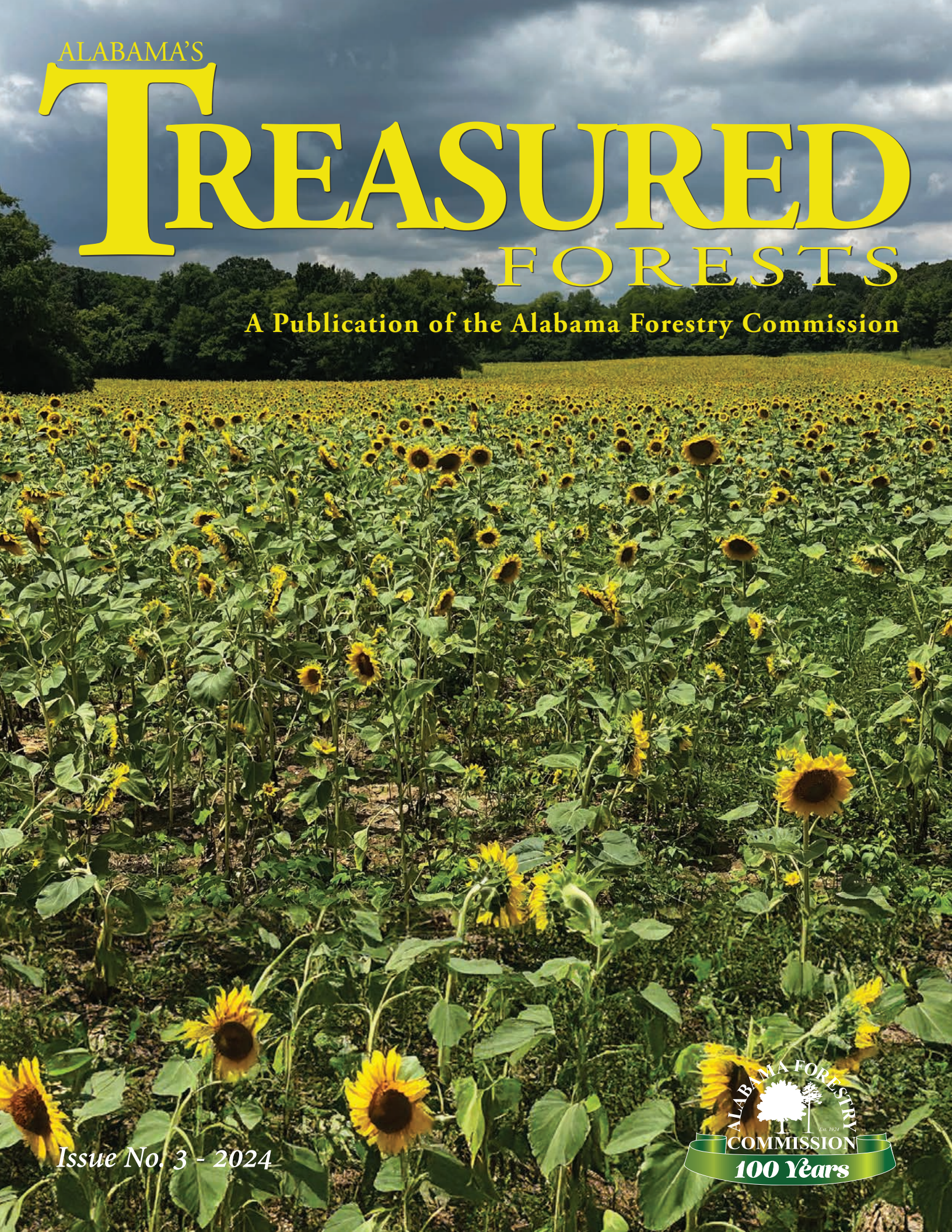

ALABAMA'S
TREASURED
FORESTS
A Publication of the Alabama Forestry Commission
Issue No. 3 - 2024
ALABAMA FORESTRY COMMISSION
Est. 1924
100 Years

PROMOTE • EDUCATE • IMPROVE

ATFA

TREASUREForest.org

SUPPORT NATURAL RESOURCES EDUCATION

We'd rather be in the woods. Wouldn't you?

Buying an "I'd rather be in the woods!" tag helps share that love of Alabama's incredible natural resources with kids – and adults – of all ages. Learn more at your local Probate Office.

ALABAMA'S
TREASURED FORESTS
A Publication of the Alabama Forestry Commission

table of CONTENTS

Vol. XLIII Issue No. 3 - 2024

On The Cover:

Key Cave National Wildlife Refuge in Lauderdale County covers a little over 1,000 acres and is managed as an upland grassland. The Lauderdale AFC does a lot of work on the site such as prescribed burning and timber inventory.

Photo by Chris Brewer

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**

facebook YouTube

GoodFIRES
www.goodfires.org/

VISIT MY FOREST
www.visitmyforest.org/

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.

Message from the *STATE FORESTER*

Rick Oates, State Forester

The third installment of our look back at the Alabama Forestry Commission's history will be a random walk through the "Administrative Handbook" for Department of Conservation-Division of Forestry (DOF) employees, dated November 26, 1940. For those of you who do not know, the Alabama Forestry Commission was established as an independent state agency in 1924. In 1939, legislation passed that combined Forestry with the Department of Conservation and later, in 1969, legislation again spun the agency off as a separate entity, which is how it remains today.

At the beginning of this document, State Forester Brooks Tolor said, *"The handbook is being developed in order for our employees to have a ready reference concerning all regulations of the division and other information and material which will assist you in rendering service to the people of Alabama."*

Filing System *- It is again requested that field men thoroughly digest the Filing System set up in the Montgomery office. The successful application of this system requires that all employees handling official correspondence familiarize themselves with the subject classification and use it in preparation of correspondences.* Considering how easy it is to print, proof, correct, reprint, send, and store documents today, I am sure it was difficult to keep things organized back then without the convenience of printers, email, and electronic storage.

Use and Care of Canteens *– The DOF has included canteens as standard firefighting equipment on the assumption that men cannot continuously perform hard manual labor in extreme heat without an available supply of drinking water. In several instances it is reported that a number of the men were possibly made ill by drinking water from canteens, but on investigation it is the water rather than the canteens that were the cause of the trouble. As a safety precaution, the following maintenance standards for canteens have been prepared...* In today's world we take clean water for granted, and disposable water bottles, for better or worse, are the normal way we supply our people with clean water.

Public Relations *– As the term implies, Public Relations refers to contacts with the general public and is used by the DOF to designate all activities dealing with the dissemination of information advancing the cause of forestry and forest fire protection. The promiscuous use of the term "educating the general public" should be avoided as it connotes ignorance on the part of those whom you are trying to convert to your way of thinking. Quite frequently a person with very little schooling may be blessed with a high degree of native intelligence and pride and will naturally resent any obvious reference to his education, or lack of education. I am not sure what can be said about this wisdom, except that we ought to apply it more often today!*

The Farm Woodland – This appears to be an early reference to a forest management plan for private landowners that was to be prepared by DOF employees. It required: *1) The farm woodland area on each farm should be divided first on the basis of type (i.e., swamp lands and ponds, flatwoods, uplands, and ridges), and second on the basis of special treatment of the forest land. 2) The plan will start out with a very basic description of the woodland, covering species, stocking, age, and condition with respect to cutting, burning, grazing, and disease. 3) The woodland plan should include a description and treatment recommendation. The description should paint a word picture of the stand covering the items mentioned in section (2). The treatment should describe what needs to be done to the stand. 4) The location of the farmer's home should be shown on the map as well as any principal roads. 5) The recommended naval stores should be specifically set forth. 6) In setting up the work to be done on the summary sheet, a division should be made between the work which the farmer can do with his own labor and that work which is desirable but will have to be done with other than the farmer's labor.*

I wish I had more space to point out things I found interesting in this document. It appears to me, that though things have changed a great deal for the AFC in the last 100 years, many things remain the same!

Rick Oates

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

URBAN SUCCESS:

NATIVE PLANT TRAIL at Daphne Central Park

By Noel S. Yoho, Retired Forest Ecologist, City of Daphne Environmental Advisory Committee and Jesi Ward, Environmental Programs Manager, City of Daphne

In December of 2023, the city of Daphne had the opportunity to partner with the Alabama Forestry Commission, several local Boy Scout troops, and the city's Environmental Advisory Committee (EAC) to establish a variety of native trees in one of Daphne's popular parks. In a matter of a couple of hours, the group had planted more than 40 species native to the Coastal Alabama region. These plantings will mature into what will become the Native Plant Trail at Daphne Central Park. The arboretum will serve two primary functions: to provide an outdoor biology classroom and to exhibit living examples to residents of native trees suitable for landscaping.

Daphne resident Noel Yoho, a retired forest ecologist, championed the establishment of the Native Plant Trail. The city's moderate climate, sunny days, and bountiful rain made it a natural choice. The Eastern Shore of Mobile Bay is well known for its natural beauty and welcoming climate – a welcome that also extends to the plant community. While the area is home to many native species, the fact is that non-native species have found their way here and are oftentimes outcompeting the natives.

The arboretum will allow homeowners, teachers, outdoor classrooms, and the public the opportunity to see firsthand a large variety of species in one location. The city of Daphne has long had a robust native tree and shrub campaign, complete with handouts and public outreach events. By displaying native trees in their natural setting, this new project will greatly enhance the effort in this area.

Extensive infrastructure, staffing expenses, and maintenance requirements of comprehensive arboretums exceed the capability of all but the largest municipalities and universities. This begs the question; must an arboretum be comprehensive and intensively maintained to be effective? In 2020, the city's Environmental Advisory Committee adopted the task of exploring the practicability of creating a mini arboretum in the city.

There were many things to consider while planning the city's arboretum. The challenge was to achieve optimum benefits with minimum maintenance. Both the short- and long-term burden on the Public Works Department had to be taken into consideration.

(Continued on page 6)

Native Plant Trail at Daphne Central Park

(Continued from page 5)

The department would have to take over the exhibit without compromising its many other responsibilities. Minimizing long-term maintenance became a theme in designing the Native Plant Trail.

The first decision involved the sizing of the arboretum, as the EAC wanted it large enough to be interesting while also being easily managed. Focused discussions on the number and type of species ultimately produced a consensus that a planting limited to 40 trees was the magic number. Arboretum specialists recommended that large trees be spaced a minimum of 60 feet apart, medium trees 45 feet apart, and small trees 30 feet apart. Establishing 40 trees of varying mature size would require about two acres. A wish list of 50 species was then created, anticipating the commercial unavailability of some selected species, and

the probability that the selected property would already contain several native plant specimens. The creation of this list required collaboration from experts including Patrick Thompson, Auburn University Arboretum Curator; Dr. Jim Miller, retired U.S. Forest Service Forest Ecologist; and Fred Nation, Daphne's local celebrated expert on native tree species.

The preferred size for the trees was three-gallon containers. Most tree species are commercially available in three-gallon containers, and this size is large enough to be conspicuous in an expansive landscape. These smaller trees are also much less

expensive, easier to plant, establish more firmly, and typically outgrow plantings of larger containers. Most importantly, smaller planted trees require much less assistance to survive and establish than do larger planted trees.

It became obvious that Daphne Central Park was the ideal location for this project. The park is an attractive location, and though originally a nine-hole golf course, it was re-purposed as a disc golf course and walking trail. The existing undeveloped woodlands within the park contributed 24 native woody plants to the mini-arboretum's inventory. Topography commences from a ridgetop that drops 35 feet to a bridged ephemeral creek and frequently wet alluvial bottom and extends halfway up the opposite slope. Soils are drought-prone loamy sands (Bowie and Lakeland series). Blacktopped paths border each side of the fairway. Approximately half the area opposite the walking paths is occupied by house lots; the other half is wooded.

