After the lumber is dried, the final finish is applied by sending it through the planer machine. This gives lumber the smooth finish you see at big box stores. Lumber is stored in one of the three finished sheds until a customer is ready for a truckload delivery.

Rex Lumber is a fourth-generation, family-owned business and is committed to the communities in which it operates. Rex is proud to be involved in community projects around Pike County, such as teacher appreciation programs, events with the local schools, and donating to local police and fire stations. Recently, the company and employees assisted the Meeksville Volunteer Fire Department with upgrades for Harmony Park in Pike County. These included setting up a new basketball court. Rex Lumber employees have also generously given their time to participate in ringing the bell for the Salvation Army around Christmas, and an annual Trunk or Treat in the mill parking lot is a big favorite for the children at Halloween.

All this information and more can be found on their website at <https://www.rex-lumber.com>. 

Photos courtesy of Rex Lumber



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LAKE MARTIN

A 'Treasured Lake' in Alabama



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

Covering over 41,000 acres and including more than 880 miles of shoreline, Lake Martin is the largest lake in Alabama and was once the largest man-made lake in the world. Alabama Power Company began building Martin Dam in 1923 and construction was completed in 1926. It reached full pool for the first time on April 23, 1928, after storms brought massive flooding to the Tallapoosa River and its tributaries upstream of the dam.

The lake borders three counties: Tallapoosa, Elmore, and Coosa, bringing tremendous economic value to all of Alabama. As of April 2023, there were 6,700 individual lake front property owners which equates to 7.6 property owners per mile of shoreline. The total value of all lake front property is \$7,038,731,900 providing tremendous amounts of tax revenue to lake-adjacent counties. Even with all the development that has taken place, there remains approximately 350 miles of undeveloped shoreline.

For the 12 month period ending April 30, 2023, which is the most current data available, Lake Martin waterfront real estate sales totaled \$267,892,016 from 255 total residential transactions. This averages to \$1,050,557 per sale. Of these transactions, 91 were for empty waterfront lots, with sales totaling \$65,503,507, averaging \$719,818.76 per lot. Total sales for all lake properties

during this period were \$333,395,523 for 346 properties. Beyond the real estate value, the City of Alexander City draws about 12 million gallons of water from Lake Martin daily to serve more than 40 thousand customers on its public water system. Obviously, the monetary value of this property along with the absolute necessity to be able to draw water for customers requires enormous efforts to maintain high water quality.

On December 28, 2010, the water supply, state park, wildlife refuges, recreational significance, and rare and extraordinary ecological significance of Lake Martin led then Governor Bob Riley and the Alabama Department of Environmental Management to name it as the first (and only to date) 'Treasured Lake' in Alabama. This feat is even more impressive when considering that when the lake was first impounded, erosion from near-shore farming led to reddish-brown water, with some even believing Lake Martin would fill in with silt within ten years.

That situation began to change when the founder of Russell Corporation, Benjamin Russell, began buying property around the lake. As Mr. Russell's ownership of Lake Martin property swelled to more than 25,000 acres, his decision to take the land out of farming and plant it with loblolly pine trees slowly decreased erosion and stabilized the shoreline to such an extent that

we can enjoy the lake in its pristine beauty and purity to this day.

This accomplishment, however, is only the beginning of the story of good forestry practices by the company now known as Russell Lands, Inc. overseen by Mr. Russell's grandson Ben Russell. According to Russell Lands forester Cary Whiteard, much of his work is different than most foresters, "Some of my primary concerns are maintaining and improving water quality throughout Russell Lands forests for the purpose of protecting the lake. For us, it's not just about making money from trees, it is about protecting water for the neighborhoods we have developed around the lake, those we are currently developing, and our future development projects.

"Where the Alabama Forestry Commission recommends streamside management zone best practices of leaving 35 feet uncut around streams to protect water quality when harvesting timber, we leave 70 feet. In areas protected for wildlife, the Commission recommends leaving 50 feet around streams; we leave 100 feet," Whiteard continued. "The amount of money lost by leaving this timber standing is unbelievably small when compared to the value of the clean water running through and leaving our forests, eventually reaching Lake Martin. As far as lakeside forest management, we do not cut any timber within 200 feet of the shoreline. This buffer allows both aesthetic and water quality benefits."

Russell Lands also ensures forest health by cutting and replanting mature trees on an ongoing basis. At least one logging crew is working on Russell Lands property year-round, while up to three crews run during the drier months. To date, the company still allows clearcutting in some areas; however, attempts are being made to move away from this practice. In 2002, Russell Lands began decreasing its clearcutting by beginning to replant recently cut areas with native longleaf pine, replacing the typical loblolly pine most often grown in Alabama forests. With longleaf pine forests, the need for clearcutting is decreased because they allow uneven aged stand management, which promotes continuous cover on a site, reducing erosion and excessive run-off after heavy rains.

Whiteard stated, "Longleaf pine is the native species and the one we want to go back to. It regenerates well through use of prescribed burning on uneven aged stands. Through this process we are also seeing the voluntary regrowth of native grasses, including milkweed, in our understory. The reemergence of these grasses has the added benefit of bringing back quail, which we have recently documented in our forests along with other species such as the monarch butterfly which relies on milkweed as a food source. Prescribed burning, which is not effective in wet areas, allows hardwoods and other species to grow around their native habitat which further diversifies our forested lands."

While prescribed burning sometimes results in complaints from the public, Russell Lands management feels the benefits to the land, increased habitat for wildlife, and improvements to water quality (which can last up to three years) far outweigh the inconvenience of two or three days of smoke during the burns. The improvements seen in the quality of their forest lands make a strong case that they are correct.

