



ALABAMA'S  
**TREASURED  
FORESTS**

A Publication of the Alabama Forestry Commission

*Summer 2021*



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**FOREST**  
 Alabama TREASURE Forest Association  

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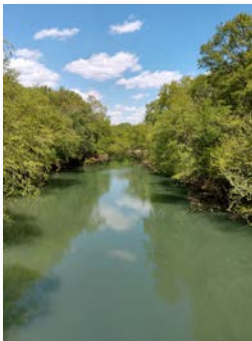


[TREASUREForest.org](http://TREASUREForest.org)

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- 4 MESSAGE FROM THE STATE FORESTER
- 8 New TREASURE Forest Certifications
- 8 2021 Alabama Landowners Conference
- 9 Learn-N-Burns in Alabama:  
Building Capacity Through Mentoring  
*by John R. Stivers*
- 13 White Oaks & Whiskey  
*by Robert Maddox*
- 20 The Armadillo: The Little Armored One  
*by Dr. Jim Armstrong*
- 26 The AFC Delivers  
*by the Editor*
- 29 MEMORIAL: Charlie Hamilton
- 30 Letters of Appreciation: AFC COVID-19 RESPONSE
- 32 TREES OF ALABAMA: White Oak



**On the Cover:**  
The Paint Rock River in  
Jackson County  
*Photo by Coleen Vansant*

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](http://www.forestry.alabama.gov)



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# table of CONTENTS

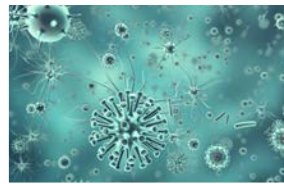
Vol. XXXX, No. 3 Summer 2021



- ◀ 5  
Chasing a Dream of Conservation  
*by Cole Sikes*



- ◀ 11  
Forest Landowners & Networking  
are Key to White Oak Success  
*by Dan Chappell*



- ◀ 14  
Forest Industry and the Economic  
Impact of COVID-19: The Uninvited  
Guest That Would Not Leave  
*by Gary Faulkner*



- ◀ 16  
Colors of Summer: Butterflies  
*by Ray Metzler*



- ◀ 22  
Alabama's Birding Trails  
*by Coleen Vansant*

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# Message from the STATE FORESTER

It is time . . . Summer is winding down and we are getting ready for fall. In Alabama, that means football, wildfires, and landowner tours. Today I want to focus on the latter, landowner tours and workshops. For most of us it has been a long time since we've been allowed to gather in large groups for any purpose. I pray we can continue to put the pandemic further and further in the rear-view mirror and start connecting with people again.

As you all know, landowner tours are probably the best way for forest landowners and resource professionals to interact and share information. Whether it's about the latest cost-share program or the best way to eradicate invasive species on your property, when landowners learn from professionals and each other, we end up with better managed forests and everyone wins! Getting out on someone's property and hearing the enthusiasm they have when sharing about how they created a beautiful TREASURE Forest is contagious. It makes other landowners want to duplicate that effort. We need these programs to encourage each other.

That being said, I know many county planning committees are working right now to plan fall tours and workshops. I urge you to get involved with your local county forestry planning committee to help put on a great tour. Also, let's all make a commitment to participate in these events – albeit in a safe manner – whether in your county or across the state. Let's get out and show what the forestry community is made of this fall. I promise to make as many of them as I possibly can, as a way to get out to see people and show that I am committed to getting back to normal. Hopefully I will see you on a tour trailer or enjoying a barbeque lunch in the shade of some old oak trees!

It's not just time to get back to conducting landowner tours, we've also got to return to teaching young people. *Classroom in the Forest* and *FAWN* programs need to begin again this fall and spring. These programs offer great information to the next generation of forest managers, community leaders, and policymakers. They need to learn how important forestry is to the economy and environment in Alabama. If we don't take the time to educate them, who will?

Lastly, don't forget one other great opportunity this fall. Plans are underway to conduct the Annual Landowner Conference sponsored by the Alabama Natural Resources Council. This year it will be held on October 21-22 at the 4H Center in Columbiana. As always, it will feature a great landowner tour and seminars on carbon credits, longleaf management, using private contractors, forest health, and much more. This conference is a great way to connect with other landowners and learn how to better manage the property you have been entrusted to protect! Look for registration details on page 8 in this magazine or on the AFC website soon.

Until I catch up with you on a tour or at the Landowner Conference, stay safe!

*Rick Oates*



Rick Oates,  
State Forester

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The Alabama Forestry Commission supports the Alabama Natural Resources Council's TREASURE Forest program. *Alabama's TREASURED Forests* magazine, published by the Alabama Forestry Commission, is intended to further encourage participation in and acceptance of this program by landowners in the state, offering valuable insight on forest management according to TREASURE Forest principles. TREASURE is an acronym that stands for Timber, Recreation, Environment, and Aesthetics for a Sustained Usable Resource.

# CHASING A DREAM OF CONSERVATION

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

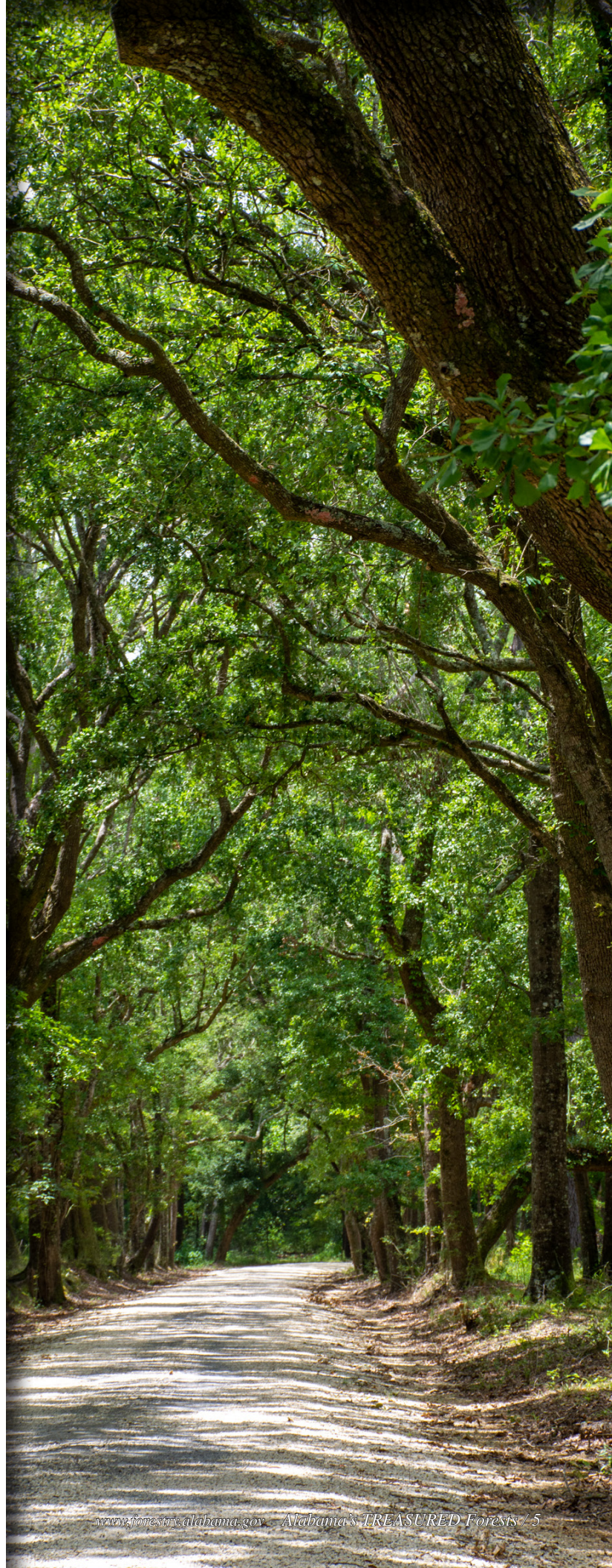
**F**or many Alabama landowners, their property is one of their most cherished possessions. To most of them, it is a feeling of achievement, a piece of hunting land where they gather with friends and family, a private getaway, an invaluable heirloom, and even a home. Each tract of land is unique, offering some experiences and amenities that others may not; however, a common bond is instilled within each location: it is loved. Molded within the countless bodies of water, pastures, timber stands, and built-by-hand structures are memories; abstract *treasures* that will make you recall the first deer harvested, the fish that got away, the afternoon trail adventures, the evening cookouts with family, or the moment when you saw the beauty of nature and realized God was watching over you.