Having identified the desired species, plants were ordered in early June 2023, primarily from Superior Trees in Lee, Florida. The order was managed by Moe Nation, an experienced landscape contractor, who warned that orders placed after early sum-

mer were likely to encounter problems with availability. Fortunately, however, the nursery delivered as scheduled, two days before the planting date.

Given that Daphne Central Park is a popular disc golf course partially flanked by homes on one side, careful consideration was given to the placement of the plantings so as not to interfere with the course or present future danger to the homes as the larger trees mature. Within these limitations, plants were placed as closely as possible to mimic how they naturally occur. A grouping of shrubs and small trees was located at the ridgetop adjacent to Daphne Central Park's parking lot. Remaining plants were arranged along the walking trail spaced 30 to 60 feet apart and, to maximize shading benefits, 15 to 25 feet from the trail, depending on mature size. Concentrating the placement of trees to minimize added maintenance created a circuit approximately one-third of a mile in length, a leisurely 15-minute walk.

In anticipation of the December planting, site preparation began in mid-October 2023. Planting sites were marked with flags numbered to correspond with specimen identification, and a three-foot diameter zone around each flag was treated with glyphosate to eliminate herbaceous competition. Residual and emergent herbaceous growth was retreated in mid-November. Installment was scheduled to avoid fall heat and drought, as well as provide for winter-long root establishment.

The plantings took place on December 9, 2023, and included the help of the Alabama Forestry Commission and three local Boy Scout troops. Environmental Advisory Committee member Mimi Boxx inspired these troops and procured an abundant pool of labor. The Forestry Commission's Urban Forester, Dale Dickens, provided instruction to 24 shovel-armed Boy Scouts on the proper technique of tree planting. Dickens then led a delegation of four Baldwin County Forestry Commission employees, each supervising a team of scouts. These teams expertly planted 40 shrubs and trees. The backbone of the Daphne Native Plant Trail was now in place.

Plantings will be monitored but are not scheduled to receive further attention for several months until drought risk reemerges. Dickens suggested the deployment of an 'infant-tree squad' and Daphne's Boy Scout Troop 82 willingly enlisted in the effort. Daphne's Public Works Department has likewise committed to watering these plants when called upon. The authors represent a third defensive line with too much skin in the game to watch these trees wither.

Our goal is long-term success. First-year losses can be replanted next year at a fraction of the cost of intensive efforts to avoid losses. The completed exhibit will feature more than 50 native trees.

We certainly don't want to keep this lovely addition to the park a secret, so before the planting took place a public relations strategy was formed. The first step was informing the immediate neighbors and regular parkgoers of the new additions. The completed exhibit will feature a phone app with coordinating signage onsite that will guide the public through the learning exhibit and provide a biography of each plant, along with its advantages and disadvantages as a landscape candidate. The city's marketing team is eager to help amplify the message about this lovely little trail.

We have found that the Native Plant Trail has already been well received. In approving its establishment, Daphne Mayor Robin LeJeune noted, "We are thankful for the men and women of the Environmental Advisory Committee for bringing a mini arboretum to the city of Daphne. Not only does it add additional beauty to our Daphne Central Park, it is a great learning tool for future generations."

The Native Plant Trail is uniquely compatible as a multiple-use element. Adjacent homeowners will enjoy an improved vista; trail users will appreciate the more interesting walk; and disc golfers will experience improved playability. The benefits of shade, beauty, and serenity have not only been recognized by all current users but will also enhance the suitability of Daphne Central Park for further development.

Creating the Native Plant Trail required assistance from many individuals in the city's administration and workforce, as well as the community and people from across Alabama. Only a few are herein recognized, but note that no request for help went unheeded. We wish to express our deepest appreciation to all, 78 by count, who helped make the Native Plant Trail a reality at Daphne Central Park.

FOREST HEALTH:

POSTCARDS OF ALABAMA PINES NOT SO PRETTY THIS SUMMER

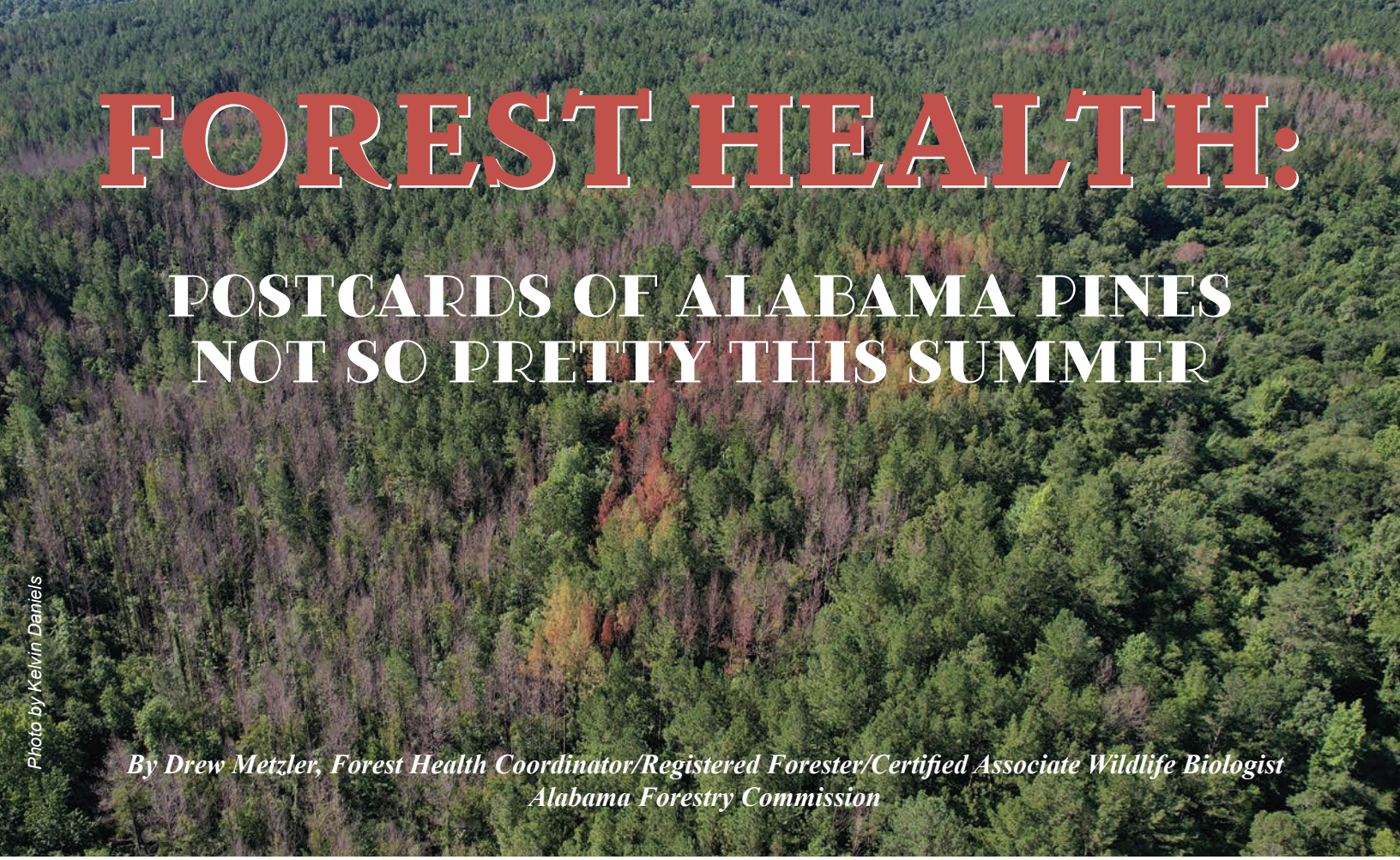


Photo by Kelvin Daniels

By Drew Metzler, Forest Health Coordinator/Registered Forester/Certified Associate Wildlife Biologist
Alabama Forestry Commission

Alabama is blessed with some of the best timber-growing conditions in the country due to our long growing season, coupled with typically generous precipitation patterns. This allows our forests to be among the most productive in the country, and collectively, the southern U.S. states account for over half of the timber harvests by volume in the country. However, these same climatic patterns also provide ideal growing conditions for a variety of insects and pathogens that can harm our forests.

Southern Pine Beetle

In the previous edition of *Alabama's TREASURED Forests* magazine, we included an article about pheromone trapping of southern pine beetle (SPB) (*Dendroctonus frontalis*), a study conducted by the Alabama Forestry Commission (AFC) and U.S. Department of Agriculture, Forest Service every year to estimate SPB populations and plan for potential outbreaks. This spring, southern pine beetle populations were much higher over the northern half of the state at survey locations in the Bankhead and Talladega national forests. This phenomenon can largely be attributed to the severity of drought conditions in north Alabama last year, as droughts can cause prolonged residual stress on timber stands. Drought in combination with overstocked or over-mature stands, and low populations of predatory beetles such as the checkered clerid beetle (*Thanasimus dubius*), can create ideal conditions for SPB to proliferate and cause widespread mortality. The first three weeks of June were abnormally dry and certainly did not help stressed stands.

The Forestry Commission has flown nearly every county this summer, recording more than 9,400 individual SPB spots that are synced to an online server that provides spot locations to the public. In addition to live mapping, landowners receive a paper notification in the mail with the approximate pine beetle infestation location, so they can take action to suppress the SPB infestation.

Southern pine beetles can be identified by observing pitch tubes and their location on the tree. Pitch tubes are the natural defense mechanism to ward off attacking beetles, but in high numbers this response is overwhelmed by the beetles. SPB pitch tubes are typically characterized by cream-colored popcorn-shaped clumps of resin emitted from the bark crevices of the pine and occur on the bole of the pine from head height to 30 feet usually (up to 60 feet on large pines). If you can peel the bark back on a pine suspected of having SPB, you'll find winding S-shaped galleries created by the beetles as they feed on phloem tissue.

If you see or suspect SPB in your pine stands, it's important to get a quick and accurate identification from a forestry professional such as an AFC county forester or a consulting forester. If an infestation is caught early and limited to just a few trees, a simple cut-and-leave strategy can be taken to halt the spread. This is most applicable to younger stands that can easily be felled with a chainsaw in the case of smaller spots of 5-20 trees. However, with larger spots, heavy machinery will be necessary to cut or push over infested trees. A good rule of thumb is to cut all the infested trees inwards towards the spot's origination point and cut an additional buffer of healthy trees about as wide as the trees are tall, although a wider buffer may be necessary this year due to the heightened activity.

While leaving the trees on site leaves the beetles on the property as well, felling the trees inward and cutting a buffer zone does interrupt the pheromone communication of SPB. It also increases the amount of sunlight to the bole of the infested trees, which can cause mortality to larval southern pine beetles. Without these focused pheromone cues, adult beetles that emerge from horizontal trees on the ground are much less apt to attack adjacent standing pines and may fall victim to other predatory insects. Stands that are close to maturity or have multiple large beetle spots will likely need to be salvaged by clearcutting all merchantable timber and replanting.

Brown Spot Needle Blight on Loblolly

A particular pathogen that has been troublesome this year and in recent years is brown spot needle blight (BSNB) (*Lecanosticta acicola*). This disease is a fungal pathogen historically closely tied to longleaf pines, and especially detrimental to young longleaf pines in the grass stage. It has also infected many other species of pines, especially non-native pines used for ornamental and Christmas tree production. Over the past few years, BSNB has been infecting loblolly pine, our most economically important species for wood fiber production. The fungus thrives on mild humid conditions, typical of our spring and early summer weather patterns. Severe infections were noted in many stands throughout the state this spring as humid conditions and rainfall allowed the fungus to rapidly spread.