When the potential became known of an article about the efforts of Russell Lands to protect Lake Martin using exemplary forest practices, several local entities who rely on the lake to promote growth were quick to take advantage of the opportunity

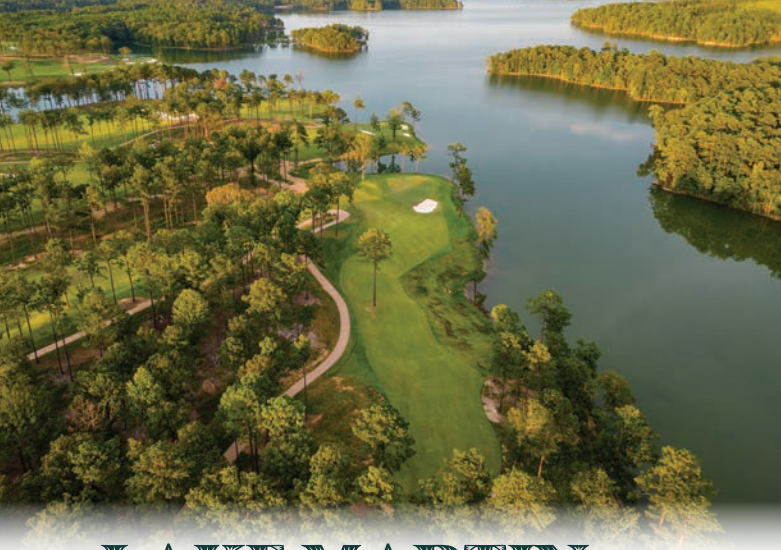


to express their appreciation for the company's efforts. They are as follows:

I took office in November of 2020. At that time, I had no idea how active Russell Lands was, and is, in protecting its 25,000 acres of watershed on the banks of Lake Martin. In almost three years in office and working closely with Russell Lands, I have gained a great appreciation of the stewardship Russell Lands shows toward their timberland properties. Alexander City supplies clean water to over 40,000 residents. That water originates from Lake Martin. Russell Lands goes above and beyond the standard forestry practices to protect that valuable resource. Russell Lands has also been diligent to ensure its development along the shores of Lake Martin protects the lake during construction. While many cities struggled with population and tax revenue declines during the COVID-19 pandemic, Alexander City was fortunate to increase in both categories. These increases are completely attributable to residents of larger cities who had second homes on Lake Martin moving to their lake homes full-time after realizing they could work from their houses and enjoy the lake fulltime. Being home to a Treasured Lake certainly has its advantages, which would not be possible without the outstanding forestry practices of Russell Lands.

WOODY BAIRD
MAYOR OF ALEXANDER CITY

(Continued on page 18)



LAKE MARTIN

(Continued from page 17)

I am constantly impressed with Russell Lands' intentional practice of sound forest management. Not only does this practice display the beauty of the surrounding forest it also protects the waters of Lake Martin. We are fortunate that Russell Lands maintains this high standard of forest management which increases the area's quality of life and drives local economic development.

JEFF LYNN

PRESIDENT, CENTRAL ALABAMA COMMUNITY COLLEGE

The natural beauty of Lake Martin is a huge asset in attracting tourism and economic development dollars. For many years we have worked to quantify the economic impact of Lake Martin on surrounding communities and have found it, not surprisingly, to be the main driving economic force of the entire area. I think protecting this asset must be a collective effort by every governmental entity and private organization connected to it. Russell Lands has always embraced that commitment, and in fact is an example to others when it comes to sustainable development and exemplary forestry practices.

DENISE WALLS

EXECUTIVE DIRECTOR,

LAKE MARTIN AREA ECONOMIC DEVELOPMENT ALLIANCE

Having an amazing natural resource like Lake Martin is what sets our community apart in many ways. Lake Martin's attraction for residential development and recreation, in addition to the many local businesses feeding off that to support the area's demand for services and goods, make for a dynamic combination of factors that enhance and elevate our economic development opportunities. Our potential would be severely limited without good stewards of that natural resource. The lake community is fortunate to have a company like Russell Lands as a leading example of that stewardship with very high standards for water quality and forestry practices which conserve and protect Lake Martin while helping guide responsible and sustainable development.

JACOB MEACHAM

PRESIDENT AND CHIEF EXECUTIVE OFFICER,
ALEXANDER CITY CHAMBER OF COMMERCE

Due to Russell Lands dedication and commitment to water quality through intensive forest management, the State of Alabama can be comfortable in the knowledge that its only Treasured Lake has a motivated and capable protector whose efforts inspire others in the area to keep Lake Martin pure, clean, and beautiful. 🏡

All photos courtesy of Russell Lands



HEALING ALABAMA'S VETERANS AND FORESTS:

Tall Timbers & AHERO Partner to Develop a Workforce for Prescribed Burning



(Story previously published in *AHERO* and *Alabama Forests* magazines)

By John McGuire | Director | Tall Timbers Private Lands Prescribed Fire Initiative

In the spring of 2020, Tall Timbers – a non-profit dedicated to research, conservation, and education – was enlisted to conduct prescribed burns under the vibrant longleaf pines on the AHERO Farm in Macon County, Alabama. AHERO (America's Heroes Enjoying Recreation Outdoors) had the vision to turn the event into a celebration of Veterans learning about how fire is used as a tool in forest management, and so the Tall Timbers/AHERO relationship was begun.

The burn event at AHERO was an operational success: the fire did the intended job, and the event also served to introduce several Veterans to potential career fields in forest management.

Following the event, Major Lee Stuckey came on as an intern with Tall Timbers through the Marine Corps Wounded War-

rior Battalion. The program was novel in that it allowed Major Stuckey a soft transition from active duty to retirement – a luxury many service members do not have.