An old saying comes to mind when I think about the many landowners who have achieved success in forest management, “you only get out of it what you put into it.” The Armentrout family is yet another example of this phrase. They have poured themselves into their land in a relatively short amount of time, ensuring that they share it with others every step of the way. Because of their dedication to conservation, they have received all the blessings that owning forest land in Alabama has to offer, culminating with a 2020 Helene Mosley Memorial TREASURE Forest Award.

Confederate Bluff Conservation LLC, owned by Neil and Ellen Armentrout, is a flagship example of why the TREASURE Forest Program was invented back in the 1970s. Located near the Alabama delta in Baldwin County, this 850-acre ‘park’ (692 acres certified) embodies the desire to continuously manage a forest. It contains manicured trails, a variety of tree species/ages, a sanctuary for wildlife, and a custom-built house for family.

Neil acquired his love for the outdoors during his youth in the Boy Scouts of America. He spent countless hours performing activities such as camping, hiking, and canoeing while working through the ranks and earning all of his merit badges, eventually leading to designation as an Eagle Scout. “I have always loved being outside,” said Neil. He carried this passion with him throughout his upbringing, always knowing he wanted to have a piece of Alabama to call his own.

*(Continued on page 6)*



# CHASING A DREAM OF CONSERVATION

*(Continued from page 5)*

Upon finishing college, a new interest influenced Neil to begin a career in the field of technology. This was a dramatic change from finding arrowheads and conquering rappelling courses during his childhood. “I was the complete opposite of being outdoors,” laughed Armentrout. “In fact, I was more of a ‘computer geek.’” This new passion of Neil’s led him to found Televox, a software designed to assist healthcare institutions with communication solutions between the business and their patients.

After a long career in the software industry, Neil sold his business in 2007 and returned to his first love, enjoying and caring for the environment around him. Approximately one decade later in 2015, Neil and his wife, Ellen, purchased their first tract of land at 528 acres in Bay Minette. “We were finally able to live our life’s dream of owning a place where we could bring more people to enjoy it,” said Armentrout.

Neil and Ellen’s challenge at the beginning was finding the available resources to learn more about how they could improve their land. “One of the first things we did was ask ourselves, what does it take to properly manage hundreds of acres? It was a whole new endeavor for us.” claimed Neil. The couple reached



*AFC Baldwin County Forester Rickey Fields and Neil survey one of Confederate Bluff LLC's wildlife food plots.*

out to several professional organizations including the Alabama Forestry Commission (AFC), USDA Natural Resources Conservation Service (NRCS), and Alabama Wildlife Federation (AWF).

After consultation with the AFC, NRCS, AWF, and other resources, the Armentrouts learned about forest stewardship practices, ultimately leading to aspirations of certification in the TREASURE Forest Program. The first step of this new plan was to determine their goals, as well as establish their primary TREASURE Forest management objective as wildlife habitat and their secondary objective as timber. They started implementing these goals immediately and achieved TREASURE Forest certification in 2019.

One of the projects the AFC assisted the Armentrouts with was a prescribed burn plan. It was recommended that Neil enroll in the Certified Prescribed Burn Manager (CPBM) course so that he could learn how to execute a prescribed burn safely and properly. After completing the course, he claims the knowledge he gained has been invaluable and instrumental in the effectiveness of their burns. Their forests are burned about every two years on a rotational basis. Half of the property was burned in 2020 and the other half was burned in 2021, allowing for an abundance of wildlife year-round, complimenting their 55 acres in wildlife openings and food plots.

Always being an avid bird hunter, Neil plants food for recreational dove hunting and manages his forest for bobwhite quail habitat. “This area was once known for its quail population, and we are trying to bring them back,” said Armentrout. He achieves this practice by controlling their natural predator count and planting the appropriate grasses for the ground-dwelling birds to thrive. Other wildlife species found on the property are eastern wild turkey, whitetail deer, woodpeckers, and even gopher tortoises. There are also 14 combined acres in ponds that provide perfect recreational fishing opportunities for bass and bream. He also realizes the importance of controlling invasive species that hinder wildlife habitat such as cogongrass, which plagues the southern region of Alabama. By participating in cost-share opportunities, Neil and Ellen have been able to suppress the spread of this weed-like grass.



*After timber losses from two hurricanes in one year, the Armentrouts' pine population still shows signs of natural pine regeneration.*



*Approximately 14 acres of Neil and Ellen's property is comprised of recreational fishing ponds.*

At its prime, timber made up more than 50 percent of the land total at Confederate Bluff Conservation LLC. Approximately 400 acres of it were planted in loblolly pines, 200 acres in longleaf pine, 100 acres in hardwood bottoms, and numerous wildlife openings with mast-producing trees. This was a snapshot of the Armentrout property prior to September 16, 2020. On this date, many Alabamians were devastated by Hurricane Sally, which made landfall in Gulf Shores in Baldwin County. This Category 2 hurricane ripped through boats, businesses, vehicles, timber, and even homes as it swept through the state.

Later that year in October, Alabama was affected by a second Category 2 storm, Hurricane Zeta, that made landfall in Louisiana and passed virtually over the same area as Sally. Neil and Ellen's property saw significant destruction because of the combination of rain saturation and high wind speeds. Armentrout claims they lost more than 1,000 trees due to these two storms. "We endured a 'double-whammy' last year. Hurricane Sally leaned the trees over, and Hurricane Zeta finished the rest." Approximately 100 truckloads (mostly pulpwood) were removed from the property, and Neil claims there are probably still 100 truckloads on the ground, as of this publication. In 2021, Armentrout planted approximately 32,000 pines (a mixture of both longleaf and loblolly) in an effort to restore timber to his south Alabama soil.

Prior to facing two hurricanes and a global pandemic, the couple was able to share their property with multiple visitors. The Armentrouts have chosen to use their property as an educational site where other landowners and enthusiasts can learn about managing forest land. "Mr. Armentrout has always allowed me to have an 'open door policy' to visit his property at any time," said AFC Baldwin County Forester Rickey Fields. "This has allowed me to showcase his achievements to a lot of private landowners, land managers, as well as local, state, and federal employees seeking advice." Rickey and Neil have had a long-standing relationship ever since he purchased the property in

2015. As the state is recovering from storms and the pandemic, Neil is excited to host more landowner tours on the property and increase the number of people he can bring onto their land.

The future of this Baldwin County *TREASURE* is bright. The entire property is under a conservation easement, which ensures that the land will remain in a natural state used for conservation and wildlife habitat. As an example of what the alternative outcome may be, Neil recalls a portion of adjoining land they purchased a few years ago. This tract was under consideration to be developed. They purchased the land solely to keep the area green and aesthetically pleasing, ensuring the existence of additional wildlife habitat in the area.

As stated at the beginning of this story, each successful landowner truly loves his or her property. Even though affection isn't your average concrete measurement, Neil and Ellen's love for their place is one of the first features you notice when visiting Confederate Bluff Conservation LLC. The Armentrouts have invested countless amounts of time and effort into their land and their progress truly reflects the classic phrase, "you only get out of it what you put into it." This philosophy resonated in Neil's response when asked why they do all that they do in the name of managing private forests. "The driving factor as to why we put in all the effort and spend all of the money to have this goes back to my experiences as a boy. To practice conservation and care about God's outdoors is our stewardship responsibility, and we plan to continue to carry it on for years to come." 🙏



*Neil and Ellen Armentrout in front of their home in Baldwin County.*

# New TREASURE Forest Certifications

Created in 1974 by members of the Alabama Natural Resources Council, 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 landowners who recently earned their TREASURE Forest certifications!

Landowner	County	Acres
Tracey & Kevin Etheridge	Shelby	144
David & Jan Farnsworth	Talladega	245
Charles Parrish	Talladega	205
	Total	594



## You Don't Want To Miss This!

& Alabama Natural Resources Council Awards Banquet

# 2021

Oct. 21-22 | 4-H Center | Columbiana

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# LEARN-N-BURNS

## in Alabama:

### BUILDING CAPACITY THROUGH MENTORING

*by John R. Stivers, Sehoj Plantation & Tanyard Properties  
Member, Alabama Chapter, Association of Consulting Foresters (ACF)  
Certified Prescribed Fire Manager, Alabama #448 & Georgia #1132  
Member, Alabama, Georgia, and Mississippi Prescribed Fire Councils*

Since early 2016, the Alabama Prescribed Fire Council ([alpfc.org](http://alpfc.org)) has collaborated with the Alabama Forestry Commission and other key partners, successfully building a Learn-N-Burn model now widely applied across the state and beginning to gain traction across the Southern region. There are numerous barriers that are common across every state in the U.S. which limit the use of prescribed fire (refer to the 2020 National Prescribed Fire Use report at Coalition of Prescribed Fire Councils website). Capacity is one of the major barriers and the application of Learn-N-Burn is designed to tackle that barrier by increasing practitioner confidence through mentoring.