Typically, the bottom canopy of loblolly is where the infection begins, and through splashing rainfall, spores are moved upward through the canopy. The first sign of infection is the discoloration of needles. Infected needles will contain circular lesions with a brown spot surrounded by a yellow halo. Over time, the infected area will turn brown with a dark red or dark green border. Strategies for controlling BSNB in longleaf pine are well documented, and prescribed fire is the gold standard for controlling the disease by burning infected needles still attached, as well as needle litter and vegetation on the ground. This not only physically removes the fungus, but also increases the aeration at ground level, which helps reduce the humidity that the fungus prefers. Control in planted loblolly stands is much less defined, as our ability to use prescribed fire in loblolly is typically at lower intensities and longer return intervals.

Multiple universities including Auburn and Mississippi State are studying the disease and the myriad of biotic and abiotic factors such as tree genetics, soil type, and stand density that may be causing the disease to be more infectious in some locations. Anecdotally, common management prescriptions such as thinning and prescribed burning appear to at least lessen the degree of infection by increasing air circulation in the canopy and reducing the amount of inoculum in the understory. This 'inoculum' is made of previously infected needles that have fallen off the trees but continue to harbor the fungus, allowing it to emit spores and re-infect trees the following spring. Prescribed burning could also reduce the amount of mid-canopy hardwoods that often invade the lower canopy of pines and contribute to additional rainwater splashing and upward movement of the blight through the canopy.

Pine Decline

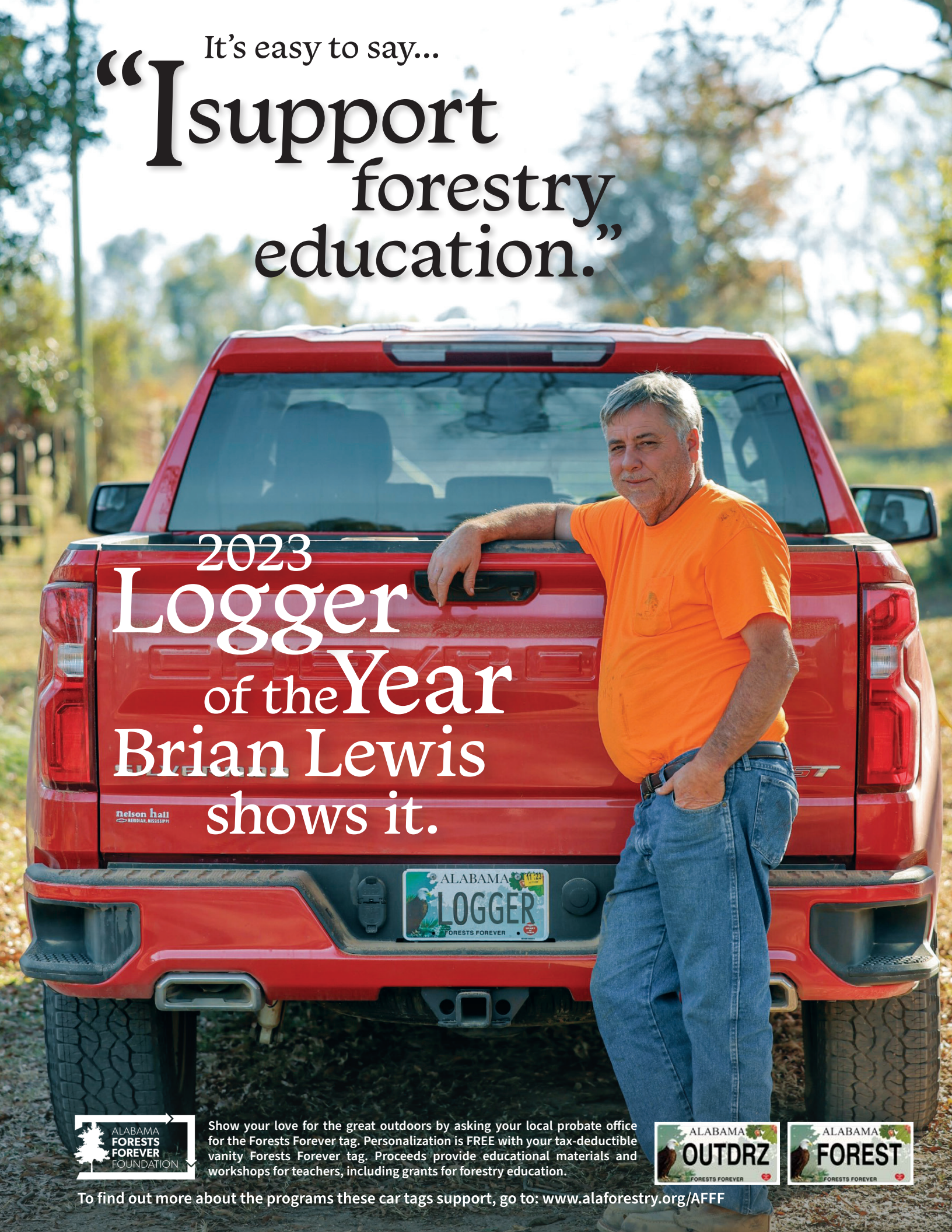
Another important disorder of pines is collectively called southern pine decline (SPD). Whereas BSNB infects live needle tissue, SPD affects the root systems of pines, creating a chronic condition that causes the tree to decline over a period of time. Despite studies beginning in 1966 on the Oakmulgee Ranger District of the Talladega National Forest, SPD is still a relatively poorly understood forest disease. Symptoms of SPD closely mimic another disease known as littleleaf disease, but the site conditions differ between the two. Littleleaf disease predominately affects shortleaf pine on poorly drained soils of the Coastal Plain and Piedmont, whereas SPD is associated with loblolly pines declining on predominantly upland sites. Decline symptoms are characterized by thinning crowns with short chlorotic needles and reduced diameter growth. This reduced growth is thought to be tied to root infection by various 'blue-stain' fungi. Fungi in this category can cause blockages of the xylem tissue resulting in reduced transpiration rates and reductions of food reserves in the roots. Root-feeding weevils and beetles such as the *Hylastes* beetle are often associated with these fungi. While the insects may directly vector the disease-causing fungi, there are many predisposing factors that put loblolly stands at risk.

In general, loblolly pine is more nutrient-demanding in comparison to other southern yellow pines such as longleaf and shortleaf. These nutrient demands coupled with deep sandy soils or eroded and compacted soils do not contain the nutrients to grow and sustain loblolly or limit the root development over time. Root samples can be taken from stands that express pine decline symptoms to test for the presence of fungi associated with pine decline. For stands chronically impacted by SPD, consider re-evaluating the site and planting pine species that are better suited to the soil conditions and more disease resistant.

In Summary

Southern pine beetle, brown-spot needle blight, and pine decline are just a small subset of the insects and pathogens that our pine forests are exposed to every year. Most southern yellow pine health issues likely result from a complex interaction between predisposing factors such as poor soils and inciting factors such as drought, wind damage, brown-spot needle blight, etc. However, some of our most tried and true silvicultural practices (timely thinnings and prescribed fire) still help maintain the vigor and resilience of our pine forests in the face of continuous stressors, diseases, and insects. As new research becomes available, we may be able to further fine-tune our management strategies, but the aforementioned management methods will continue to provide the best mitigation for forest pests and sustain healthy pine forests.

Photo by USDA Forest Service



ALABAMA FORESTS FOREVER FOUNDATION

Show your love for the great outdoors by asking your local probate office for the Forests Forever tag. Personalization is FREE with your tax-deductible vanity Forests Forever tag. Proceeds provide educational materials and workshops for teachers, including grants for forestry education.

ALABAMA OUTDRZ FORESTS FOREVER

ALABAMA FOREST FORESTS FOREVER

To find out more about the programs these car tags support, go to: www.alaforestry.org/AFFF

New TREASURE Forest Landowners

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

Congratulations to these new TREASURE Forest landowners!

Landowner	County
Robert Bass	*Houston*
Perone Branch Farms	*Baldwin*
AHERO	*Macon*
Wesley Todd	*Calhoun*
Camp Westmoreland	*Lauderdale*
Don Wood	*Greene*

ALABAMA LANDOWNERS CONFERENCE & Alabama Natural Resources Council Awards Banquet 2024

Tours
Networking
Awards Banquet
Educational Resources

Visit www.alaforestry.org/events/ for more information.

A summer water resource activity for Autauga County students

Autauga Forestry & WildLife Stewardship Council

"BAD TO THE BONE!"

By Ray Metzler, Certified Wildlife Biologist, Alabama Forestry Commission

Former Alabama State Forester Bill Moody was a leader and visionary who emphasized the power of cooperative conservation efforts through the formation of forestry planning committees. When discussing the establishment of the Autauga County Forestry Planning Committee, retired AFC Forester John Pirtle stated that Mr. Moody "wanted it done," so Autauga County formed a forestry planning committee. John also admitted that his memory wasn't as good as it used to be, but he thought he remembered the committee winning the award for outstanding planning committee in its first year of existence. A plaque on the wall at the county's AFC office indicates the Autauga County Forestry Planning Committee won that award in 1986, so we can assume the committee was formed no later than that year. The group changed names a few times over the years, but for the past 10 years or so it has been known as the Autauga Forestry & Wildlife Stewardship Council (Council). My hope in writing this article is that readers will glean information from it that may help their efforts to establish or improve their county forestry planning committee. A lot can be accomplished when folks harness the knowledge and enthusiasm of a group interested in working collaboratively to benefit our natural resources.

What makes the Council tick?

The Council has been recognized as an outstanding forestry planning committee many times since its inception. Brigetta Giles, retired AFC Regional Forester, Work Unit Manager, and Autauga County Forester, once said that the Council was "bad to the bone." As a more recent participant in Council activities, I agree with her assessment. Committee members find a way to "do good things" year after year. For many years, the group has had a good makeup of private landowners, agency personnel, and private industry support. They meet monthly and generally have attendees representing the Alabama Cooperative Extension System (ACES), Alabama Forestry Commission (AFC), Natural Resources Conservation Service (NRCS), Soil and Water Conservation District (SWCD), Master Gardeners, Alabama Power, International Paper, City of Prattville, and several private landowners. Two of three Council officers are private landowners.

There are several county forestry planning committees in Alabama that function at a high level to accomplish stewardship and educational goals. Every county is unique, but having achievable goals and objectives is important for any group to experience success! With that in mind, the Council focuses on activities that enhance stewardship and natural resources education for both kids and adults. Three events conducted annually include a fall landowner tour, Arbor Day tree give-away, and 'Classroom in the Forest' for all of Autauga County's fifth grade students which is held on private land for about 600 students over the course of three days. A fourth event is a workshop that focuses on current issues in natural resources management. During the past several years, workshops have featured carbon credits, wild turkey habitat, pollinator habitats, black bears, longleaf pine establishment and management, prescribed burning, and water quality issues.

Administering four annual events comes with financial obligations the Council must meet. The landowner tour is our biggest fundraising event, and funds from the tour are used to support other events conducted throughout the year. Various partners and sponsors help support the stewardship and educational efforts of the group. Unlike some other planning committees, the Council chose to raise the fee for attending our fall tour, so participants actually paid for the entire cost of their meal. Feeding 125-150 tour participants is a relatively expensive endeavor, and charging actual costs allows us to use tour sponsorship dollars to help fund other annual activities such as Classroom in the Forest and Arbor Day seedling distributions in Autaugaville and Prattville. Trees are purchased for these events and leftover trees are given to Chilton and Montgomery counties for their Arbor Day events.