Stuckey and I soon determined that our organizations could benefit each other. AHERO is committed to assisting Veterans with reintegrating into American life and finding the right career, and Tall Timbers is interested in workforce development to meet the need for more prescribed fire to protect forests, firefighters, and communities. A partnership between Tall Timbers and AHERO seemed a good fit.

Alabama has a large Veteran population, and their unemployment rate is higher than that of the state's general population. Additionally, when Veterans are released from active service,

(Continued on page 20)

Healing Alabama's Veterans and Forests: Tall Timbers & AHERO Partner to Develop a Workforce for Prescribed Burning

(Continued from page 19)



Dave Riley, former National President of Disabled American Veterans (DVA)

they become part of a group with an even more dire rate – an increased risk of suicide.

A worthwhile career, solid earnings, a strong support network, and a sense of purpose are all key ingredients to help address this epidemic of Veteran suicide. Training for a job in natural resources addresses those criteria, while also aligning with research findings that engaging with the natural environment has critical therapeutic value for Veterans who suffer from post-traumatic stress disorder (PTSD).

Currently, the natural resource management sector has significant bottlenecks in its capacity to respond to conservation requirements in many states, Alabama among them. Veterans interested in nature-based employment can certainly assist in this workforce capacity issue. Indeed, programs that train Veterans in land management may well be saving lives as they save the environment.



With Tall Timbers' deep history on the use of prescribed fire as a land management tool, Stuckey and I focused on the subject of wildland fire training. As those who know Stuckey understand, the Marine worked with speed and efficiency. By mid-summer, he had identified three Veterans who would serve as 'test subjects' in the pilot training program.

Through the summer of 2021, we were able to train the three Veterans to become certified burn managers in the state of Alabama, in addition to earning their federal wildland firefighter credentials. By September, we'd found seats for all three on contract fire engines heading west to participate in managing the wildland fires we all were hearing about, with names like Dixie Fire, Memorial Fire, and KNP Complex Fire.

The value of these experiences is best described by one of the Veterans, a south Alabamian who served in Afghanistan, U.S. Army Specialist Shane Herring: "The challenges I faced post-retirement were businesses looking at me as a liability due to possible PTSD incidents, as well as health issues stemming from my time in service. Finding someone who was willing to take a chance on me to prove I was fit for duty was my biggest obstacle.

"The best part about my training and experience in wildland fires is that it places me back on a close team that I can rely on to help me throughout the incident. It also has given me back a sense of purpose and drive I thought I would never have again."

The partnership between AHERO and Tall Timbers, as well as our pilot project's success, showed there are great opportunities open to Veterans who want to transition to this field of work. To date, this new program has trained more than 40 Veterans in the use of prescribed fire – a critical practice for managing forests and reducing wildfire risk. Those are exciting numbers, but this same program was also able to stop four of those Veterans from taking their own lives after providing them with a new sense of purpose. Veterans interested in this proposed training are encouraged to reach out to AHERO.

There are tremendous workforce opportunities in natural resources that can benefit our Veterans and our environment. The need is so great that Tall Timbers recently created the Quail Lands Job Board (TallTimbers.org/Jobs) just for the niche market of jobs on large private quail-hunting properties. Many such natural resource jobs require skills largely learned in the military, meaning interested Veterans may need only minimal training.

This is the beginning of a partnership between AHERO and conservation organizations such as Tall Timbers. AHERO is the hub and conservation organizations are the spokes to this newly forged 'wheel' of opportunity. Moving forward, it will open new career vistas for our Veterans who want to stay engaged in, and critical to, a new mission of protecting and restoring our nation's natural resources. 🙏

To learn more about Tall Timbers, go to TallTimbers.org/ and for more information or to help AHERO support more Veterans, please visit AHEROUSA.Org.

Photos courtesy of John McGuire & Lee Stuckey



“

The best part about my training and experience in wildland fires is that it places me back on a close team that I can rely on to help me throughout the incident. It also has given me back a sense of purpose and drive I thought I would never have again.

”

**-- U.S. Army Specialist
Shane Herring**



Warrior Work Unit

*By Chris Wright / Registered Forester/Work Unit Manager
Alabama Forestry Commission*



The Warrior Work Unit is comprised of Bibb, Greene, Hale, Tuscaloosa, and Walker counties. The name was chosen because the Black Warrior River is a common thread running through the heart of the work unit, starting in Walker County, flowing through Tuscaloosa County, then dividing Greene and Hale counties.

These counties occupy the west-central part of Alabama and contain diverse topography ranging from the steep hills of Walker, Tuscaloosa, and Bibb counties to the swamps and prairies of lower Greene and Hale counties. The area has a rich history in timber growth, with much of the land being owned by large timber companies in the past to these properties being owned by investment groups today.

The Warrior Work Unit continues to focus on traditional strengths of forest management, direct services for landowners, forestry education, and urban forestry. The staff also fulfills numerous requests from landowners that have signed up with the USDA Natural Resources Conservation Service under the Environmental Quality Incentives Program (EQIP): installing fire breaks, conducting prescribed burns, and implementing the technical needs of the landowners.

This work unit houses one of three Caterpillar D7 dozers that are dispersed across the state. Used to install permanent fire breaks, this tractor makes light work of larger tracts. It has been utilized in many specialty projects across the northwest region of Alabama.

Forest education also occupies a large part of this work unit's time. Educational activities range from delivering Smokey Bear presentations at schools, to giving trees to

second graders, and teaching the importance of the forests and trees to our environment. Other outreach programs include assisting the University of West Alabama with forestry career initiative classes, and working closely with the Alabama Forestry Association to conduct multiple 'Learn & Burn' workshops across the counties within the work unit.