Many landowners lack the ‘capacity’ to perform burns due to lack of equipment, personnel, training, experience, and confidence to safely plan and execute burns on their property. Learn-N-Burns give landowners and practitioners real-time and meaningful opportunities to participate on ‘live fire’ projects and be mentored by experienced and highly qualified burn bosses and mentors.

The goal is to see Learn-N-Burns implemented in most all of Alabama’s 67 counties to further provide opportunities in the diverse landscape and fuel types for landowners to gain the confidence by participating with professional burners. Since early 2017, Learn-N-Burn events have been held in many locations

across the state during the dormant and growing season, as well as a Learn-N-Burn dedicated to night burning projects in young pine plantations.

Learn-N-Burns can range in size anywhere from a few acres on up to several thousand acres. The first Learn-N-Burn was held in Bullock County in early 2017 on the Enon and Sehoj Plantations, with 10 groups accomplishing over 3,500 acres in one day. Each burn group consisted of one burn boss, two mentors, and six to seven participants burning a block between 250-400 acres. Each participant experienced tasks such as hand ignition, holding, patrol, mop up, and taking onsite weather. Participating in a Learn-N-Burn does not qualify anyone as a Certified Burn Manager but is merely a step to observe all the details involved in performing a prescribed fire project and understand how planning is key to a successful ‘burn day’ outcome.

The measure of success for a Learn-N-Burn is not acres treated, but rather how many of the participants increased their confidence in taking the next steps to becoming more proficient. We encourage all the participants to become a Certified Burn Manager in Alabama where they can couple the science with their experiences. 🌲

*This prescribed burning student sets a line of fire using a drip torch at a 'Learn-N-Burn' event at Sehoj Plantation.*



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# FOREST LANDOWNERS & NETWORKING ARE KEY TO WHITE OAK SUCCESS

By Dan Chappell,

Forest Inventory & Analysis/Marketing Section Lead, Alabama Forestry Commission

It was a great privilege of mine to travel to the Heflin area on May 13 to speak to a live audience of landowners and the interested public on developments within white oak science. My presentation led into a talk by the Natural Resources Conservation Service (NRCS) representative concerning cost-share opportunities related to white oak, as well as other cost-shares currently being offered.

I know that the paragraph above sounds like a typical way to kick off an article, but this is 2021. This workshop was a first-of-its-kind-in-a-long-time for many involved. With live events being off the table for 2020, landowner meetings and outreach efforts have simply not been possible. Events such as this carry value far beyond the agendas. I arrived at Penny Creek Farm and was greeted by the sight of a property that is managed with great pride. The Owen family has clearly worked with diligence over many years to develop their property into a location that is able to host gatherings such as this one easily, with the sound of running water the perfect accompaniment to the attractive cabin and covered picnic space (and excellent restrooms).

As someone who enjoys learning about things I don't know enough about (which is most things), Tracy Hare's talk on trapping and furbearers gave me a lot of insight into the current efforts aimed at beaver control and similar topics. It struck a chord with many of the attendees as well. The presentation by Alex James on streamside erosion control was excellent. If you see her name on a program for a landowner event, I highly recommend attending and learning from her expertise. Likewise, if you see that Drew Metzler will be presenting on wildlife and deer in particular, you should make an effort to attend. After he speaks, you will be thinking, "Now *there* is someone who knows what he's talking about." Following my talk, Jody Burdette of NRCS let everyone know about the sign-ups they were offering and how these programs were going this year. Giving credit where credit is due, Paul Williams and his AFC team did a great job with set-up and tear-down; Cindy Beam and Greg Pate organized the workshop flawlessly; and Sweet Southern Market made sure no one left hungry.

As beneficial as agenda presentations are, we all know that as much, if not more, gets accomplished over lunch and during breaks. These are the times where

ideas are exchanged, and you get a chance to talk one-on-one with the visiting speakers. You can ask specific questions related to situations encountered on your own property and listen to the answers that others receive when they ask their questions. Apart from that, there is the catching up that occurs between friends and neighbors, where you can compare notes on ideas you are thinking about implementing on your own property. These types of interaction are lost through the virtual format. Sure, it's possible to stage Zoom meetings involving natural resource topics. And yes, this is a way to spread knowledge. My apprehension is that so much is lost through the lack of informal interactions, that the greater benefit of having online workshops is lost.

I say all of this for a reason. In my presentation I shared about the conservation issues that white oak faces and the work of the White Oak Initiative. Unfortunately, many of the full-time professors and researchers who advance the science have been sidelined for much of the past year. Various health directives and even illness itself has impacted the work of the White Oak Initiative, as it has everything else,

*(Continued on page 12)*

# FOREST LANDOWNERS & NETWORKING ARE KEY TO WHITE OAK SUCCESS

(Continued from page 11)

such that goals for accomplishments set in place simply were not reached. Nevertheless, the White Oak Initiative, now and as it always has, recognizes that this tree, which is one of the most important to the composition of the mixed hardwood forests of the Eastern United States, is facing a slate of challenges that severely hamper its ability to reproduce.

There is no pressing shortage of mature, acorn-producing trees, although they are sought after for their commercial value. Those acorns produce seedlings by the millions. The issues arise when it comes to getting these seedlings up to 3 and 4 inches in diameter. Deer densities being what they are, much is consumed as browse. Surviving seedlings don't do well in the absence of light, which in mix-aged stands is most often brought about through some type of disturbance. Historically, white oak did well on upland sites that were disturbed by fire, often fire that was deliberately set by humans. Decades of effective fire suppression has allowed hydric, fire-phobic, shade-tolerant species (such as red maple and American beech) to climb out of the creek bottoms and up the hillsides to establish themselves across a landscape where they oth-

erwise would not be. When these species arrive, they begin to change the environment to better meet their own needs. As they grow up on drier sites that were once home to more fires and more sunlight hitting the ground, they begin to form a dense mid-story which grabs the sunlight that passes the dominant and co-dominant trees in the canopy. The result is a major lack of light reaching the ground, and white oak seedlings, while they survive for a time in low light conditions, cannot put on enough growth to reach the light they need.

The next time you get a chance, pick up a dried white oak leaf from the forest floor and compare it with a red maple leaf from off the forest floor. The moisture contents are very different. Also note the way that red maple leaves lay on the ground. White oak leaves are custom-made to provide a fuel bed that will carry fire needed by the tree to give its seedlings a chance to overcome competition and reach the canopy and the light. Red maple leaves collect in such a way as to provide a dampening effect on any fire that might approach. Over time, even if it is a landowner's aim to do so, it becomes more and more difficult to reintroduce fire to a landscape that, through species change, has developed a much different micro-climate than what existed before.

These challenges are not new, and if one-size-fits-all solutions were available, I believe they would be widely implemented. The reality is that this white oak puzzle has been observed for a long time. I located an article from the 1940s where these basic challenges were noted. I have reviewed the proceedings of symposiums that were held in 1992, 2002, and 2017 with white oak and upland oak regeneration in general as main topics of discussion. What I have found is that you cannot make broad-brush pronouncements concerning how to benefit white oak regeneration. Or to be more accurate, you can make pronouncements, but you will make yourself the subject of vigorous disagreements as other research is published that tends to contradict your findings. Is fire the way forward? What about chemical control of competition? Can you plant the trees, and if so, what species works best as a 'trainer' tree to encourage the white

oaks to grow upwards instead of outwards? Timber stand improvement harvesting of less-desirable mid-story species is only viable if there is a market for lower-valued wood and loggers interested in hauling it, and this often is not a financially viable option. What is the landowner to do?

If there is an answer to the white oak regeneration question, I firmly believe it will come from the landowners themselves. As cost-share programs are put into action such as the white oak-themed one now being offered by NRCS, landowners will need to communicate with each other as to what is working on their property, and what is not.

Yes, university and Forest Service research will continue to be funded to address this topic, and their work should be reviewed, discussed, and implemented on the landscape where appropriate. However, the challenges of finding what works locally will ultimately come down to communication between timber growers at the local level. Share your own hard-earned knowledge with likeminded friends and neighbors who want to see white oak thrive in the forests of Alabama.

When you feel ready to return to live events, then please come out and tour well-kept properties in your home county and in neighboring counties. See what practices have been implemented that seem to be working well. Talk to the visiting professionals who speak; tell them about problems or successes you are observing first-hand. Trust me, they are learning from what you say. I have discovered what a privilege it is to be able to be out meeting with the public, talking shop with landowners, and hearing what happens in the real world beyond the walls of a Montgomery office.