The fact that AFC, ACES, NRCS, and SWCD are all located in one building in Autaugaville is another benefit that enhances Council functionality. An auditorium is available in the building, and the centralized office space allows for easy communication and cooperation among agencies. Engagement by AFC employees is very important, but the Council has been able to 'rock on,' even during times when the AFC Forester position has been vacant. Long-term engagement by private landowners and groups such as the Master Gardeners plays a critical role in the functionality and success of our committee. I believe the agency personnel involved in the Council are truly interested in education and stewardship, but it is the private landowners that hold them accountable and drive the initiatives taken on each year.

I think Mr. Moody would be happy with the results of his "Get it Done" directive to John Pirtle many years ago. The Autauga Forestry & Wildlife Stewardship Council has benefitted forestry and natural resources education efforts in Autauga County for many years. We are not perfect by any means, but we continue to learn and grow as an organization and in our efforts to provide outreach to residents of Autauga and surrounding counties.

Stream Crossings and the Success of Temporary Bridges

By Carey Potter, Registered Forester, Best Management Practices Coordinator
Alabama Forestry Commission

Stream crossings are often a necessary evil during logging operations when it is necessary to access areas of the property that are separated by a stream. I am often approached with the question, "What is the best type of temporary stream crossing to use?" My answer is, the one that you don't have to install! In many situations, you can access the other side of a stream by using a different road. However, if you cannot get access to the other side, the only option is to install a stream crossing.

Various types of temporary or permanent stream crossings can be established, but there are always two important considerations. The first is to never impede the flow of water in the stream. The second consideration is that all stream crossing approaches should be stabilized with logging slash, rock, or adequate material to prevent sediment from entering the stream. Protecting water quality and keeping non-point pollutants such as sediment out of the stream is extremely important with any type of stream crossing. For this article, we'll focus on temporary crossings.

Although temporary stream crossings can be constructed in several ways, let me start by stating what **NOT** to do. The one thing you should never do is put limbs, tops, logging slash, and debris into a stream and then push soil over it to cross a stream. This is absolutely the worst type of crossing to use, and you will receive a visit from me at your logging operation to remove it and install a proper crossing. Now that the wrong practice is out of the way, let's talk about the best type of crossings to use.

Culverts provide one of many acceptable crossings. The only issue is that soil/sediment is often pushed into the stream during the installation process. Culverts are best used in permanent crossings where rock and stone will be used to stabilize the crossing.

One crossing that is often used involves placing logs in the stream bed until they are level with the banks. Bridge mats are often placed over the logs so the skidder can cross the stream and minimize any damage to the stream banks. The approaches to these crossings must be stabilized with logging slash to minimize the amount of soil movement into the stream.

Another popular stream crossing is a ford or low water crossing. Fords are typically used with shallow, rocky streams. When using this type of crossing, the banks should be back bladed, and approaches stabilized.

The last temporary stream crossing we'll discuss involves the use of temporary bridges, which can be made of metal or wood and come in a variety of shapes and sizes. When properly installed, this is by far, the best type of crossing to use because it has less of an impact on the stream bed and banks. Temporary bridges create the least amount of impact on stream flow. As with any type of crossing, the approaches to a temporary bridge must be stabilized before attempting to cross with any equipment.

Temporary bridges, my favorite type of crossing, have been significantly gaining in popularity over the last several years. I made it a point to interview one of our loggers in Alabama to determine why temporary bridges have been so successful. Kelly Crawford, owner of K&K Logging, operates in the north-central part of the state around Cullman County and is highly respected. My first question to Mr. Crawford was how he would say the use of temporary bridges has improved stream crossings and protected water quality. His response was, "I would say that it has drastically improved from what I've seen. With the use of the bridge system, there is nothing impeding water flow or threatening aquatic life. Putting logs and or slash in the stream always seems to cause bank failures and/or erosion. The bridges usually lay far enough past the bank that you don't have to worry about that. With logs in there, you had very little water movement, if any, through the logs, so if you got any rain event, you ended up backing up water."

I also asked him how easy it is to install temporary bridges on a logging site, and what kind of equipment he uses for this task. Mr. Crawford's reply was, "It's very easy. We drag the bridges out there with a skidder and then cut a path with the cutter. Sometimes you must cut a stump that's in the way or pull it up. You then heel the bridge with a skidder and place them across the stream."

My final question to Mr. Crawford was regarding his opinion of the biggest advantage of using temporary bridges for logging operations. He said, "Really, [it's] the ease of crossing the stream. The production doesn't slow; it's not like you must cut up a lot of logs and put them in there to fix the crossing. You just put these bridges down and go. They are also very easy to remove as well. Many times, you can access timber that you could not get unless you use these bridges."

Best Management Practices (BMPs) are state guidelines, though voluntary, that are necessary to prevent non-point source pollutants such as sediment from getting into streams. The use of BMPs on logging operations is essential to minimize the threat to water quality, and if utilized properly, they help maintain and protect the chemical, physical, and biological integrity of the waters of the state. Proper installation of temporary bridges is also crucial to protecting water quality and the aquatic species that live in our streams. One of the most important BMP guidelines is to think and plan before you act. Knowing where to put the temporary bridge and installing it correctly will go a long way in achieving this objective.

Longleaf Savannas

By Dan Chappell, Assistant Director, Forest Management Division, Alabama Forestry Commission

When you read the words 'pine savanna,' what images come to mind? For me, I can pull up many images of taking timber inventory on Fort Stewart in the broad flatwoods between the numerous drains, 30 to 40 miles as the crow flies inland from the ocean, in the lower coastal plain of Georgia. This landscape seemed to me as being as close to what the woods would have looked like 100 or more years ago, as you would be likely to encounter today. I picture the sparse, 18-inch diameter longleaf pines with some slash pine mixed in. Saw palmetto and grass as the immediately apparent understory. Burn marks on the tree trunks and stump holes indicative of frequent fire, along with the telltale scent. Very long sight lines for that part of the world. For those reading this article that have taken inventory on their share of plantation pine (especially in high-tally, never-burned, high water table, titi/fetterbush/gallberry-choked plantations), you know why these images are treasured! If you have not earned the invaluable experience of taking forest inventory in, let's say, challenging conditions, that is okay, but it may be a little more difficult to appreciate the full beauty of a pine savanna.

I believe that many Alabama landowners, especially in the lower two-thirds of the state, share a vision of restoring at least a portion of their properties to pine savanna. While researching to write this piece, I learned that there is not necessarily a firm definition of what the term 'pine savanna' means. What we do have is a continuum of terms. Beginning with very few trees and increasing to greater canopy coverage, you can have a grassland, a savanna, a woodland, and a forest. There are no true quantitative criteria, such as basal area benchmarks for tree density, that separate a savanna from a woodland, or a woodland from a forest. I had always viewed a frequently burned, open-understory, low-density pine (often longleaf) dominated stand as a *forest* with low stocking. However, a view that has some merit is that such landscapes may more accurately behave as high tree density *grasslands*.

It is true that *Andropogon* grasses (certain of the bluestems) and *Aristida* (wiregrasses) usually accompany longleaf pine in well-functioning savanna-like ecosystems. It is only natural that these grasses are ecosystem keystones, along with longleaf pine, as they in tandem provide much of the combustible fuelbed to carry the frequent fires necessary to maintain the open condition of an early-successional habitat. As has been well-covered in the pages of this magazine many times, low-intensity ground fire, applied by knowledgeable practitioners within certain established bounds of humidity, wind speed and direction, etcetera, is a necessary ingredient to achieving the aesthetic and ecological results desired by those seeking to recreate the classic pine savanna landscape of old. However, in making that very statement, we have revealed a large cause for why the longleaf savanna, including the landscape at Fort Stewart mentioned above, is not so easily achievable as we may like. It also explains why much of it, where it is found in large blocks, is located on federal installations such as Fort Stewart and Eglin Air Force Base on the Panhandle of Florida.

One decided advantage in producing pine savanna that Fort Stewart possesses – but few (if any) private landowners can match – is a dedicated team of professional prescribed fire technicians and foresters with a mission to apply prescribed fire to the greater share of 280,000 acres on a 3-year rotation. It does not take too much calculation to see that a lot of burning must be accomplished on any and all days where the prescriptions can be met. However, with that many acres annually needing to have fire applied, an extensive road system bounding the large military reserves with equipment and personnel on round-the-clock standby, plus fire breaks where appropriate and often miles of buffer in every direction that minimizes risk to the neighbors, most days do turn into burn days. Thus, over a period of many years, the desired outcome has been achieved and is being maintained.

Please do not be discouraged if you have pine acres that you want to transition into a more savanna-like setting. It cannot be achieved with one cool-season burn. It will take patience and persistence in addition to active management, but with a forest management plan in place and that objective in mind, progress toward the goal is possible.

The idea of pine savanna as a key ecological system is increasingly receiving the attention from researchers that it deserves. In a recent research paper by Stephanie Pau of Florida State University, she and her collaborators take a close look at what was likely the one-time largest savanna ecosystem in North America, that of the longleaf pine. This paper gives a reader a better appreciation of the intensity of activity occurring in the understory below the dominant pines that immediately catch the eye. As the pine needles and flammable grasses work together to carry fires at short return intervals in a true savanna, abundant light reaches the forest floor, leading to plant species diversity at ground level as high as 52 distinct species to the square meter. This places the longleaf savanna as remarkably high in plant diversity not only at the local level, but up among the highest for ecosystems worldwide.

A feature that further expands the diversity of the plant communities within the full natural range of the longleaf pine savanna is that landscape's ability to thrive across many soil types and a wide range of annual rainfall averages. From the perspective of a forester, it is not hard to guess that variation in soil types and soil fertility, along with variation in rainfall averages and, at fine scale, rainfall over individual years, will greatly affect a given landscape's ability to either grow dense stands of quality timber quickly, or by contrast only support scattered trees with stunted growth. Looking beyond timber production, these highly variable attributes of soil and water across the wide historic range of the savanna forest type also allow for tremendous species diversity across the range of understory grasses and forbs.

Another source of information that adds to the growing body of knowledge on the value of pine savanna plant species diversity is a paper written by Jane Dell and others based on research they were able to carry out on the large 'living laboratory' of the pine forests at Eglin Air Force Base. Fascinatingly, the research team made use of LiDAR technology (Light Detection and Ranging) to gather data that does much to inform their conclusions. This research brings up important considerations of how litter on the forest floor plays a major role in the number and type of plants occurring in the understory community. Think about being within a closed-canopy pine stand with no recent fire. Needles build up and up, existing in various states of decay, forming an organic duff layer that lies above the mineral soil. At their research site, greater amounts of duff led to a less flourishing understory. However, this condition could be improved upon by the reintroduction of prescribed fire, which over a series of burns, and through interacting with limbs and cones on the ground which burn at hotter temperatures, can consume the duff layer and return patches of ground to bare dirt that, coupled with sunlight, is highly receptive to new plant germination.

This paper also shares the need for continued research on sample areas that have not only a buildup of a duff layer but have progressed to hosting a dense mid-layer of shrubs. If I had to make a guess, the research will point to the need for not only continued application of prescribed fire, but also that, ideally, some burning should be attempted during the growing season. If you think about how important lightning must have been as a natural source of ignition for the southeastern pine savannas, it stands to reason that fire on the ground during the seasons of greatest lightning occurrence played a key role in creation and maintenance of the characteristics of the pine savanna. Here in the present day, the burn teams at the large military reserves make use of fire throughout the year and have achieved a great deal of success on recreating the savanna structure. With the structure comes the understory, and following that the improved habitat needed to promote the variety of wildlife which is geared toward life on the pine savanna.

It is only fair to mention the patient work being carried out by the Alabama Forestry Commission on its own state forests that is, year by year, bringing positive change to the forested landscape through the well-planned application of prescribed fire. AFC rangers and foresters are doing their part to actively manage these properties in such a way as to favor more open understories that allow for multiple use, including timber harvest, and greater public enjoyment.