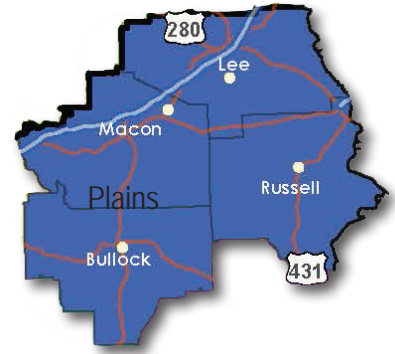
With the growth and changing diversity of the City of Tuscaloosa, urban forestry has generated more interest and expanded into the surrounding areas. The work unit has observed more interest in the Tree City USA program in the last few years as well. Along with these expansions, also comes more forest fire protection responsibilities.

Warrior Work Unit personnel currently consists of Forester Joel Naron and Forestry Specialist Jarred Kornegay in Bibb County; Forestry Specialist Heath Dorman in Greene County; Forest Management Specialist Sam Boswell, Forestry Specialist Ronnie Turner, and Forest Ranger Roy Davis in Tuscaloosa County; Forestry Specialists Bartley Wyers, Jason Berry, and Jessie McDonald along with Work Unit Manager Chris Wright in Walker County. FIA Forestry Management Specialist Josh Angel with the AFC Forest Management Division is also physically located here, along with AFC Fire Analyst Ethan Barrett. 🏠





Plains Work Unit



Matthew McCollough / Registered Forester/Work Unit Manager / Alabama Forestry Commission

The ‘Plains’ name was chosen to represent the location on which this work unit sits, which is the fall line of the Piedmont Plateau and the Coastal Plains. The Plains Work Unit consists of six employees that service more than 1.6 million forested acres spanning four counties: Bullock, Lee, Macon, and Russell. They dedicate their time primarily to prescribed burns, installation of firebreaks, forest management activities for landowners, and wildfire suppression with an average of 92 wildfires per year.

Home to Auburn University and Southern Union State Community College, Lee County is not only a producer of millions of dollars in revenue from agriculture, forestry, and related industries, but also of brilliant minds. Northernmost county in the work unit, it is a true melting pot of landowner services. With more than 280 residents per square mile, AFC employees may find themselves servicing Conservation Reserve Program (CRP) contracts or conducting prescribed burning in the morning, then performing an urban tree assessment that afternoon. Lee County is home to West Fraser, the first air-conditioned sawmill in the United States. This state-of-the-art facility can produce one million board feet in 16 hours.

The second largest county in this work unit, Russell County has a very diverse landowner base. While the northern part of the county has more urban forestry needs, the southern half is home to landowners such as Matt Green who runs a full-time organic dairy farm. On his TREASURE Forest, he demonstrates a true ‘silvopasture,’ successfully incorporating timber growth with grazing livestock. In Russell County, the AFC staff spends a lot of time working with landowners and the USDA to make sure all landowner assistance contracts are serviced in a timely manner.

Southernmost in this work unit, Bullock County is known not only for growing lots of timber but also for its large white-tailed deer and a vast variety of other game species. The county seat, Union Springs, hosts one of the largest bird dog field trials in the state. This sport is so popular that the town is home to a life-size statue of an English pointer, paying tribute to both Bullock County’s upland hunting bird dogs as well as the local residents elected as members of the Field Trial Hall of Fame in Grand Junction, Tennessee.

Without a doubt, Macon County is most famous for the Tuskegee Airmen who fought during WWII, now honored at the Tuskegee Airmen National Historic Site and Museum. Although located in the smallest county of the work unit, the Macon County office is unique because it sits on the Macon State Forest, 200 acres of forestland used for educational and outreach programs. In the past three years, the work unit has hosted more than 250 visitors on site including grades K-12 as well as students from Auburn University’s College of Forestry, Wildlife & Environment. There are also two wildlife openings within the state forest that the Alabama Department of Conservation and Natural Resources (ADCNR) utilizes to host a Physically Disabled Hunting program during specified seasons. Additionally, Macon County is home to Tuskegee National Forest. At 11,000 acres, it is the smallest of all the National Forests in the U.S.

The Plains Work Unit takes pride in working hard and doing everything to the best of their abilities. Forestry Specialists Gary Braxton, Scott Farmer, Ashley Haden, Jody McDonald, and Mark Richardson, along with Work Unit Manager Matthew McCollough share their experiences and forestry knowledge with as many landowners and students as possible so that future generations can continue to manage the natural resources with which Alabama has been gifted. 🌲




BATS.

COOL CREATURES OF THE NIGHT

Essential to the Ecosystem

By Ray Metzler

*Threatened & Endangered Species Specialist/
Certified Wildlife Biologist
Alabama Forestry Commission*



Alabama is home to 16 of the 45 species (19 genera) of bats that occur in the United States. Tropical regions of the world typically have more bat species than temperate zones. For example, West Africa has about 100 species of bats from 30 different genera. Approximately 1,400 species of bats occur worldwide except in extremely cold climates such as Antarctica and the Arctic. Bats are second only to rodents in the number of mammalian species occurring worldwide.

WHAT MAKES A BAT A MAMMAL?

Animals that possess mammary glands for milk production to feed their young are all considered to be mammals. Another unique characteristic of a mammal is the presence of hair or fur – even dolphins and whales have it! All mammals except the spiny anteater and duckbilled platypus are born live – not from eggs. Most mammals also have a relatively constant body temperature except during hibernation or torpor.