Take advantage of these opportunities; learn about the areas of forestry, wildlife, and ecology in which you are interested, but also learn about fields where you have limited knowledge. It will be through work and sharing stories, with landowners trying out solutions on their land, that the difficulties facing white oak will be confronted and one day overcome. ☪



# WHITE OAKS & WHISKEY



*By Robert Maddox,  
Registered Forester, Alabama Forestry Commission*

I'll bet you instinctively wince when you hear the words liquor and forestry in the same sentence. You may be imagining some sap-derived high-alcohol paint-stripping libation. Well, this article isn't about a sacrilege of spirits. Instead, we are going to look at a special market for white oak that uses a tried-and-true method for storing and flavoring whiskey.

Near the Tennessee River on the border of Lawrence and Morgan counties, lies a 65-acre facility known as the Jack Daniel's Cooperage. There, 150 team members process white oak into barrels used in distilling the world-famous whiskey. This facility produces approximately 285,000 barrels every year. A whiskey barrel is not small. That's a lot of wood. So where does it all come from?

Jack Daniel's operates two cooperages that supply all the barrels for distilling a variety of whiskeys that bear the label. The Brown-Foreman Cooperage in Louisville, Kentucky, and the Jack Daniel's Cooperage in Trinity, Alabama, perform this impressive feat of manufacturing. Feeding these facilities are three internal mills found in Jackson, Ohio; Clifton, Tennessee; and Stevenson, Alabama. All these operations have been strategically located to tap into areas that historically produce high-quality white oak logs.

To maintain this level of production, a lot of white oak logs are needed. Alabama supplies about one third of the lumber used at the Trinity Cooperage. The remainder is brought in from Tennessee, Kentucky, Georgia and Mississippi.

The ideal size for barrel staves at these cooperages is 17 inches diameter for a 'clean' log (no limbs or curves). Anything larger than that, while certainly marketable elsewhere, is not usually processed at Jack Daniel's mills.

If you'd like to read a brief history of Jack Daniel's Distillery, it can be found here: <https://www.jackdaniels.com/en-us/our-story> 🍷

*Reference: interview with Darrell Davis, Jack Daniel's Cooperage: Trinity, AL*



# FOREST INDUSTRY & THE ECONOMIC IMPACT OF

# COVID-19 :

## The Uninvited Guest That Would Not Leave

By Gary Faulkner, Economic Development Specialist, Alabama Forestry Commission

Remember a time when you had an unexpected visitor that came over to the house completely uninvited? And of course, with no prior notice for their arrival, it put the host in an embarrassing dilemma. Plus, they took forever to leave – even with helpful hints. I am sure we have all had this experience. Unfortunately, the whole nation has recently encountered another uninvited guest – COVID-19.

Forestry and the wood industry were not immune to this unwelcome visit (reference Alabama's *TREASURED Forests Summer 2020* article by Dan Chappell "Economic Impacts of COVID-19: The Big Picture").

However, the good news is that the industry is now seemingly running on all cylinders, revving up our economic engine and filling our pent-up consumer market needs. Let's look at the trends.

### What Are the Market Signals?

A good source for monitoring industry and economic trends is FRED. What is FRED? According to their website (<https://fred.stlouisfed.org/>), it is "short for Federal Reserve Economic Data. FRED is an online database consisting of hundreds of thousands of economic data time series from scores of national, international, public, and private sources. FRED, created and maintained by the Research Department at the Federal Reserve Bank of St. Louis, goes far beyond simply providing data: It combines data with a powerful mix of tools that help the user understand, interact with, display, and disseminate the data. FRED helps users tell their data stories."

Housing is a primary wood products indicator which moves the needle for our timber markets, along with other influential factors such as mortgage and unemployment rates. Current FRED data indicates rebounding housing starts since COVID. Why is this important? Housing consumes a significant amount of our forest products, thus generating market demand and subsequently timber demand. As well, unemployment rates have collapsed from the COVID historic highs. Lower unemployment facilitates consumers who can reengage the economic engine for utilization of goods and services. Also, 30-year fixed mortgage rates are continuing to remain low. Home buyers desiring to access the market can lock-in long term financing for homes at still historic low rates. Again, these are all positive indicators for our industry to push forward.

### Optimistic Industry Trends

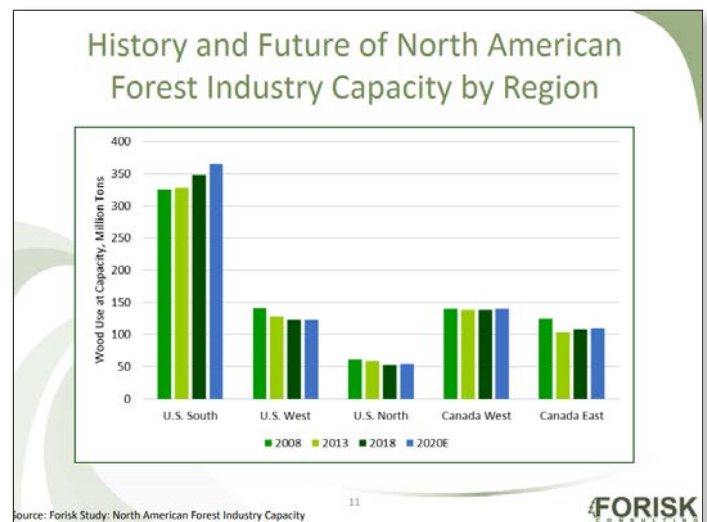
Forestry and wood products are exiting from the COVID doldrums in a robust manner. The industry is showing strength,

according to Forest2Market (<https://www.forest2market.com/>), a global provider of timber pricing, cost benchmarks, and in-depth analytics for participants in the wood raw materials supply chain. Here is their performance index from a recent article ("US Forest Industry Performance Remains Strong, But Capacity Worries Persist" – June 28, 2021).

#### In the forest products sector, index performance included:

- Pulp, Paper & Allied Products: +1.9 percent (+7.5 percent YoY)
- Lumber & Wood Products: +3.8 percent (+36.5 percent YoY)
- Softwood Lumber: +6.4 percent (+7121.1 percent YoY)
- Wood Fiber: +0.0 percent (+8.3 percent YoY)

There should also be comfort in knowing that the southern region is by far the most impactful geographical area within the US for forest industry capacity. No matter the crisis, we are continuing to supply the market, and growing in capital expansion.



As an example, there has been an unusual softwood sawmill expansion in the U.S. in the last year. As reported by FORISK Consulting (<https://forisk.com/>) in their article "North American Softwood Sawmill Capacity Increased by 1.4 Billion Board Feet Over the Past Year" dated May 19, 2021, they state that, "Over the past twelve months, North American softwood sawmill capacity increased by 1.4 billion board feet. The U.S. South received the greatest proportion of the growth, 1.1 billion board feet, expanding southern softwood lumber capacity by almost 5 percent." Founded in 2004, FORISK analyzes forest supplies, wood demand, and timber pricing to develop forecasts and strategic guidance for clients.

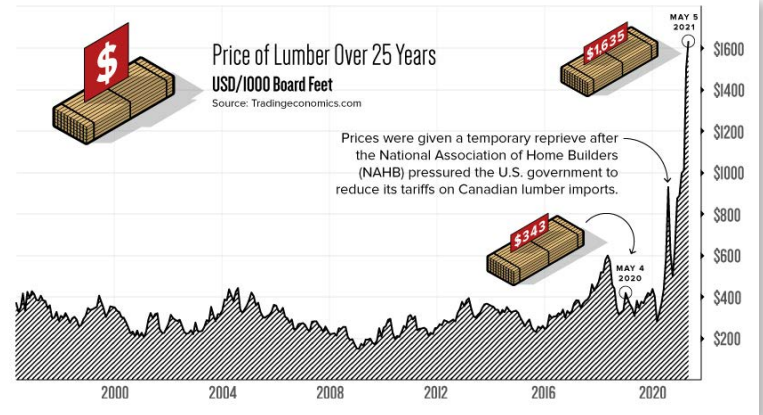
# A Funny Thing Happened on the Way to the Lumber Store

“Amazing.” “An absolute roller coaster ride.” These are a couple of appropriate descriptions for the record high price of lumber and other wood products at the time of this writing. As a spin-off of pandemic economics, the prices of lumber have shattered records for the previous months but are waning at this time. If you are planning to purchase a new home, hang on to your hat. Why? As Forest2Market stated in their May 10, 2021, article (*Southern Yellow Pine Prices Shatter Previous Records*), “While the 2020 run-up in lumber price was demand driven, the pandemic created such an imbalance in the market that evolving demand patterns continue to keep us all guessing.”