Photo of Geneva State Forest

Sources:

"Restoration of Longleaf Pine Ecosystems" by Brockway, Outcalt, Tomczak, and Johnson. 2005.

"Overstory-derived Surface Fuels Mediate Plant Species Diversity in Frequently Burned Longleaf Pine Forests" by Dell, Richards, O'Brien, Loudermilk, Hudak, Pokswinski, Bright, Hiers, Williams, and Dyer. 2017.

"Longleaf Pine Savannas Reveal Biases in Current Understanding of Savanna Biogeography" by Pau, Griffith, Zampieri, and Costanza. 2023.

RELIABLE *WARRIOR* IN THE WOODS.

You're never alone in the woods with John Deere Forestry Core Technology Features.

With JDLink™, Connected Support, Remote Diagnostics and Programming, combined with Machine Health monitoring, we have all the tools you need to manage your fleet.

Warrior Tractor & Equipment continues to serve Alabama counties and its surrounding areas with some of the finest, state of the art products John Deere has to offer.

Warrior is proud to continue to grow with our customers, employees, and communities we serve.

SCAN QR CODE BELOW TO VISIT OUR WEBSITE AND SEE THE FULL JOHN DEERE FORESTRY LINE-UP.

SCAN ME SCAN ME SCAN ME SCAN ME

WWW.WARRIORTRACTOR.COM

JOHN DEERE | WARRIOR Tractor and Equipment

A Different History of Longleaf

Photo by Jerry Soto

By Ed Lewis, Forestry Management Specialist, Alabama Forestry Commission

What do the USS Constitution, the University of North Carolina Tar Heels, and the phrase, *"Only YOU can prevent wildfires"* have in common? They all share one special thing: the Longleaf Pine.

Going in reverse order, let's first discuss Smokey Bear, who in his early illustrious career (1947 to be exact) was quoted as saying, "Only YOU Can Prevent **Forest Fires**." Fast forward to 2001, and Smokey changed his slogan to, "Only YOU Can Prevent **Wildfires.**" Why the change?

Foresters learned that not all fires are bad. Advances in forest and ecosystem management made it clear that fire has always been an important part of managing longleaf pines, along with the ecosystem benefits where they grow. Fire in young longleaf stands helps in reducing brown-spot needle blight (*Lecanosticta acicola*), a needle-borne fungus that can cause seedling mortality. Fire can also reduce the understory plants down to ground level, thus allowing for low-growing plants such as gopher apple (*Licania michauxii*) to prosper in the direct sunlight, which provides delicious meals for the gopher tortoise (*Gopher polyphemus*) and other animals that benefit from fire in longleaf stands. Even the red-cockaded woodpecker (*Leuconotopicus borealis*), whose sole choice of nesting is in old, mature longleaf pines, benefits from a clean forest floor where they forage for bugs to feed their hungry children!

The USS Constitution is not only the longest serving ship in the US Navy, but also is, in fact, the longest currently serving ship on earth, having been built in 1797 and still sailing today. So, what does that have to do with longleaf pine?

Firstly, her decks were made of boards sawn from longleaf pine. Secondly, longleaf pine pitch, the resin taken from the tree, serves as the waterproofing agent painted on the outside planks of the ship below the waterline to prevent leaks. When the world depended on wooden ships,

(Continued on page 20)

A Different History of Longleaf

(Continued from page 19)

Photo by Jerry Soto


Photo by Robert Mitchell

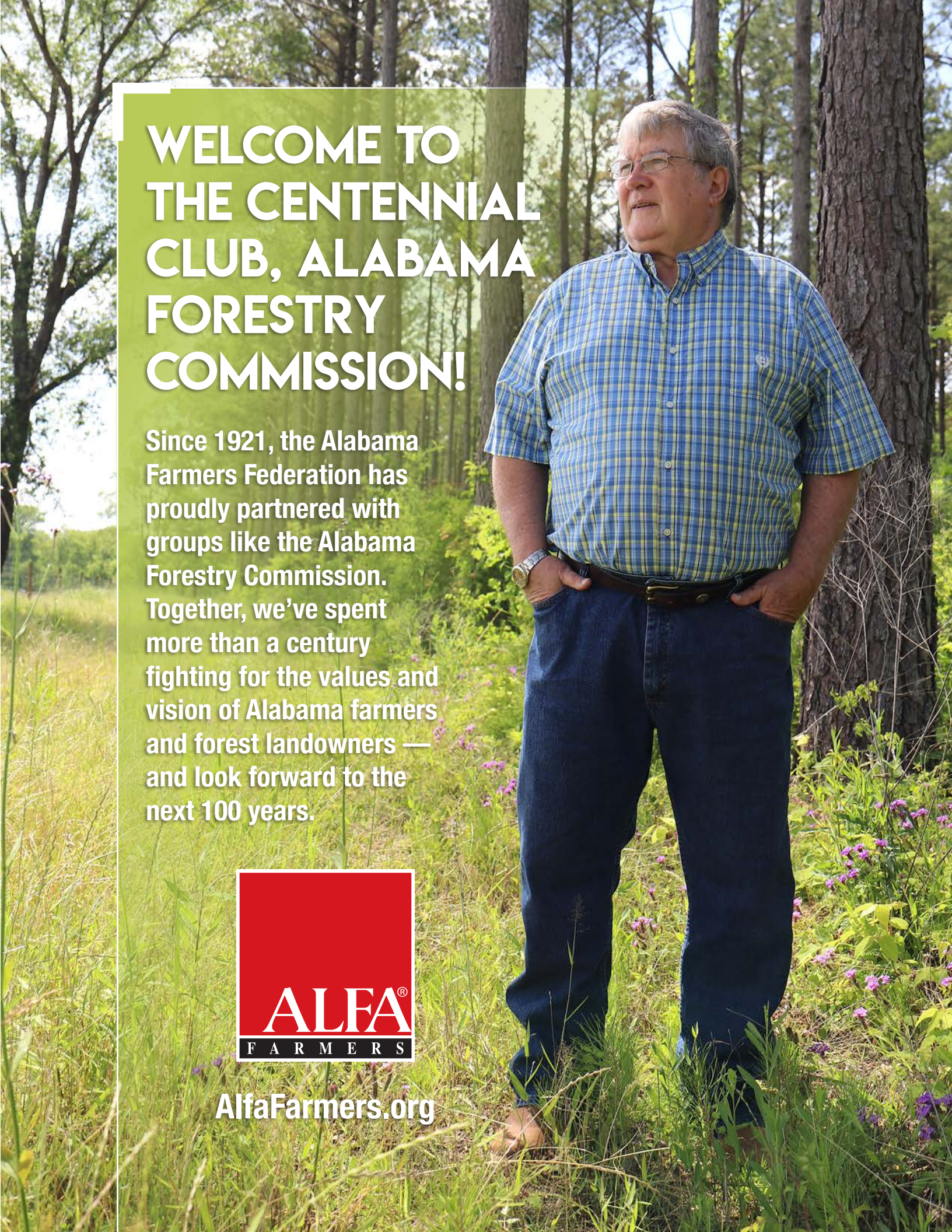
the seam between the bottom keel of a ship and the first plank that joins it was called the 'devil's seam,' partly because if the boat was at sea and this seam leaked, the crew was in a perilous position. If the devil's seam began to leak, sailors would move the ballast stones in the ship to one side, causing the ship to list to that side. A tale is told that the worst qualified sailor on the ship (one whose absence might not be missed if he fell into the sea) would be provided a bucket full of hot, boiling pine pitch, given a brush, and dropped by a rope over the side of the ship to paint the hot, boiling pitch over the seam to stop the leak. That sailor was literally between the devil's seam and the deep blue sea. This, I am told, is where the saying originates, "Between the Devil and the deep blue sea." It literally means you are in a spot where you have two choices, and neither one is very good!

Finally, 'Tar Heels' were people in North Carolina who worked in the physically strenuous trade of collecting pine pitch from longleaf pines for the naval industry. Originally, the term was used to negatively describe people who worked in a low-paying job or in a little-respected field such as collecting pine resin. Today, many North Carolinians proudly refer to their college sports team as the Tar Heels!

Longleaf has a long and storied history. I hope you have enjoyed this chapter!


Photo by Robert Mitchell


Photo by Jerry Soto


WELCOME TO THE CENTENNIAL CLUB, ALABAMA FORESTRY COMMISSION!
Since 1921, the Alabama Farmers Federation has proudly partnered with groups like the Alabama Forestry Commission. Together, we've spent more than a century fighting for the values and vision of Alabama farmers and forest landowners — and look forward to the next 100 years.
ALFA®
FARMERS
AlfaFarmers.org

TRADE MISSION: Finland!

By Gary Faulkner, Forest Economic Development Specialist, Alabama Forestry Commission and McKenzie Gay, Communications & Public Relations Specialist, Alabama Forestry Commission

As part of the Alabama Forestry Commission's wood-based economic development and marketing activities, Al Jones, the agency's Senior Economic Development Representative, was recently granted the opportunity to participate in a Bioeconomy Trade and Study Mission from the United States and Canada to Finland.

Business Finland hosted the historic tour in June of 2024, marking an unprecedented collaboration to gain insight into the country's advanced forestry practices and innovative wood-based technologies. Within this mission were two concentrated tours – Forestry and Wood Building/Cross Laminated Timber (CLT). The purpose was to explore forest management, wood construction, and logging practices across Finland to familiarize participants with the nation's forest expertise, sustainable forest policies, and carbon reduction strategies, as well as the diverse operations of the Finnish forest industry. Any forester familiar with high-quality tools such as Finland-manufactured Suunto brand compasses and clinometers already has an idea of how the country has been on the cutting edge in practicing professional forestry for decades.

Even with its small size and cold winter temperatures, Finland has a forest footprint of more than 50,162,392 acres which is more than twice the forest land area of Alabama. To give some insight into the forestry makeup of Finland, Jones explained that the country's proximity to the Arctic Circle makes it home to a completely different tree population than we have in Alabama. The main species there are alder, aspen, birch, elm, hazel, linden, and maple. "In June, the highs were in the 50s and the lows were in the 40s. Daylight lasted about 20 hours and the rest of the time was like twilight," noted Jones. "When someone from our group would tell a local citizen how beautiful and pleasant Finland is, they would just laugh and tell them to come back in the winter! Apparently, weeks of darkness, bitter cold, and a howling arctic wind are somewhat unpleasant."

While Jones has extensive knowledge of forestry's economic impact both in Alabama and nationwide, one of his goals for this journey was to learn the differences in Finland's views of forestry versus our views here in Alabama. "Forestry is of vital importance to Finland. The country has a vast coverage of timberland, and forest products are their main industry." He continued, "Obviously forestry is huge in Alabama and the United States, but in Finland, it is the main driver of their economy."

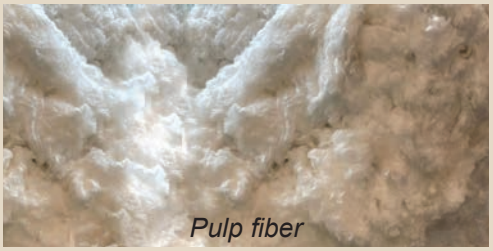
He was also interested in learning about the strides their country has made in technology that has not yet developed in the States. "My primary expectation anywhere I travel is to meet leaders of forest industry companies and to discuss opportunities to expand their operations into our state when it would be mutually beneficial both to them and the people of Alabama," said Jones.

There was plenty of new technology to be seen. At Metsä Fibre pulp mill, one of the displays was made from the residue of the pulp-making process that looked almost like cotton, and they even had a coat made from it. "It was beautiful and looked just like it was made of regular everyday textile fiber," Jones said. "Knowing that it came not only from wood but also was leftover 'waste' from making pulp was fascinating."