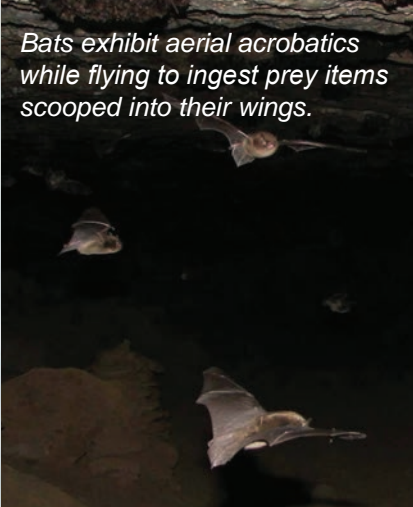
Bats do produce milk and their bodies are generally well furred. Their forelimbs have evolved to become wings that are often naked and transparent.

Unlike flying squirrels that glide, bats truly fly and are the only mammals to do so. Birds typically flap their wings up and down while bats more or less ‘swim’ through the air. Bats exhibit a range of flight skills depending on body size, wing shape, and size.

ALABAMA BATS

Bats play an important role in nature and are beneficial members of our natural systems. They consume huge quantities of insects including, but not limited to flies, mosquitoes, moths, bees, wasps, and crickets. Without bats, humans would probably spend millions, maybe billions of dollars annually to control unwanted insect populations. Some bat species, including the endangered gray bat, are known to fly up to 30 miles from a roost site to feed in areas of high insect abundance.

Northern Long-eared Bat roosting
All photos courtesy of USFWS



Alabama's 16 bat species are all nocturnal insect eaters with most possessing small, poorly developed eyes. All bats can see and utilize their eyes to navigate long distances. They emit echolocation signals through their mouth or nose that bounces off objects (including prey) and are received by their complex ears. By comparing the outgoing pulse with the returning echoes, bats can gather information on their surroundings and focus

on moving prey that are caught in their mouth or scooped into their wings. They may exhibit aerial acrobatics such as doing a somersault while flying to ingest prey items that were previously scooped into their wings. Large prey may often require them to 'light' in a tree to adequately ingest the item.

Most bats roost by hanging upside down from their feet. They have tendons that allow them to lock their feet closed when roosting. This anatomical feature allows them to grasp or perch without using muscles to keep their feet locked in position, thus saving energy as they spend long periods of time roosting. They use muscle power to unlock their grasp as needed.

HABITAT NEEDS

A wide variety of habitats are needed to provide bats in Alabama with sufficient roosting and foraging sites. Forested landscapes provide important, year-round habitat for many bat species and active forest management often results in a heterogeneous landscape with abundant, high-quality habitat. A diverse landscape which includes young and old forest stands, snags, open areas, and clean, accessible water should provide most bat requirements. Some bats will feed within these forested habitats while others forage in open areas or over water sources.

Several bat species utilize cave systems extensively for roosting, but many roost in forests in hollow trees, on leaves, and under loose bark. Some species, including big brown bats and Brazilian free-tailed bats often utilize man-made structures such as attics, louvered attic vents, walls, bat houses, and under bridges. In fact, big brown bats are the most likely species to be encountered by people in Alabama due to their abundance and ability to live in close proximity to humans.

BAT EXCLUSION

Excluding bats from human dwellings can be difficult in some instances but many times can be easily done by simply opening all doors and windows to allow the bat to leave. If this is not successful, throw a towel over the animal and place it outside. It will extricate itself from the towel without any additional handling.

Bats that have invaded inaccessible locations may be removed by placing metal hardware cloth over the opening after they have left the site for the night. They will try to rip the hardware cloth from the structure so it will need to be secured, and duct tape will not suffice. I have firsthand knowledge of bats' tenacity to return to a previously used roost site (a louvered vent on a house). I constructed a temporary enclosure using duct tape and hardware cloth, installing it on the louvered vent shortly after the bats left for the evening. I measured the louver and made plans to

construct a permanent fixture. The bats destroyed the temporary enclosure the first night upon returning to the site! The following evening after they left the roost, I managed to install a permanent fixture made from wood and hardware cloth.

Another option is to establish a one-way exit through which the bats can leave but can't return, while also sealing all other potential entry sites. This often involves a PVC or plastic tube with a one-way valve for roost sites with a small single opening. A great deal of information regarding bat exclusion is available on the internet that can easily be found via your favorite search engine or at www.batcon.org.

Preventative measures are the best solution to minimizing bats invading spaces you don't necessarily want them. Note that exclusions should not be conducted between April and late August, when pups (baby bats) might be trapped inside.

There are many 'wildlife removal' companies in Alabama that can be hired if you need assistance in assessing and managing the source of bat intrusion. As previously stated, Alabama bat species serve a critical role in nature by consuming huge amounts of insects. However, most folks (me included), just don't want them in their house or even a louvered vent. Bat guano is highly odorous and does have some health implications if it accumulates in large quantities. Bat houses are commercially available if you want to provide roost sites on your property. Do-it-yourselfers can surf the internet for 'bat house plans' for information about making your own.

WHITE-NOSE SYNDROME

White-nose syndrome (WNS) is a disease caused by a fungus, *Pseudogymnoascus destructans* (*Pd*), that impacts bats during hibernation. Caves provide an ideal place for fungus growth because they are cold, dark, and damp. This fungus causes harm to hibernating bats by attacking bare skin while they are inactive. It appears to make the animals become more active, burning up stored fat reserves which leads to death prior to the end of their winter hibernation.