A couple of stunning illustrations shown here reflect the rise in lumber prices at its height, provided via permission of the Visual Capitalist (<https://forisk.com/>) in their article “*Visualizing the Recent Explosion in Lumber Prices*” by Marcus Lu, May 8, 2021.

## In Conclusion

We hope the uninvited COVID guest will eventually take the hint and pack up to leave. We cannot wait to say goodbye, bon voyage, arrivederci, good riddance, and don’t let the door hit you on your backside as you leave! Our forest industry is surging, our citizens are working, and markets are trending upward. Most importantly, our forests never stopped working! 🌲



## How Many Homes Can You Build With \$50K of Lumber?

To see how burgeoning lumber prices are impacting the U.S. housing market, we’ve calculated the number of single family homes that could be built with \$50,000 worth of lumber. First, we established the following parameters:

- Lumber requirements: 6.3 board feet (bd ft) per square foot (sq ft)
- Median single family house size: 2,301 sq ft
- Total lumber required per single family house: 14,496 bd ft

Based on these parameters, here’s how many single family homes can be built with \$50,000 worth of lumber:

Date*	Lumber Price	Total Lumber Purchased	Total Homes Built
2021-05-05	\$1,635 per 1,000 bd ft	30,581 bd ft	2.11
2020-05-04	\$343 per 1,000 bd ft	145,773 bd ft	10.05
2015-05-01	\$234 per 1,000 bd ft	213,675 bd ft	14.74
2010-05-01	\$270 per 1,000 bd ft	185,185 bd ft	12.77

\*Exact matching dates were not available for past years.  
Source: Insider



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# *The Colors of Summer:* BUTTERFLIES

By Ray Metzler

*Threatened & Endangered Species Specialist, Alabama Forestry Commission*

**T**he verse pictured here is from my wife's flower bed and rock garden at our house. I believe that many of Alabama's forest landowners may feel the same way about our forests and fields as they provide us with a sense of 'oneness' with nature and a true connection to the earth. There are many sights and sounds that elevate that sense of oneness, but a colorful butterfly or even an earth-colored moth flitting from location to location on a woods walk is a joy to behold and surely adds to the feeling of being one with nature.



More than 10 percent of America's 750 butterfly species occur in Alabama, while our state land mass occupies only approximately 1.3 percent of the nation. This fact is not unusual as Alabama is certainly in the Top Five when comparing biodiversity in the United States. However, the warm, moist climate of the tropics of Central and South America harbor the greatest

number of butterflies and similar insects in the western hemisphere.

Butterflies, skippers, and moths are insects of the order Lepidoptera. Three features are common to all lepidopterans: 1) the presence of minute scales that give butterflies (typically colorful) and moths (typically drab) their coloration, 2) a proboscis – a flexible, coiled, and elongated mouthpart, and 3) a life cycle that includes metamorphosis. As with all insects, lepidopterans have a head, thorax, and abdomen and most species also have two pairs of membranous wings.

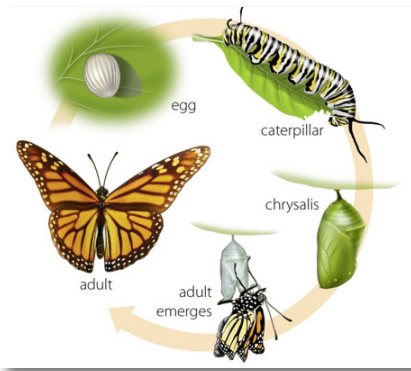
Distinguishing what are sometimes called 'true' butterflies from skippers and moths can be difficult. A couple general rules to help distinguish them are 1) butterflies and skippers are typically diurnal or active during daylight hours; and 2) moths are generally nocturnal or active at night. There are exceptions to these generalities though. The antennae of butterflies and skippers are generally thread-like with an enlarged club-like or knobby structure near the end. Skippers also have a hook at the end of the antennae, while butterflies lack a hook.

The *Alabama Butterfly Atlas* lists 84 species of 'true' butterflies and 60 skippers that call Alabama home at one time or another during a calendar year. Several species are also listed as strays or accidentals that ordinarily do not occur in Alabama.



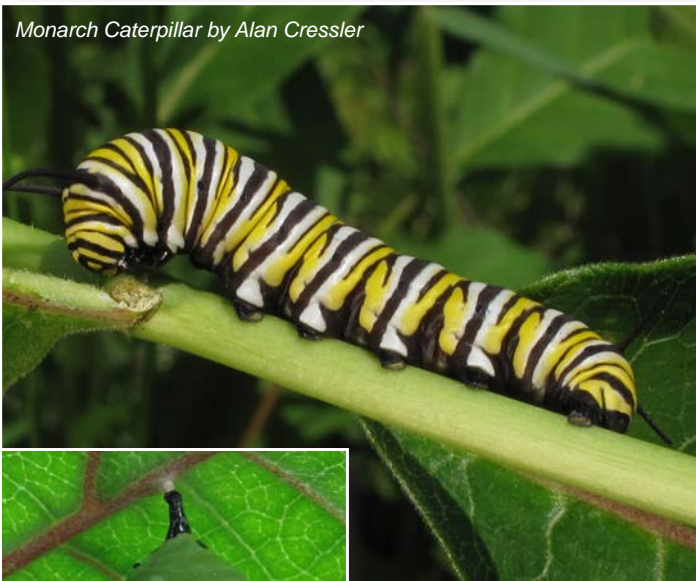
## LIFE CYCLE

Complete metamorphosis involves passing through a four-stage cycle that includes an egg, caterpillar, chrysalis, and adult. Eggs vary in color depending on the species and may be laid on a specific host plant. For instance, monarch butterflies only lay eggs on milkweed plants.

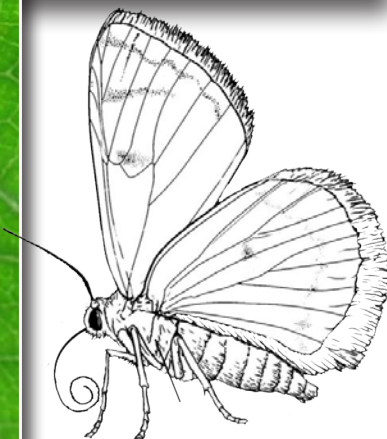


Caterpillars normally emerge from eggs within a week and typically consume the nutritious eggshell prior to turning their attention to the host plant. A caterpillar's voracious appetite for plant material leads to an increase in mass that requires them to periodically shed their skin. The new layer of skin is larger and flexible, allowing the caterpillar to continue to eat and grow larger. Each stage between shedding, when the caterpillar is active, is called an instar. A caterpillar in the final instar stage begins to look for a location to attach itself to undergo a transformation into a butterfly while encased in a hard covering or chrysalis. The adult emerges from the chrysalis fully grown after varying lengths of time, depending on the species. The adult flies off after its wings have fully expanded and dried.

Monarch Caterpillar by Alan Cressler



Monarch Chrysalis by Alan Cressler



## PLANTS AND THEIR RELATIONSHIP WITH INSECTS

Plants provide food, shelter, and reproductive sites for a wide variety of insects including Lepidopterans in their various stages of development. Proboscis length often determines if a species can feed on nectar from specific flowering plants. Species with a long proboscis can generally feed on nectar but even some species with a short proboscis will utilize plant parts (fruit or sap) as a food source. Insects frequently exhibit some type of camouflage that allows them to remain hidden in nature during the various stages of metamorphosis, such as eggs often being cryptic in color to match the host plant. Survival of the fittest requires adaptations to minimize the risk of predation at all stages of life.



Used by butterflies to feed on flowering plants, the proboscis can be identified by its long and curly shape. Photo courtesy of [www.naturetreasurehunter.com](http://www.naturetreasurehunter.com)

## ALABAMA'S THREATENED & ENDANGERED INSECTS

Mitchell's Satyr's, a butterfly, is the only insect in Alabama provided protection under the Endangered Species Act. Mitchell's Satyr was first 'discovered' in Bibb County on June 23, 2000, by Dr. Jeffrey Glassberg, President of the North American Butterfly Association, and his wife. Prior to their discovery, the nearest known population was over 500 miles away in North Carolina. Preferred habitats are wetlands highly associated with long-term beaver activity. The species has also been documented in three Mississippi counties since the discovery in Alabama. Butterfly enthusiasts are hopeful that the discoveries in Alabama and Mississippi may indicate that the species is more common in the Southeast than once thought. Additional field work is necessary to either confirm or deny this thought.