A 'see it to believe it' type operation was the control room at Koskisen Sawmill which contained several huge computer screens in a semi-circle. The entire plant was managed and monitored from that one room. The leadership of the company described how their grandfather started the company and in the

Material handling equipment

Gang saw



Pulp fiber

Jacket made from pulp fiber

Photos by Al Jones

early days, he would talk about how many logs he could saw in a week. As technology improved, he changed to telling how many logs could be sawn in a day. They have now become so efficient that discussions have progressed from how many logs they sawed in an hour, to how many they sawed in a minute, to where they are today sawing 1.2 logs per second.

Regarding mass timber, several buildings were pointed out and the group toured Isokuusi Daycare and School. Jones commented, "It is easy to imagine that many standard building materials would have to be imported to Finland at a much higher cost, while native wood is readily available and affordable. It may appear that the Finnish people have been quicker to adopt mass timber, but we were told the reason for building the school with CLT is because the city's zoning regulations require all new construction in that area be built of mass timber!"

Other site visits on the tour included the sawmill machinery manufacturer HewSaw, a paper mill company named UPM, sawmill material handling manufacturer Pinomatic, a design group called KIRAhub, Swedish forest industry company Stora Enso's Finnish headquarters, and an architectural tour of the capital city, Helsinki.

The forest tour may not fall completely in the realm of technology; however, the forestry methods used at the Metsä Group's '*Nemus Futurum*' (Latin for 'Forest of the Future') were certainly outside of expectations according to Jones. The group visited a site where the trees had been harvested about seven years ago. Three tree species existed at this site pre-harvest, and those same three had been replanted post-harvest in the same percentages as the trees that had been removed. Some of the tree species were faster growing than others, so the staff protected the slower-growing trees until they were large enough to compete for necessary resources. The reasoning was that specific birds, reptiles, insects, and other animals in the forest relied on each of the different tree species for food and so, even after harvesting, this area would continue providing equivalent habitat for all residents as before.

Jones noted that it was also interesting to see some 'old technology' in use there. Large volumes of logs were being transported on train cars, which has not frequently been seen in the United States since the 1970s. It remains common in Finland today, where they even have unit trains 70 cars long dedicated solely to hauling logs.

In addition to Jones, other delegates from Alabama included Veronica Crock, Senior Economic Development Representative from the Alabama Department of Commerce; Steve Pelham, Associate Vice President for Economic Development at Auburn University; Tom Chung, Professor of Practice, Auburn University School of Architecture, Planning and Landscape Architecture; and Jake Elbrecht, Visiting Assistant Research Professor of Building Construction, Auburn University McWhorter School of Building Science. Representatives on the tour from other states included Georgia, South Carolina, Arkansas, Minnesota, Washington, California, Colorado, Pennsylvania, and Michigan. A delegation from Nova Scotia represented Canada.

With multiple staff members of Auburn University in attendance, it appears that their representatives were looking not only at using more mass timber/CLT in new buildings on campus but also at ways to increase the use of those materials both state and nationwide. Although currently slightly more expensive to build, mass timber's beauty, renewability, and carbon-storing ability leave no room for doubt that it is the building material of the future. "Just think of the benefits to Alabama's forest owners when more and more buildings are built of mass timber," said Jones. "When lumber and mass timber usage go up, thus increasing resource demand, local timber price rises can follow. And when higher prices incentivize greater timber harvest, we expect to find that forests will be efficiently replanted to start the process again. You can't get much more renewable than that."

After participating in this journey to Europe, Jones says his most important follow-up will be to simply keep in contact with Business Finland. Their role is to help Finnish companies be successful and expand as they are aware of their forest industry's goals and member companies' plans. "Alabama needs to be at the forefront of their minds as new opportunities arise," he said. "It would be great if Alabama could host a delegation from Finland, as some other states have, and show them what is available here and how Alabama can fit in their expansion plans."

BIRDS IN ALABAMA'S FORESTS: The American Woodcock

By Ray Metzler, Certified Wildlife Biologist, Alabama Forestry Commission

The American woodcock (*Scolopax minor*), also known as a timberdoodle, is an upland shorebird that is related to sandpipers and other birds you might see at Alabama's beaches. They are short, plump birds with a mottled brown plumage that provides great camouflage for a critter that spends its time on the forest floor. Large eyes are set well back and high on the sides of their heads. It is theorized that this positioning lets the bird look to all sides while it probes the soil for food. Sexes are similar in appearance, but females are generally a bit heavier with slightly longer bills. During my college days, we learned to differentiate sexes by slight differences in the outer primary feathers and length of the bill. In the field, biologists and hunters can use a dollar bill to sex a woodcock. A male woodcock has a bill generally shorter than the short dimension of a dollar bill while a female's bill is equal to or greater than the short dimension of an American greenback.

Woodcock are similar in appearance to Wilson's snipe (*Gallinago delicata*). Yes, there is such a species as a snipe, and you can actually hunt them. The easiest way to distinguish a woodcock from a snipe is the direction of the striping on top of their head. Woodcock have stripes that go from side to side while snipe have stripes that run from front to back.

Woodcock are migratory birds, but some may be found in Alabama year-round. Woodcock inhabit the eastern half of the United States and populations are divided into two management units – eastern and central units generally separated by the Appalachian Mountains. Woodcock population numbers have been on the decline for the past several decades and they are one of the least studied gamebirds in Alabama. Loss of habitat, especially early successional habitat, is thought to be the primary stressor in population declines. Dr. Keith Causey, retired wildlife professor at Auburn University, conducted several woodcock projects in Alabama during the 1970s to '80s. More recently, the Alabama Department of Conservation and Natural Resources, Division of Wildlife and Freshwater Fisheries participated in a project with many other states to gather woodcock migration information. The recent migration study focused on capturing woodcock on their wintering grounds and placing a backpack transmitter on them to monitor locations via satellite. Birds captured and "transmittered" in Alabama during the winter primarily return to areas in northern latitudes in the central management unit from Ohio and West Virginia to as far north as Manitoba, Ontario, Quebec, and Maine.

Habitat

Woodcock utilize a variety of habitat types depending on the time of day and the season. One study conducted in east-central Alabama indicated wintering woodcock preferred bottomland hardwoods and mixed pine hardwoods with dense midstories. An avid woodcock hunting friend stated he often finds birds in palmetto-dominated bottomlands while hunting in Louisiana. I suspect that similar habitats here in Alabama would be occupied as well. I have seen several woodcock in Alabama while conducting site prep burns in recently sprayed clearcuts. One thing is certain, they will almost always be close to moist soils that are easily probed for earthworms with their long bills.

Males utilize forest clearings, log landings, abandoned farm fields, road edges, and other openings that are adjacent to forested habitat to make dawn and dusk courtship flights in the spring-

time. These courtship flights are sometimes called 'sky dances.' The male vocalizes a buzzy *"peent"* call at fairly short intervals from the ground and then performs a spiraling display flight up to about 250 feet high. He chirps and makes a twittering sound as air passes through his wingtips. He lands silently on the ground and resumes peenting before beginning another display flight.

Diet

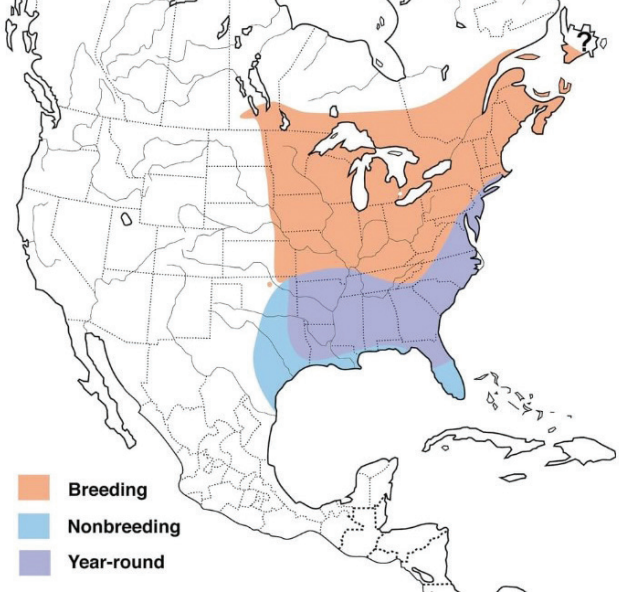
Earthworms are rich in protein and make up a significant portion of an American woodcock's diet, but they are known to also eat snails, millipedes, spiders, flies, beetles, and ants. They forage by probing the soil with their long bills, which have flexible upper mandibles specialized for capturing and extracting earthworms. They often exhibit a unique rocking motion by shifting

their weight from foot to foot while foraging. This motion is thought to create vibrations in the soil that prompt earthworms to move and make slight sounds which increase detectability, allowing woodcock to capture them with their long bills. An internet search of "woodcock foraging video" results in several files that show the unique rocking motion utilized to forage and probe the soil. They also eat small amounts of plant material, such as sedges, pigweed, and members of the rose family.

Nesting and Reproduction

Woodcock typically nest in early successional habitats including young, shrubby deciduous forests, old fields, briar patches, and young pine stands. A typical nest is just a slight depression on the ground among some dead leaves. Courtship in the South may begin as early as December. Males will mate with multiple females and give no parental care. Females lay one egg per day and clutch size averages four eggs with incubation lasting 20-22 days. The oval eggs may vary in coloration from a pinkish buff to cinnamon with brown blotches and darker speckling. Like many other ground-nesting birds, nest predators include, but are not limited to small to medium-sized mammals, snakes, dogs, cats, and crows.

Across the range, peak hatching occurs by May. Unlike turkey and quail eggs, woodcock eggs split lengthwise as the chicks begin to emerge. Precocial hatchlings are covered with fine down and leave the nest a few hours after drying off. The female feeds



the young for about a week, but they will begin to probe the soil for insects three to four days after hatching. A high-protein diet of insects and earthworms allows chicks to grow rapidly. Like a turkey hen, woodcock hen will brood their young often during the first few days of life, especially during inclement weather. Young woodcock 'freeze' when threatened or in response to the hen's alarm call. They can fly short distances after two weeks and are nearly fully grown at four weeks. The family breaks up once the chicks reach 6-8 weeks of age. Average life expectancy is less than two years, but known-age banded birds have been recovered at seven years of age. Nest success is fairly high and juvenile mortality is fairly low.

Hunting and Harvest Opportunities

Being a migratory bird, hunting season frameworks are established by the U.S. Fish & Wildlife Service much like waterfowl seasons. Current frameworks allow each state to select a 45-day hunting season that opens no earlier than September 15 and closes no later than January 31. This framework does allow for a split season and multiple zones. Recent Alabama statewide seasons have generally opened in mid-December and closed in late January.

Hunter participation and harvest surveys for the past five years indicate woodcock are lightly hunted in Alabama, with hunter numbers varying between 74 to 1,029 per season. Total number of birds harvested varied from 222 to 2,825 in any given season. Being a migratory bird, the free Harvest Information Program privilege is required prior to hunting woodcock.

THOMPSON TRACTOR:

COMMITTED TO YOUR SUCCESS.

Choose a partner you can count on.
At Thompson Tractor, we are committed to offering quality new, used, and rental equipment, as well as service, parts, technology, and safety support. Our experienced representatives are ready to assist and ensure you and your team succeeds.

"At Thompson Tractor, we believe that your success is our success. Through our relentless pursuit of operational excellence and customer satisfaction, we have built a company that we are proud of."