Spelunkers were the first to document WNS in a cave near Albany, New York, in 2006. The following year, biologists saw evidence of sick and dying bats. WNS has been found in every state east of the Mississippi River except Florida. In Alabama, the disease was first discovered during the winter of 2011-2012 in Russell Cave in Jackson County. Although bat biologists have not conducted exhaustive searches in every county in the state, the fungus has been found in 14 counties with Bibb County being the furthest south. All counties north of there are considered to be WNS positive.

WNS has been devastating to several species of bats but the most highly impacted have been northern long-eared bat, little brown bat, Indiana bat, and tricolored bat. Millions of bats across North America have succumbed to WNS with mortality at some sites being as high as 100 percent. There is no cure for WNS but scientists across the world are researching the disease and exploring potential vaccines and possible habitat modifications to limit further WNS impacts.



(Continued on page 26)



About 95 percent of gray bats hibernate in only nine caves, one of which is Fern Cave located in Jackson County, Alabama, and is part of the Fern Cave National Wildlife Refuge. Gray bats have been documented as far south as a cave in Conecuh County.

ALABAMA'S THREATENED AND ENDANGERED BATS

Three Alabama bat species are provided protection under the Endangered Species Act: gray bat, Indiana bat, and northern long-eared bat. A fourth species, tricolored bat, has been proposed as an endangered species and a decision regarding this proposal should be finalized soon.

Gray bats highly utilize caves for hibernation as well as summer roosting and maternity activities. About 95 percent of gray bats hibernate in only nine caves, one of which is Fern Cave located in Jackson County, Alabama, and is part of the Fern Cave National Wildlife Refuge. Gray bats have been documented as far south as a cave in Conecuh County.

Indiana bats are forest dwelling during all seasons of the year except the winter hibernation period. Most documented sightings have occurred in the northern one-third of Alabama but there are records

BATS: Cool Creatures of the Night... (Continued from page 25)

from as far south as Hale County. Sauta Cave in the Sauta Cave National Wildlife Refuge in Jackson County is a known hibernaculum, and Fern Cave (mentioned above) is thought to be an Indiana bat hibernaculum as well.

Northern long-eared bats were first listed as a threatened species in 2015 but their status has recently changed to endangered, primarily because of high mortality due to white-nose syndrome. A forest-dwelling bat that primarily use caves and abandoned mines for winter hibernation activities, they forage in forests beneath tree canopy for various insects. Females form maternity colonies of up to 100 individuals during the summer months and are known to use hollow trees, snags, and live trees with exfoliating bark. While sightings have been limited primarily to areas north of Bibb and Shelby counties, this species was recently documented in Baldwin County.

Tricolored bats were common throughout the eastern United States, including Alabama. However, populations have been decimated nationwide due to WNS. Habitat preferences are very general, so they occupy a wider variety of habitats than most other Alabama bat species. They have been documented in counties ranging from the Tennessee/Alabama state line down to Covington County on the Florida line. Tricoloreds hibernate during the winter, though in south Alabama they may forage year-round when the weather is warm and insects are present.

zones through establishment of beneficial streamside management zones is critical to bat conservation as they are used extensively for roosting, feeding, and watering sites. Forest harvesting activities should be very limited near cave entrances to not disturb the ecological characteristics such as temperature, air flow, and humidity. As always, control of non-native and invasive plant species is beneficial to bats.

It is not always possible for a landowner, forester, or logger to be able to identify a flying bat as one of Alabama's four species protected by the Endangered Species Act. I try to emphasize the importance of recognizing what could be a maternity roost or hibernaculum in a forested setting, as well as discontinuing forest harvesting activities if it appears as though a large number of bats have been unknowingly disturbed.

A great deal of research is being done on many bat species to learn more about their biology and habits. Hopefully this research will be informative and provide us with a better understanding of their life histories and requirements. As a result, we may garner a greater appreciation for the role bats play in contributing to a healthy ecosystem on a global scale. 🦇



Tri-colored Bats

MEET THE LOCALS

Alabama has 16 species of bats flying its night skies.

- Big Brown Bat
- Brazilian Free-tailed Bat
- Eastern Red Bat
- Eastern Small-footed Myotis
- Evening Bat
- Gray Myotis
- Hoary Bat
- Indiana Myotis
- Little Brown Myotis
- Northern Long-eared Myotis
- Northern Yellow Bat
- Rafinesque's Big-eared Bat
- Seminole Bat
- Silver-haired Bat
- Southeastern Myotis
- Tri-colored Bat

WHAT CAN YOU DO TO BETTER MANAGE YOUR FOREST FOR ALABAMA'S BATS?

Active forest management can result in the creation, enhancement, and conservation of bat habitat over broad landscape areas. Practices that enhance diversity in tree species, tree-size class, and snag condition are important features of a plan for providing heterogeneous habitat for bats. Shagbark hickory is a particularly important tree for forest dwelling bats that utilize exfoliating bark as roost sites. Allowing snags to stand unless they provide a danger to human safety is an important aspect of bat management. Prescribed burning, especially within the northern long-eared bat range, should be excluded from about May through August. Limiting timber harvesting to the fall, winter, and early spring months will minimize the risk of damaging a maternity roost. Maintaining the integrity of riparian

GLOWING IN THE CANYON

By Mollie Kate Erwin, Communications & PR Intern, Alabama Forestry Commission

Alabama is well-known for its incredible diversity, both in landscape and wildlife. From the mountains to the sea, you can find it all in our very own Sweet Home Alabama. One species occurring in the state that may not be as familiar to locals is the North American *Orfelia fultoni*, or foxfire fly. While flies are most commonly regarded as a pest or nuisance, this particular species of fly is quite unique. During the larvae stage of their lives, these flies emit a bioluminescent glow that lights up the cavern walls of Dismals Canyon! Although they are referred to as “dismalites” and are often confused with glow worms found in Australia and New Zealand, they are their own distinct species. Alabama is considered to have the largest population of these flies in North America.