Protection for monarch butterflies has been petitioned under the Endangered Species Act. Monarchs can be found in all 67 Alabama counties, but are typically only seen in the spring and fall during their annual migrations to and from locations as far away as Canada and New England. The U.S. Fish & Wildlife Service is reviewing population and distribution information in the hopes of making a listing decision in the future. Populations have declined significantly during past decades due primarily to loss of habitat. Some monarchs are known to overwinter at Fort Morgan and in Fairhope, Alabama, but most migrate all the way to Mexico.

(Continued on page 18)

## Colors of Summer: BUTTERFLIES

(Continued from page 17)

The frosted elfin, a butterfly species not currently found in Alabama, is being considered for listing as a threatened or endangered species by the U.S. Fish & Wildlife Service. The only known specimen collected in Alabama was in Tuscaloosa County during the 1950s, although this species has been documented in Florida within a few miles of our southern border. Butterfly enthusiasts suspect it may occur in Alabama as its preferred habitat includes scrub oak forests and sandhills of longleaf pine where it finds a preferred host plant, *Lupinus perennis*.

## PLANTING A BUTTERFLY GARDEN

Lepidopterans, as well as many other pollinators, can easily be attracted to a location by planting **native wildflowers** in appropriate soils and sunlight conditions. Some of the more common native wildflowers in Alabama include coneflower (*Echinacea spp.*), milkweeds (*Asclepias spp.*), black-eyed Susan (*Rudbeckia hirta*), beebalm (*Monarda spp.*), pyeweed (*Eutrochium spp.*), and members of the *liatris* genus. It is highly beneficial to have plants in your garden with varying bloom periods (spring, summer, and fall) to attract butterflies and other pollinators throughout the year. Most pollinator-friendly native wildflowers are sun loving and need partial to full sun. Non-native plants should be avoided as they may have unintended negative consequences for our environment. Some specific non-natives to avoid that are widely available are butterfly bush (*Buddleia davidii*), lantana (*lantana camara*), and tropical milkweed (*asclepias curassavica*).

Landowners eligible for funding through Farm Bill cost-share programs such as EQIP and CSP may want to consider developing pollinator habitat on their property. These programs are focused on providing pollinator habitat on farms and forestland outside of a typical backyard setting. Consult with your local National Resources Conservation Service office to obtain additional information on funding availability for pollinator habitat development.

The *Alabama Butterfly Atlas* and *Xerces Society* websites are useful when trying to locate information regarding habitat management and ecology of Alabama's butterflies. In fact, a tremendous amount of information about lepidopterans and associated plants is available on the internet and can be found by googling a variety of subjects including (but not limited to) Monarch Milkweed, U.S. Wildflowers, Alabama Plant Atlas, Insect Identification, Biota of North America, as well as Butterflies and Moths of North America. *Butterflies of Alabama* is also an excellent resource published by the University of Alabama Press as part of The Gosse Nature Series of publications focused on Alabama's natural resources. 🌿



**Silvery Checkerspot**  
(*Chlosyne nycteis*)  
by Alan Cressler



**Zebra Swallowtail**  
(*Eurytides marcellus*)  
by Alan Cressler

### Author's Note:

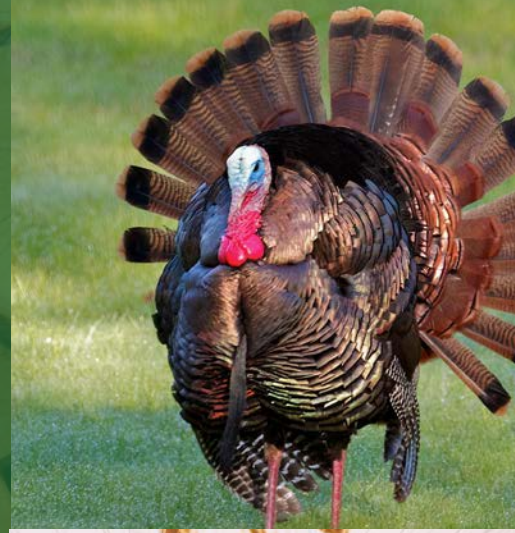
As a retired state employee, I appreciate the opportunity to work part-time for the Alabama Forestry Commission in a unique role that has broadened my horizons as a professional wildlife biologist. My work activities have allowed me to work cooperatively with several agencies and entities as well as the thousands of private landowners that own more than 90 percent of Alabama's forestlands. As a subscriber to this magazine, you are probably a forest landowner and are the key to managing habitat for the benefit of our state's highly diverse wildlife resources, including the many imperiled species. Many of our imperiled species can benefit from active management that is designed to benefit common game species. I encourage you to stay engaged and continue to 'grow and learn' about our highly diverse natural resources and how your management decisions impact the world we live in. Take time to really enjoy your next walk through your flower bed, rock garden, woodlot, or forest!



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# THE Armadillo

## The Little Armored One

By Jim Armstrong, Ph.D., CWB  
Professor Emeritus, School of Forestry and Wildlife Sciences, Auburn University

When I first moved to Auburn, Alabama, in 1990, one seldom saw an armadillo in the area. That all changed within six months, and soon there were dead armadillos on the roads everywhere. It reached the point where no self-respecting opossum could even get run over!

According to the late Dr. Julian Dusi, one of the early zoology professors at Auburn University, armadillos were first reported in the state in Mobile County in 1945. They have expanded throughout Alabama, and though less numerous in the mountainous northeastern areas of the state, they do occur there as well.

When I conducted a statewide survey of county Extension agents in the mid-1990s, armadillos were ranked first in the number of calls from homeowners about nuisance wildlife. Even though their ranking has dropped somewhat, this prehistoric-looking mammal continues to raise the hackles of homeowners today.

There are over 20 species of armadillos existing in South, Central, and North America; however, the species that has spread into much of the Southeastern United States is the nine-banded armadillo (*Dasypus novemcinctus*), so named because of the seven to nine moveable rings of armor. Nine-banded armadillos are about the same size as opossums and have a peculiar looking three-toed foot. In addition to the broad bands of armor that cover the main body, the tail is protected by rings of armor.

Armadillos are primarily nocturnal; however, I have seen them out during the day. They burrow in the ground and have

strong legs adapted for digging. Armadillos have a keen sense of smell, which they use while rooting in the leaf litter and soil searching for insects, grubs, and other invertebrates.

Additionally, armadillos may feed upon small reptiles, amphibians, and the eggs of ground-nesting birds. Experts agree that the armadillo has poor eyesight; however, there is some disagreement in the literature as to how acute their hearing may be. I do know from personal experience, that while searching for food, they seem oblivious to anything else and may come very close to human beings before becoming alarmed. When startled, they jump in the air — this behavior greatly reduces their chances of

surviving an encounter with a vehicle. Armadillos make a great deal of noise while traveling through the woods, and many deer hunters have been disappointed to discover that the trophy buck they heard was actually an armadillo searching for food.

In the southeastern United States, some armadillos have been known to carry *Mycobacterium leprae*, the bacterium often associated with Hansen's disease (also known as leprosy). Whether humans can contract the infection (leprosy) from armadillos is

debatable, although case histories suggest that a few armadillo handlers in Texas may have acquired leprosy during many years of catching, handling, skinning, and eating armadillos. A widely accepted hypothesis is that the organism exists in the soil in certain regions, especially Louisiana and coastal Texas, and that both armadillos and humans contract the infection from this environmental source. According to the Southeastern Cooperative Wildlife Disease Study Group based out of the



Photo courtesy of U.S. Fish & Wildlife Service

University of Georgia, there is no conclusive evidence that people can contract leprosy from armadillos. The Center for Disease Control and Prevention says leprosy, once feared as highly contagious, does not spread easily and modern treatments are very effective, allowing people to live normal lives during and after treatments. As with all wild animals, it is better to err on the side of caution, and avoid close contact with armadillos.

While there may be an insignificant health risk from armadillos, few, if any homeowners welcome their presence. Their feeding habits can cause severe damage to lawns and gardens, and it is no fun to wake up to a yard that looks like it has been invaded by a sounder of miniature pigs. As armadillos search for food, they dig small holes in the ground. These holes are about 3 inches wide and 5 inches deep. Armadillos will also up-root flowers and other vegetation in loose soils. I have investigated many situations where armadillos have uprooted newly laid sod. It seems to be a strange irony that the nicer one's yard, the more likely you are to experience damage. Of course, this observation may just be my perception because if a person spends a lot of time and money maintaining their yard, they are probably less tolerant of any damage.