– Lucy Thompson Marsh, Owner

Contact your Thompson Tractor sales rep, visit the store location nearest to you or go to our website: **thompsontractor**.com

ALABASTER (Shelby County)
2070 Corporate Woods Dr
Alabaster, AL 35007
(205) 664-4833

ATTALLA/GADSDEN
121 Gilbert Ferry Rd SE
Attalla, AL 35954
(256) 570-1100

BIRMINGHAM
2401 Pinson Highway
Birmingham, AL 35217
(205) 841-8601

CRESTVIEW
5749 John Givens Rd
Crestview, FL 32539
(850) 682-6510

DECATUR
6969 Highway 31 S
Tanner, AL 35671
(256) 353-7721

DOTHAN
118 Vulcan Way
Dothan, AL 36303
(334) 671-1040

HUNTSVILLE
3600 Governors Dr
Huntsville, AL 35805
(256) 532-1776

MOBILE
30950 State Hwy 181
Spanish Fort, AL 36527
(251) 626-5100

MONTGOMERY
10120 Hwy 80 E
Montgomery, AL 36117
(334) 215-5000

OPELIKA/AUBURN
508 Columbus Pkwy
Opelika, AL 36801
(334) 749-3359

OXFORD/ANNISTON
2300 Hwy 21 S
Oxford, AL 36203
(256) 831-4104

PANAMA CITY
4109 Cato Rd
Panama City, FL 32404
(850) 785-4007

PENSACOLA
2670 W 9 Mile Rd
Pensacola, FL 32534
(850) 471-6700

THOMASVILLE
2501 Joe Davis Industrial Blvd
Thomasville, AL 36784
(334) 636-0420

TUSCALOOSA
3550 Joe Mallisham Pkwy
Tuscaloosa, AL 35401
(205) 247-2800

TUSCUMBIA
1030 AL-20
Tuscumbia, AL 35674
(256) 381-2771

thompsontractor.com

Thompson CAT

LET'S DO THE WORK.™

CHASING YOUR DREAM

By Todd Langston, Registered Forester, Forest Management Specialist, Alabama Forestry Commission

Workforce Development??? As most of you realize by now, I'm not a seasoned writer. So when asked to write an article about workforce development, I just about crawled out of my skin! My Daddy always said, "When you don't know what to say, just tell your story." BUCKLE UP!

In January of 1999, I was a 23-year-old young man who thought he had the tiger by the tail! I had just graduated from Auburn with a degree in Forest Resources. Having grown up in Selma, I was forced to relocate to Huntsville due to the lack of forestry jobs in the state. A position with a grade PINE sawmill was offered to me, and I was tickled to death to have the opportunity to cut my teeth on a log yard. I felt as if this was not only the best way to learn the process of making lumber, but also the absolute best chance to learn the industry from the ground up. For those of you that don't know the hierarchy of the wood business, it doesn't get any more 'entry level' than the log yard. When I say 'from the ground up,' I mean from unloading trucks to scaling logs, running a loader to feed the mill, and watching the boards come out of the other end. Although there is no colder, hotter, wetter, or dustier place than the log yard of a sawmill, I will be forever grateful for that opportunity!

In 2000, I accepted a position as a procurement forester with a grade HARDWOOD sawmill in south Tennessee. This provided an awesome opportunity to see the hardwood side of the wood business, as well as expand my territory. I spent a small amount of time on the log yard, getting to know the differences between hardwood and softwood, then set sail to start buying tracts of timber. Compared to the log yard, procurement was a big new world! I liken it to leaving Mayberry and moving to New York City. The procurement process was fast-paced and busy! I was on the phone at 5:00 am and still on the phone at 10:00 pm. The loggers always said the procurement guys made all the money. I must have missed the boat on the money part (insert sarcastic chuckle here). However, the experience I gained on those wood yards was invaluable in becoming a successful procurement forester.

Through the contacts I previously made by selling pulpwood, I was offered an opportunity in 2005 to take a position as a procurement forester at the local paper mill. So at this point in my life, I had started at the bottom of the ladder at a pine sawmill, became a procurement agent at a hardwood sawmill, and was now a procurement agent at a paper mill. Talk about well-rounded! The papermill was an entirely different animal, but in a good way, sometimes.

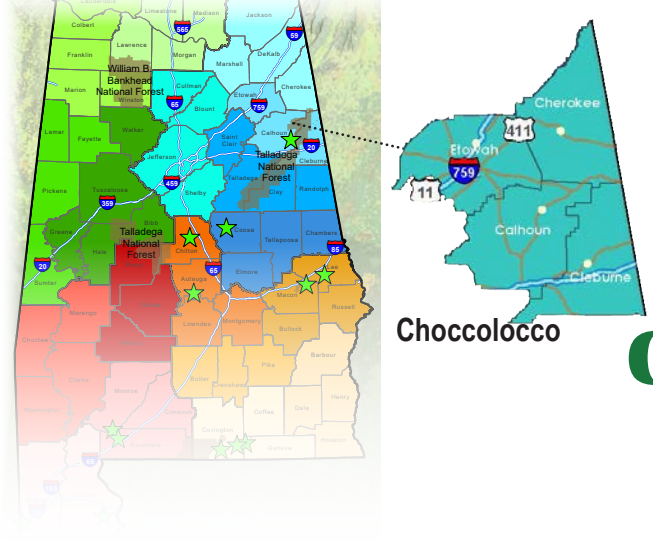
My experience with the papermill provided an invaluable opportunity to further my career and understanding of the wood business. I made connections with wood producers all over the state, and even a few in other states. There were times when I was their best friend, and other times when they hated me. "That is just the nature of the beast," was stated by numerous mill and procurement managers. I learned quickly that I needed thick skin to survive and thrive, because mill procurement is no place for the weak. The next 18 years were some of the best in my life! Throughout that time I not only made connections with just about every logger in the state, but also with various agencies. These agencies included those who represented the concerns of wood producers as well as the Alabama Forestry Commission who worked closely with landowners.

Most of you know that procurement foresters never retire, they die on a loading deck somewhere in rural Alabama! I thought I would work in mill procurement until I died. Well, sometimes God has a different plan. In 2023, the year my oldest son graduated from high school, I began to realize that there was more to life than 'wooding' a paper mill. I felt the desire to slow my life down a bit and explore other aspects of the timber business. After all, I had graduated from Auburn in 1998 with a degree in Forest Resources. I wanted to manage the forest as a whole, not just for timber values. I wanted to help improve wildlife habitat and help restore native environments. Procurement only covers a small aspect of that desire. I decided it was time for me to make a pretty major change in my life.

Looking back on all my experiences in the timber business, I had made many valuable contacts. In 2023 I was offered the opportunity to work for the Alabama Forestry Commission (AFC) as a Forestry Management Specialist in Jackson County. I was finally a resource manager – something I had set out to be as a young man! It took me almost 25 years, but I finally made it.

The last year or so with the AFC has been a whirlwind of learning. I've done everything from prescribed burning and wildfire suppression to management plan writing, landowner certifications, and certification training. Although I still work 10-hour days, my days are not nearly as long as they used to be. To be honest, I can't believe I get paid to do this. There is never, ever a dull moment.

Throughout the progression of my career, I've seen every aspect of forestry. I've followed timber from the stump to the lumber yard. I've finally made it to a point in life where my hair turned gray but fortunately has not turned loose. I realize that life is about self-worth and self-satisfaction, as long as it doesn't detrimentally affect anyone else. While I wouldn't trade my experiences for anything, I would offer a small tidbit of advice to some of my younger forester friends: Don't chase money in your career – chase your dream – and when you catch it, hold on tight because then and only then will you find true fulfillment!



ALABAMA FORESTRY COMMISSION
Est. 1924
100 Years

Choccolocco Work Unit

By Paul Williams, Register Forester/Work Unit Manager
Alabama Forestry Commission

Cleburne, Calhoun, and Etowah counties make up the Choccolocco Work Unit located in the Northeast Region of the state. The work unit is named after Choccolocco State Forest in southeastern Calhoun County, which took its name from a Muskogean term meaning "Big Shoals."

Choccolocco State Forest consists of 4,406 acres of land that was originally leased to the military for training until 1994. The northwestern portion of the Forest included small arms firing ranges, dummy mortar impact ranges, and small unit tactical training. The U.S. Army dug up approximately 13 acres of soil that contained considerable lead contamination in this area of the property and replaced it with clean soil. During this process, unexploded ordnance was also discovered.

Originally, the entire Choccolocco State Forest was part of the Choccolocco Wildlife Management Area and was open to the public for hunting and recreation. For the safety of the public, everything west of Highway 9 has been removed from the Wildlife Management Area and is no longer used for public hunting. The work unit continues to manage the property unaffected by the unexploded ordnance including road maintenance, firebreaks, prescribed burning, timber sales, and reforestation.

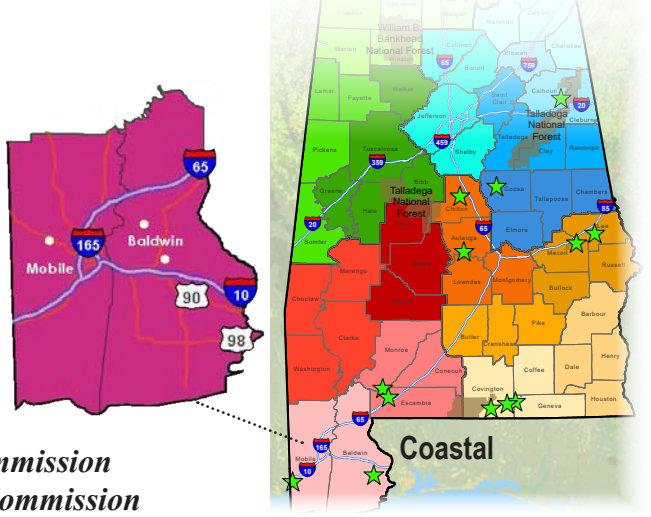
The work unit also has an annual contract with the Alabama National Guard to provide wildfire control, conduct prescribed burns, and bush hog 27 miles of boundary line at Pelham Range. A road around the perimeter is also maintained to provide access around the facility. All these activities must be scheduled well in advance to work around military training at the installation.

Talladega National Forest encompasses a large area of west Cleburne and east Calhoun counties, with Shoal Creek Ranger District located in Cleburne County. Mount Cheaha, also in Cleburne County, is the highest point in Alabama at 2,407 feet. Both the mountain and Cheaha State Park are surrounded by the Cheaha Wilderness Area. Calhoun County is home to Alabama's second-highest mountain peak, Dugger Mountain (2,140 feet), which is surrounded by the Dugger Mountain Wilderness Area.

AFC personnel work with forest landowners on cost-share programs and provide stand management recommendations to help them sustain their forests. They also write stewardship plans to assist landowners in getting their properties certified, as well as construct firebreaks and prescribed burns as requested. Educational programs such as Classroom in the Forest, forestry field days, and landowner tours are conducted throughout the work unit to educate the public about the importance of forestry in Alabama.

Choccolocco Work Unit personnel consists of Forester Robert Brown, Forest Ranger Clay Gorham, and Northeast Fire Specialist Shane Woodham, all of which work at the Etowah County office in Attalla. Forestry Management Specialist Steven Jones and Forest Ranger Tyler Ballew work in the Calhoun County office in Jacksonville. Forestry Specialist Brad Hanvey and Forest Ranger Dustin Ledbetter are stationed at Pelham Range. Forestry Specialist Supervisor James Barker and Work Unit Manager Paul Williams work out of the Cleburne County office in Heflin.