A very specific environment is needed for these flies to thrive: “humidity to prevent them from drying out, hanging surfaces to allow them to build sticky webs to trap their food, an adequate food supply of insects, a still atmosphere to prevent webs from tangling, and darkness to allow their light to show.” The caverns at Dismals Canyon just happen to capture the insect’s ideal environment perfectly!

Dismals Canyon is an 86-acre National Natural Landmark located in Franklin County near Phil Campbell, Alabama. Our drive to the park consisted of a beautiful cotton-candy sunset overlooking the signature northwest Alabama rolling hills. Just before Exit 65 on I-22 in Jasper, a beautiful white cross stands tall as a reminder of our Creator from whom all blessings flow. What an amazing God to have created such a marvelous world and allow all His people to enjoy it. There is not any signage approaching the park, causing some visitors to question whether they are even in the right place. However, upon arrival there is a large “Dismals Canyon” sign illuminated in the pitch-black countryside.

The best time to view the dismalites is late at night during the months of May to September. The last guided tour runs from 10-11 PM making it a late, yet exciting evening. The hike down into the canyon is made more difficult by the limited light available, and the path is only seen by the glow of the group’s flashlights. Red flashlights are strongly encouraged to enhance night vision, and at some points of the tour are the only light allowed. There are three specific points on the tour where large groups of the fly larvae are concentrated, though they can be seen throughout the

duration of the guided excursion. During these specific points, the tour guide Bill will ask everyone to go “lights out” so an optimal viewing experience is achieved.



During these blackouts, the tour is stationary, so visibility is not required. The blue glow of the larvae shines on the cavern walls like stars in a clear night sky.

Bill is very knowledgeable on the species, the canyon, and the surrounding land. He ensures that every group he takes on the journey is well-educated, and safety is a top priority for him. He prides himself on only having one accident during his time as a tour guide. It happened on his first trip eight years ago, and there hasn’t been another since! There are stairs down the path in the exceptionally steep areas and all low-hanging boulders are thoughtfully pointed out ahead of time so everyone can “watch their noggin!” Along the path, the tour encounters a few tight squeezes in between large boulders, so be prepared for a light workout.

The night tour was an incredible experience everyone should have and how lucky we are to have it right here in Alabama! The serene sounds of nature accompanied by the flowing waterfalls and bright night sky set the tone perfectly for an evening in the woods, fascinated by God’s creation. 🙏

“The serene sounds of nature accompanied by the flowing waterfalls and bright night sky set the tone perfectly for an evening in the woods, fascinated by God’s creation.”

Photo by Elliot courtesy of Dismals Canyon

Celebrating the 90th Anniversary of the CIVILIAN CONSERVATION CORP

Photo by Art Merripol



Flagg Mountain Tower was built by CCC Company no. 260, composed of 216 men.

Contributed by *The Civilian Conservation Corps Legacy*

This year marks the 90th Anniversary of the founding of the Civilian Conservation Corps (CCC). The CCC was a public works program that operated from 1933 to 1942 as part of President Franklin D. Roosevelt's (FDR) 'New Deal.' It targeted single young men and World War I veterans in relief of families who had difficulty finding jobs during the Great Depression. The program provided unskilled manual labor in environmental conservation and the development of natural resources in rural lands.

During Roosevelt's first 100 days in office, he signed the Emergency Conservation Work (ECW) Act, commonly known as the Civilian Conservation Corps. FDR proposed the CCC to Congress on March 21. It went through both houses of Congress and landed back on Roosevelt's desk to be signed on March 31, 1933. His proposal was to recruit thousands of unemployed young men, enroll them in a peacetime army, and send them into battle against destruction and erosion of our natural resources. "I propose to create a Civilian Conservation Corps to be used in simple work ... more important, however, than the material gains will be the moral and spiritual value of such work."

On April 5, the 'birthday' of the CCC, FDR signed the executive order creating the ECW/CCC. On April 7 the first enrollee was selected and by April 17 the first camp was in operation near Luray, Virginia – Camp Roosevelt.

He brought together two unused resources, the young men and the land. He promised he'd have 250,000 men in camps by the end of July 1933.

The Department of Labor, through its state and local relief offices, was responsible for the selection and enrollment of applicants. Enrollees had to be single and unemployed men 18-25 years old (expanded to 17-28 years old in 1935) with families on relief.

They enrolled for six months and worked a 40-hour week for \$30 per month. The government typically sent \$25 home to the workers' parents and the men had \$5 spending money. By July 1, 1933, there were 275,000 enrollees and 10,000 supervisory personnel in 1,468 camps. It was the fastest large-scale mobilization of men in US history.

Roosevelt chose the Army to supervise the camps which consisted of approximately 200 men each. The Army moved

thousands of enrollees from induction centers to working camps in record time. It used its own regular and reserve officers, together with regulars of the Coast Guard, Marine Corps, and Navy to temporarily command camps and companies. Enrollees received good food, uniforms, shelter, and medical care. During the summer of 1933 they lived in tents; later they moved into wooden buildings.

CCC camps were located in all of the 48 states and these territories: Alaska, Hawaii, Puerto Rico, and the US Virgin Islands of St. Thomas, St. John, and St. Croix. There were separate camps: white enrollees, black enrollees, unemployed veterans who served in World War I, and Native Americans who worked on tribal lands.

A camp superintendent was selected to plan, organize, and supervise projects on state and national forest land. Workers built trails, roads, campsites, and dams; stocked fish; built and maintained fire tower observer's cabins and telephone lines; fought fires; and planted millions of trees.