Controlling armadillo damage seems to be an amazingly simple task to some folks, yet an exercise in frustration to others. The most common method of controlling armadillo damage is by trapping. These traps are more effective when boards (or plastic fencing) are extended from the mouth of the trap to effectively increase the size of the opening. Set traps in the area where the damage is occurring, for example, around the house, in the flower garden, or in the vegetable garden. Live traps baited with overripe fruit, such as apples or bananas, can be used to catch problem armadillos. Over the years, I have known many people who don't use any bait, relying only on the boards to 'guide' the armadillo into the mouth of the trap. I am not an advocate of relocating nuisance wild mammals and birds, as it tends to merely shift the problem to someone else; therefore, I recommend that captured nuisance armadillos be humanely euthanized. Of



*A simple bait trap using plastic fencing to catch armadillos.*



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course, check local wildlife regulations on trapping, relocation, and euthanasia before taking any action.

If the damage is isolated to a garden area, mesh fencing may be used to exclude them from the area. A word of caution: since armadillos are prolific burrowers, a 12-inch apron of fencing should be extended on the ground facing away from the garden to discourage them from digging under it. Another alternative type of fencing is an electric fence. A single strand 3 inches off the ground should be sufficient. Polytape electric fence wire with a New Zealand-type charger makes an effective and safe exclusion device. This type of fencing is easy to install using lightweight fiberglass poles; however, be very careful when placing a fence in areas where children or pets may be active.

Spotlighting and shooting armadillos at night is an effective and selective method. However, this method requires constant vigilance to find the animal and most people grow weary of the effort after only a few nights. In addition, local regulations on discharging firearms may prohibit this activity.

No toxicant, fumigants, or repellents are currently registered for armadillo control. However, since damage is usually localized, the control measures suggested here should be useful. Since they feed on invertebrates in the ground, eliminating the food source will often cause armadillos to look elsewhere for food. However, ridding the soil and vegetation of all insects, worms, and grubs may not be practical and may be detrimental to the plants and other life forms in the area. 🍄

# ALABAMA'S

# BIRDING TRAILS

By Coleen Vansant, Communications & PR Manager, Alabama Forestry Commission

**A**lthough Alabama is the fifth most biodiverse state in the nation, it ranks first for states east of the Mississippi River. Only California, Texas, Arizona, and New Mexico have more plant and animal species than Alabama. All this diversity has combined to make our state a *treasure* for those folks interested in the sport of birdwatching.

This vast landscape of forests, plants, animals, and water helps attract around 430 species of birds that are either migratory or call Alabama home on a full-time basis. This unique natural resource is what inspired the 'Alabama Birding Trails' project across the state, which has become a major attraction for nature lovers and birdwatching enthusiasts.

Alabama's eight birding trails are a series of trails and loops that highlight the best opportunities to discover and watch a menagerie of birds in eight diverse regions across the state. All sites are located on public lands, being enjoyed not only by local residents but also attracting bird watchers from across the nation. The regions are identified as the North Alabama, West Alabama, Appalachian Highlands, Piedmont Plateau, Black Belt Nature and Heritage, Piney Woods, Wiregrass, and Alabama Coastal Birding Trails.

There are approximately 280 sites along these trails that provide birdwatchers with an interesting variety of our feathered friends to view and enjoy . . . from bald eagles on the Natchez

Trace and Lake Guntersville, to the migration of whooping and sandhill cranes on the Wheeler Wildlife Refuge, to the spring and fall migration of songbirds along the Gulf Coast.

The project was 10 years in the making, with the final trail being completed in 2013. Many agencies and organizations collaborated in the project including the Alabama Tourism Department, the University of Alabama Center for Economic Development, the Alabama Department of Conservation & Natural Resources, and the Birmingham Audubon Society.

Others contributing to the effort were chambers of commerce across the state, the US Army Corps of Engineers, the USDA Forest Service, and others.

The Alabama Birding Trail regions are as diverse and unique as the birds that visit or call them home. From the green hardwood mountains of North Alabama to the sandy white beaches of the Gulf Coast and everything in between, the state's diverse landscape has something to offer both the hardcore and beginner birder.

Stretching across the state from Mississippi to Georgia, the

**North Alabama Birding Trail** includes 50 sites selected for their prime birdwatching opportunities. These locations provide a diversity of habitat including the Tennessee River Valley, farmlands, forests, mountains, and fields. Some of the stops include Little River Canyon National Preserve Drive, Hurricane Creek Park, Bankhead National Forest – Sipsey Wilderness Area,



Alabama's state bird, the Northern Flicker of the woodpecker family (also known as the "yellowhammer")

DeKalb County Public Lake, and Wheeler National Wildlife Refuge. Twelve counties are included on this trail including Colbert, Cullman, DeKalb, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Madison, Marshall, Morgan, and Winston.

Rivers, mountains, valleys, pastures, and farmland compose the extreme diversity of the **Appalachian Highlands Birding Trail**. The Cahaba, Coosa, Tallapoosa, and Black Warrior rivers create their own diversity while Oak Mountain, Red Mountain, and Mount Cheaha give different opportunities for birdwatching. There are approximately 40 sites in nine counties on this trail including the Tannehill State Historical Park, Turkey Creek Nature Preserve, Birmingham Zoo, Birmingham Botanical Gardens, Ruffner Mountain Nature Preserve and Wetlands, Anniston Museum of Natural History, the Talladega National Forest, Cherokee Rock Village, Little River Canyon, and Horse Pens 40. This trail runs through Blount, Calhoun, Cherokee, Cleburne, Etowah, Jefferson, Shelby, St. Clair, and Talladega counties.

From the river bottoms of the Tombigbee River to forests and savannahs, the 28 sites on the **West Alabama Birding Trail** give ample opportunities for birdwatching. Some of the stops through the nine-county area of the northwest/central part of the state include Moundville Archaeological Park, Pickensville Recreation Area, University of Alabama Arboretum, Briarfield Ironworks Historical State Park, and the Cahaba River National Wildlife Refuge. This trail highlights birding opportunities in Bibb, Greene, Fayette, Hale, Lamar, Marion, Pickens, Tuscaloosa, and Walker counties.

The **Black Belt Birding Trail** is located in a region that gets its name for the rich black soil that runs through the central part of the state from Mississippi to Georgia. Known as farming country, the area also provides diversity of habitat in the bottomlands of the Black Warrior, Tombigbee, and Alabama rivers. The 32 sites on this trail will take you to places

such as Choctaw National Wildlife Refuge, Demopolis River Walk, Holy Ground Battlefield Park, the Montgomery Zoo, and Old Cahawba Archaeological Park. Eleven counties on this trail include Butler, Choctaw, Dallas, Lowndes, Macon, Marengo, Montgomery, Perry, Russell, Sumter, and Wilcox.

The **Piedmont Plateau Birding Trail** offers an assortment of birding opportunities along the 40 sites it includes. From the high peaks of Cheaha State Park (Alabama's highest point) and Flag Mountain in Weogufka State Forest, along the river bottom habitats of Fort Toulouse-Fort Jackson Park and Horseshoe Bend National Military

Park, to the woodland trails of the Alabama Nature Center and the Kreher Forest Preserve & Nature Center, this region provides several diverse habitats for birdwatchers. There are nine counties on this trail including Autauga, Clay, Chambers, Chilton, Coosa, Elmore, Lee, Randolph, and Tallapoosa.

A total of 21 sites are spread across 10 southeastern counties on the **Wiregrass Birding Trail** that gets its name from the tough wiry grass that once grew under the canopies of the pine forests. Some of the best birding opportunities in the state are found in