Coastal Work Unit



By Kenneth Leslie, Work Unit Manager , Alabama Forestry Commission
Ryan T. Peek, Coastal Program Manager, Alabama Forestry Commission

The Coastal Work Unit's name originates from the fact that it is comprised of the two counties in Alabama that border the coast of the Gulf of Mexico, Baldwin and Mobile. These two coastal counties are comprised of more than 1.8 million acres of land. Of that acreage, more than 1.2 million is forested, and much of that, approximately 75 percent, is privately owned. Maintaining and enhancing the forested components of coastal watersheds is important to the overall health of the watershed and to the estuaries that feed into the Gulf of Mexico. The AFC is committed to providing coastal landowners with knowledge, tools, and services to maintain and enhance their forests to complement current watershed planning efforts occurring within the two coastal counties.

In April of 2024, the AFC Coastal Program and Coastal Work Unit combined operations. Daily activities and goals within the work unit revolve around the AFC's mission of Protect, Sustain, and Educate. Staffing consists of three employees in Mobile County, which includes Work Unit Manager Ken Leslie, Forester Lucas Jones, and Forestry Specialist Jacob Chennault. Personnel assigned to Baldwin County includes Forester Andy Reier, Forestry Specialists William Robertson and Ryan Johnson, and Forest Ranger Jeffery Johnson. Baldwin County also has the assistance of Benji Elmore, the Southwest Regional Forester, as well as Robert Trimble, AFC Aircraft Pilot. AFC Coastal Program staff predominantly perform tasks in Mobile and Baldwin counties but will occasionally execute duties in other parts of the state. That staff consists of Coastal Program Manager Ryan Peek and Forest Rangers Mike Manion and Cody Hollen.

Baldwin County currently has 37 volunteer fire departments (VFDs) and five paid departments. Mobile County has 17 volunteer fire departments and six paid departments. During an abnormally dry year, the AFC and these VFDs are consistently busy suppressing wildfires. The counties in the Coastal Work Unit are typically among the hottest in the state as it relates to wildfire occurrence and suppression.

Personnel in both counties work with city, county, state, and federal agencies to promote educational events that benefit private non-industrial forest landowners. These events include forestry tours and workshops, Learn & Burn programs, and seminars. Staff also work with landowners to develop forest management plans for their property. Once the plan is implemented, the landowner is qualified for Stewardship Forest and Tree Farm certification programs, as well as TREASURE Forest recognition.

The Coastal Work Unit provides protection for rural and commercial trees for landowners, as well as urban homeowners who have insect and disease problems with their landscaped trees. The work unit responds to requests from homeowners, cities, and towns inquiring about Tree City USA and Arbor Day activities, seedling giveaways, and Champion Tree nominations.

The timber base of the Coastal Work Unit consists of pine plantations (longleaf, loblolly, and slash pine), natural pine sites, and various species of hardwood stands. The work unit also performs a significant amount of prescribed burning for landowners, as well as properties owned by the city, state, or county. Several rivers and estuaries are present throughout the two counties, providing habitat for fresh and saltwater fish. These water bodies provide many outdoor recreational activities, such as fishing and access to state lands for small and large game hunting.

In late December 2019, the Alabama Forestry Commission 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. It was originally supported with funding from a Gulf of Mexico Energy Security Act (GOMESA) grant and is currently funded with a Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act) grant. The Enhancing Gulf Waters through Forested Watershed Restoration program has allowed the AFC to allocate additional resources to maintain and improve forests in the Alabama coastal counties and associated watersheds. It also provides financial and technical assistance for forest landowners to aid in better management of their forests. The AFC's Coastal Watershed Enhancement Program (CWEP) provides cost share, in the form of reduced service rates, to assist landowners in overcoming some of the most common barriers to better managing their forests. Landowners can apply for forest enhancement practices that the AFC will conduct on their property. The primary focus of the CWEP is to improve coastal watersheds by assisting landowners in controlling and eradicating invasive species. Coastal Program and work unit staff have been busy mulching, spraying invasive species, and conducting prescribed burns.

A BRIGHT FUTURE AHEAD For Flagg Mountain

•Arts to Communicate the Science, and Science to Inform the Art•

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

Flagg Mountain has seen a bustle of new activity in the past four years after lying dormant for more than three decades. An important alliance between the Alabama Forestry Commission and the Alabama Trails Foundation in 2022 paved the way for a bright future with multitudes of visitors in the upcoming years. Partnered with the natural aesthetics of Weogufka State Forest and its historical significance in Coosa County, the Foundation realized the potential of the tower at Flagg Mountain. The group began exploring the feasibility of using the space as a place to communicate the importance of the tower and the people who built it, as well as the pre–Civilian Conservation Corps (CCC) history and the natural world in which it sits. A grant from the Alabama State Council on the Arts made this exploration possible.

The steps that followed were intentional in ensuring that future plans for the tower would stay true to the key goals. These included a plan for restoration and maintenance which was necessary to secure funding; exploration in the local community that provided insight into the programs already in place so as not to encroach on existing local initiatives; and assembly of a team consisting of art educators at nearby universities, natural resource professionals, architects, and historians. Two events hosted at Flagg Mountain in the Fall of 2023 were the brainchild of this team. “Birds, Beats & Bach” and “Pines, Poets & Plein Air” were rolled out as experiments to see how the community would react and engage.

Birds, Beats, & Bach in September featured classical musicians stationed across the property, experts from Alabama Audubon giving presentations on local birds, and the Alabama Trails Foundation with the Alabama Forestry Commission providing insight into the trails, tower, and surrounding area. Performers included Meg Ford, a classically trained violinist and graduate of the Alabama School of Fine Arts and Birmingham Southern College where she majored in Music Composition; Haleigh Black and Davis Little, an acoustic guitar and violin duo fresh off their tour in Scotland and Ireland; and Iron Giant, a contemporary music percussion collective that is Birmingham-based and features multi-instrumentalists Sam Herman, Betty Huffman, Seth Noble, and Justice Wallace. Natural history presenters were R. Scot Duncan, Alabama Audubon’s executive director and author of Southern Wonder: Alabama’s Surprising Biodiversity, and Andrew Lydeard, programs coordinator at Alabama Audubon, naturalist, ecologist, biologist, and avid nature photographer. The event was well attended. Guests were enthralled with their expe-

rience, being kind enough to share feedback such as, "Very nice selection of different artists that complimented this outdoorsy event," "The live music brought the place alive in new ways," and "Well worth the drive! Ready to go back."

Following the high praise of the first event, Pines, Poets, & Plein Air quickly followed. In October, a large group of people gathered for a program featuring artists, writers, and naturalists as they shared and interpreted the mountain's ecology and natural history. Artists included Amy Feger, an avid landscape painter and studio art professor at the University of Montevallo; Timothy Joe, a self-taught representational artist from Greensboro who focuses on disappearing scenes and relies on history to provide insight on the backstories of his subjects; and Allison McElroy, a painting professor at Jacksonville State University who strives to bridge the gap between nature and human expression in her work through the use of rocks, soils, and minerals. Writers highlighted were poet Tina Mozelle Braziel, author of Known by Salt and winner of the Philip Levine Prize for Poetry who serves as the director of University of Alabama Birmingham's Ada Long Creative Writing Workshop: Salaam Green, founder of the Literary Healing Arts and current poet-in-residence for the Wallace House for Arts in Reconciliation and author of the collection Healing in Harpersville; and Taminko J. Kelley, spoken word artist, author, and publisher at CoolBird Studios in Alexander City. Chris Oberholster, Director of External Affairs with the Nature Conservancy in Alabama, joined Forestry Commission foresters to talk about Flagg Mountain's unique ecology and the importance of its natural environment. Stationed around the mountain, these individuals brought knowledge and interpretative practice focused on the unique ecology of the area, including the fragment stand of montane longleaf pine and the mountain's diverse bird and plant species.

After these two successful events, it was clear there more opportunities on Flagg Mountain. Alabama Trails Foundation and Forestry Commission staff reconvened in late May, this time including arts professors, science professors, and students from Jacksonville State University, the University of Montevallo, and the University of Alabama Birmingham, along with partnering resource professionals from non-profit organizations such as The Nature Conservancy and Alabama Audubon. A key participant was Marcus Briggs-Cloud of the Ekvn-Yefolecv, an Indigenous community of Maskoke with native lands near Flagg. Strong interest prompted this gathering, and the objective was clear: to dig deeper into the conversation, particularly about curriculum development using arts to communicate the science, and science to inform the art. Everyone went home with big ideas for the future at Flagg, including an 'in-residence' program where groups, classes, or individuals can utilize the mountain's resources to enhance their learning experience. It takes a village and boy does this mountain have a big one!

Alabama's TREASURED Forests
513 Madison Avenue
P.O. Box 302550
Montgomery, Alabama 36130-2550

CHANGE SERVICE REQUESTED

PRESORTED
STANDARD
U.S. POSTAGE PAID
MONTGOMERY AL
PERMIT NO 275

TREES OF ALABAMA

SLASH PINE

By Dan Chappell, Assistant Director, Forest Management Division, Alabama Forestry Commission

Take a moment to think about the four major southern yellow pine species, all of which call Alabama home. First, you must give loblolly pine its due. It is far and away the state's primary commercial species, comprising 40 percent of all tree volume in the state and 87 percent of southern yellow pine volume. Next, longleaf pine jumps to mind. Recognized as the State Tree of Alabama, it is a keystone species for its native ecosystem, and well-coordinated restoration efforts are geared toward securing the future of this beloved tree. Shortleaf pine, with a vast native range stretching from Texas to New Jersey, has in many ways faced similar challenges to longleaf, in that within its range decades of successful fire suppression have held back its natural regeneration. The Shortleaf Pine Initiative exists to bring attention to the species and to work to reverse its decline. Lastly, there is slash pine. There are no groups dedicated to its preservation, and in Alabama, it is only responsible for about 4.5 percent of our southern yellow pine volume. However, this fascinating tree is worthy of attention.

Of the four pine species mentioned above, slash pine (*Pinus elliottii*) has the most restricted native range. While covering much of Florida and somewhat less than half of Georgia, the range extended to only a few counties of South Carolina, the far-southern tier counties of Alabama and Mississippi, and about three far-eastern parishes of Louisiana. It is not believed that at any time slash pine was a widely dominant tree on the landscape. The reason given in the literature is that the young seedlings are intolerant of fire, thus restricting the habitat to moist – though not saturated – soils, such as are often encountered on the margins of ponds, streams, and lakes. This is where the tree gets its name, as 'slash' was a colloquial name for the wet, bush-covered ground where the tree was commonly found.

The 2023 Forest Inventory Analysis survey picked up slash pine growing in the forests of 20 Alabama counties, with the lion's share found in Baldwin, Washington, Escambia, and Mobile. Slash pine is somewhat widely planted in pine plantations where, on certain specific flatwoods soils and sites with periodic standing water, it can hold its own or even outgrow loblolly pine. However, extensive research over the years has shown that on most good pine sites, loblolly will outgrow slash.

Slash pine is a large tree that can grow to 100 feet tall or more. Needles are grouped in bundles of two or three, which is a good tool to use in identification since both loblolly and longleaf pine needles tend toward bundles of three. The needles themselves are 6 to 11 inches long, making them longer than typical loblolly needles, and shorter than typical longleaf needles. On younger trees, the bark is brown and rough but develops into reddish-brown plates as the tree matures. The seed cones tend to be larger and more reddish than the grayer loblolly pinecones, and noticeably less prickly than loblolly. Birds and small mammals make use of the cones, and many bird species nest in slash pine. Although not invulnerable to southern pine beetles, slash pine seems to be more resistant to infestation than loblolly unless the stand itself is showing considerable impact from other stressors.

In the early 1800s when logs were transported by waterway, slash pine was a key commercial lumber species because it grew near streams and was often accessible. It was of major economic importance when the naval stores industry was widespread in the Southeast, as longleaf and slash were the two preferred species to tap for oleoresin, the gum that the tree would secrete in response to physical injury, and which was processed into tar, pitch, turpentine, and rosin.

Photo by Kelvin Daniels