The CCC disbanded in 1942 due to desertions, increased employment opportunities, changes in public opinion, lack of funding, and the need for soldiers to serve in World War II.

The CCC program is considered by many to be one of the most successful of Roosevelt's New Deal programs. Roosevelt's "Tree



Photo courtesy of Ryan Cragun



Tower at Cheaha State Park



Historical cabin at Flagg Mountain



Vaulted ceiling at the Flagg Mountain tower



Lake, dam, and spillway built by the CCC at Little River State Park



CCC company driving bridge piling, Mobile County

Army” planted more than three billion trees on land made barren from fires, natural erosion, and intensive agriculture or logging. In fact, the CCC was responsible for over half the reforestation, public and private, in the nation’s history.

Enrollees constructed trails and shelters in more than 800 parks nationwide, helping shape the modern national and state park systems that visitors still enjoy today. CCC companies contributed to an impressive number of park structures, creating 94 national parks and 741 state parks.

The Civilian Conservation Corps Legacy is a national organization that is “Dedicated to research, preservation, and education of

future generations to create a better understanding of the CCC and its continuing contribution to American life and culture.” Anyone interested in learning about the work of the CCC Legacy and joining should visit www.ccclegacy.org or [facebook.com/groups/ccclecacygroup](https://www.facebook.com/groups/ccclecacygroup).

MEMORIAL

Jerry McCallister

1943 ~ 2023

Jerry McCallister, a resident of Dothan, died on July 1, 2023, at Extendicare Health and Rehab at the age of 80. Memorial services were held on July 5 in Clearman Chapel at Southern Heritage Funeral Home.

Jerry was born June 27, 1943, to the late James Charlie and Mary Clemmons Womack McCallister. He was raised in the Ardilla community and graduated from Ashford High School. Jerry retired from the Dothan Fire Department as a Captain and was engaged in farming his whole life. He had a love for turkey hunting and being on the farm. He was very influential on other forest landowners in the Wiregrass area.

McCallister Farms in Houston County has been certified as a TREASURE Forest since 1979. The property received the Helene Mosley Memorial TREASURE Forest Award in 1991. Jerry affectionately renamed the timber and wildlife management portion of the property as “Mule Shoe Plantation.” His children and grandchildren have been managing the property for the last several years.

He is preceded in death by his parents and his first wife, Malinda McCallister. Survivors include his wife of 34 years, Robbie McCallister; children, Tina Wagner (Jim), Kay Dozier (Tol), Jay McCallister (Carlotta), and Jeff McCallister (Lisa); grandchildren, Colby Whitehead, Kirby Bates, Tolver Dozier, Kaylee Dozier, Justin McCallister, and Jayse McCallister; great grandchildren, Everly Whitehead, Blakely Whitehead, Kate Dozier, and Alice Bates; siblings, Joe McCallister (Sara) and Robbie Merritt (Thomas); along with several nieces and nephews.

Memorial contributions may be made to the American Cancer Society, PO Box 6704, Hagerstown, MD 21741. 🇺🇸



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Eastern Hemlock

By Josh Angel | FIA Forester | Alabama Forestry Commission

Eastern hemlock (*Tsuga canadensis*) is an evergreen tree native to eastern North America. It is found from southern Canada to much of the Great Lakes region, extending along the Appalachian Mountains and parts of northern Alabama. One of the most shade-tolerant of the eastern conifers, it often grows on north facing slopes where they are shielded from intense sunlight. They can also be found in rocky ravines where shade, cooler temperatures and moisture persist. Eastern hemlock thrives along streams in riparian zones and is an important source of shade that keeps streams cool for aquatic life.

The growth habit of the eastern hemlock is generally upright pyramidal with branches and foliage extending to the ground under open grown conditions. The leaf is mostly two-ranked and has two rows of 0.5 to 0.8 inches long, dark green, flattened needles that taper to a dull point. Each needle will have two rows of white stomata on the underside. The seed cones are oval shaped measuring 0.5 to 1.0 inch long with rounded entire scales. Cones usually mature in mid-October and produce very small seeds that are primarily dispersed by wind. The bark has a grey flaky appearance on young trees, while it

is reddish brown with wide ridges and furrows on mature trees.

The wood of the eastern hemlock is soft with coarse grain and a light brown color. The lumber is used for paper production, railroad ties, pallets, crates, and general construction. Due to the high concentration of tannin, the bark of the tree was once used in the early hide-tanning industry.

Both eastern hemlock and Carolina hemlock are currently under attack by the hemlock wooly adelgid (HWA), a sap-sucking insect introduced from East Asia. HWA is an aphid-like insect that covers its body and eggs with a white 'wool-like' wax coating which acts as a protective layer. Infestations are easily detected by the presence of tiny wool-like structures at the base of hemlock needles. HWA disrupts the nutrient flow by feeding at the base of the needles, causing the needles to change color and fall from the tree. In the absence of needles, photosynthesis cannot occur and the tree essentially starves to death. Trees are also weakened to the point that they can be killed by secondary sources such as disease or boring insects. The host tree usually dies within three to five years after being infested. The three main strategies to reduce HWA and its impacts include the use of insecticide treatments,

biological controls such as utilization of predatory insects, and breeding hemlocks for resistance to HWA.

The Alabama State Champion eastern hemlock is located in Winston County within the William B. Bankhead National Forest. This tree was crowned state champion in 1992. When recertified in 2021, it had a circumference of 152 inches (48.4 inches in diameter), height of 120 feet, and average crown spread of 25 feet. 🌲



Alabama State Champion
eastern hemlock

Photo by Josh Angel