*(Continued on page 24)*



*Eastern Towhee*



# ALABAMA'S BIRDING TRAILS

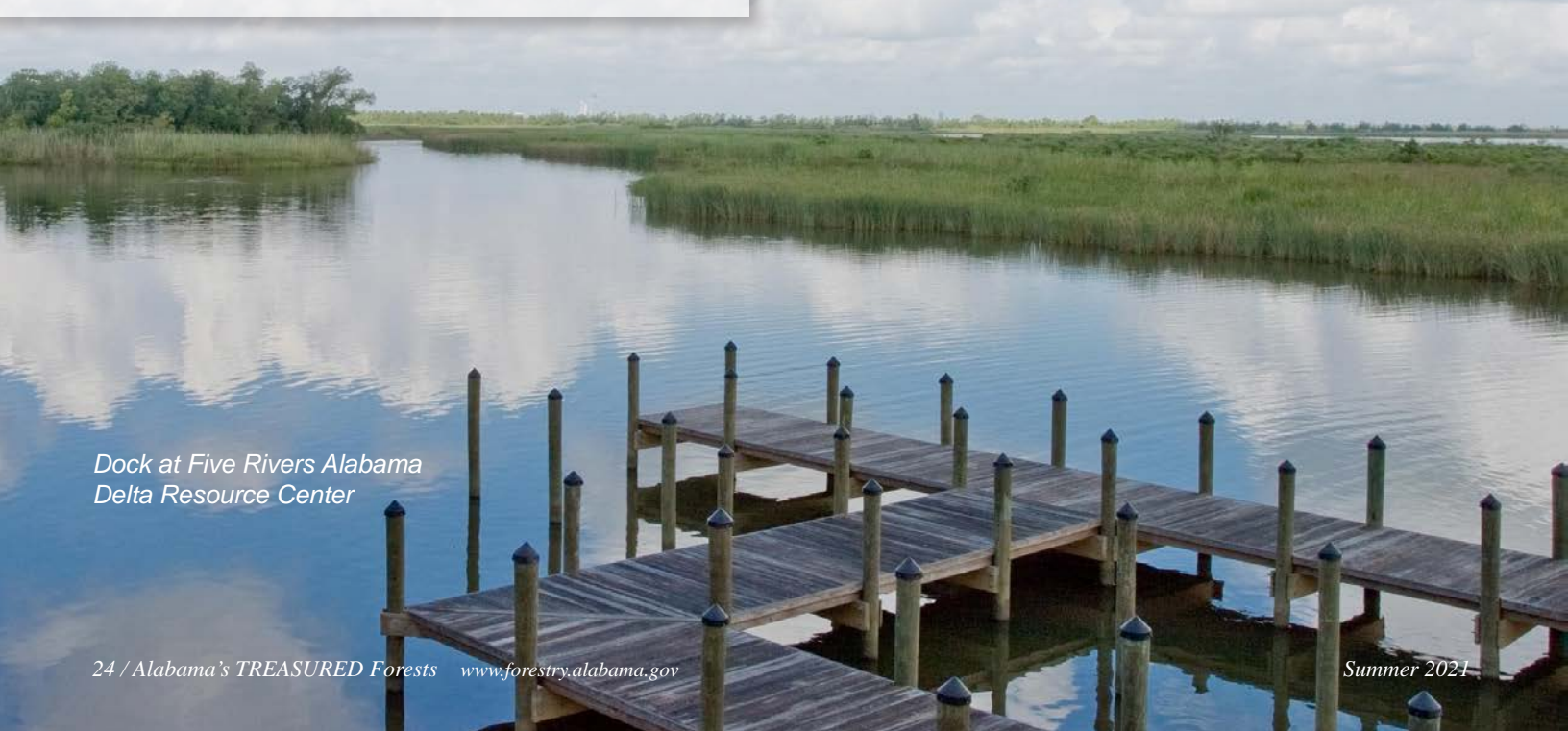
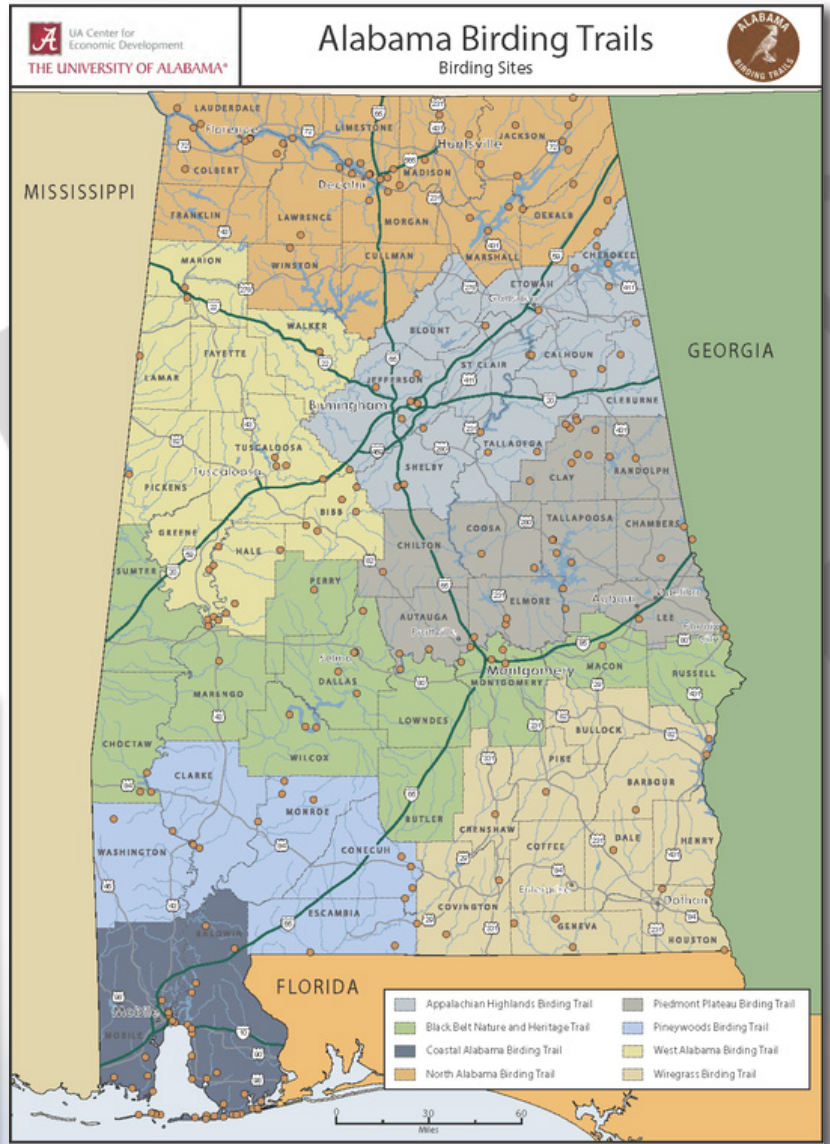
(Continued from page 23)

this area including Eufaula National Wildlife Refuge where 281 species of birds have been documented. Other areas of distinction are Geneva State Forest, Solon Dixon Forestry Education Center, Troy University Nature Trail, Yoholo Mico Trail, and the Chattahoochee River. This trail includes the counties of Barbour, Bullock, Crenshaw, Coffee, Covington, Dale, Geneva, Henry, Houston, and Pike.

The five-county *Piney Woods Birding Trail* offers 22 outstanding birdwatching sites that are organized into three loops, each with its own distinct character. Each stop provides a site description, driving directions, birding opportunities, and information on other recreational activities in the area. Some of the excellent birding sites on this trail include Old St. Stephens Historical Park, Monroe County Lake, Turtle Point Environmental Science Center, Little River State



Summer Tanager at Flagg Mountain



Dock at Five Rivers Alabama Delta Resource Center



Forest, and Bashi Creek Public Use Area. The southwestern counties included on this trail are Clarke, Conecuh, Escambia, Monroe, and Washington.

From the sandy shores of the Gulf of Mexico, through Mobile Bay and the delta bottomlands, the *Alabama Coastal Birding Trail* offers some of the best birdwatching opportunities in the state. This region is the first and last stop for songbirds during their spring and fall migration across the Gulf of Mexico, and the trail has 50 stops organized into six birding loops totaling more than 200 miles in Baldwin and Mobile counties. Sites include 5 Rivers Alabama Delta Resource Center, Graham Creek Nature Preserve, Weeks Bay National Estuarine Research Reserve, Bon Secour National Wildlife Refuge, Blakeley Island, Gulf State Park Nature Center, Fort Morgan, Bellingrath Gardens, Battleship Park, and Dauphin Island Bird Sanctuary. You don't want to miss the 'Alabama Coastal BirdFest' in October!

The next time you plan a vacation or 'staycation,' you may want to consider visiting one of Alabama's Birding Trails. Most sites along the trails include directional signage, interpretive pan-



*American Goldfinch*

els, kiosks, walking trails, observation towers, visitor guides, and maps. Many of the trails are fully or partly wheelchair-accessible through paved walking paths, observation platforms, and boardwalks. For more information, visit [www.alabamabirdingtrails.com](http://www.alabamabirdingtrails.com) or the Alabama Ornithological Society website. 📱

*All photos by Joe Watts, Alabama Birding Trails*



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**SCAN ME**



# THE AFC DELIVERS

You may already know that the mission of the Alabama Forestry Commission (AFC) is three-fold: to Protect the forests from wildfires, insects, diseases, and all harmful agents; to service and help landowners Sustain responsible forest management on their property, using professional technical assistance so as to benefit themselves, their land and society; and to Educate the general public about the value of our forests in ensuring both a healthy economy and environment. Additionally, you may even be aware of or have been a recipient when the AFC has assisted with emergency responses following hurricanes, tornadoes, ice storms and other natural disasters. After Hurricanes Sally and Zeta devastated the Gulf Coast in 2020, the agency assisted in cleanup efforts. AFC employees not only helped clear roads using chainsaw teams, but also assisted in staffing the state's emergency management centers, and transported equipment and supplies as needed across Alabama.

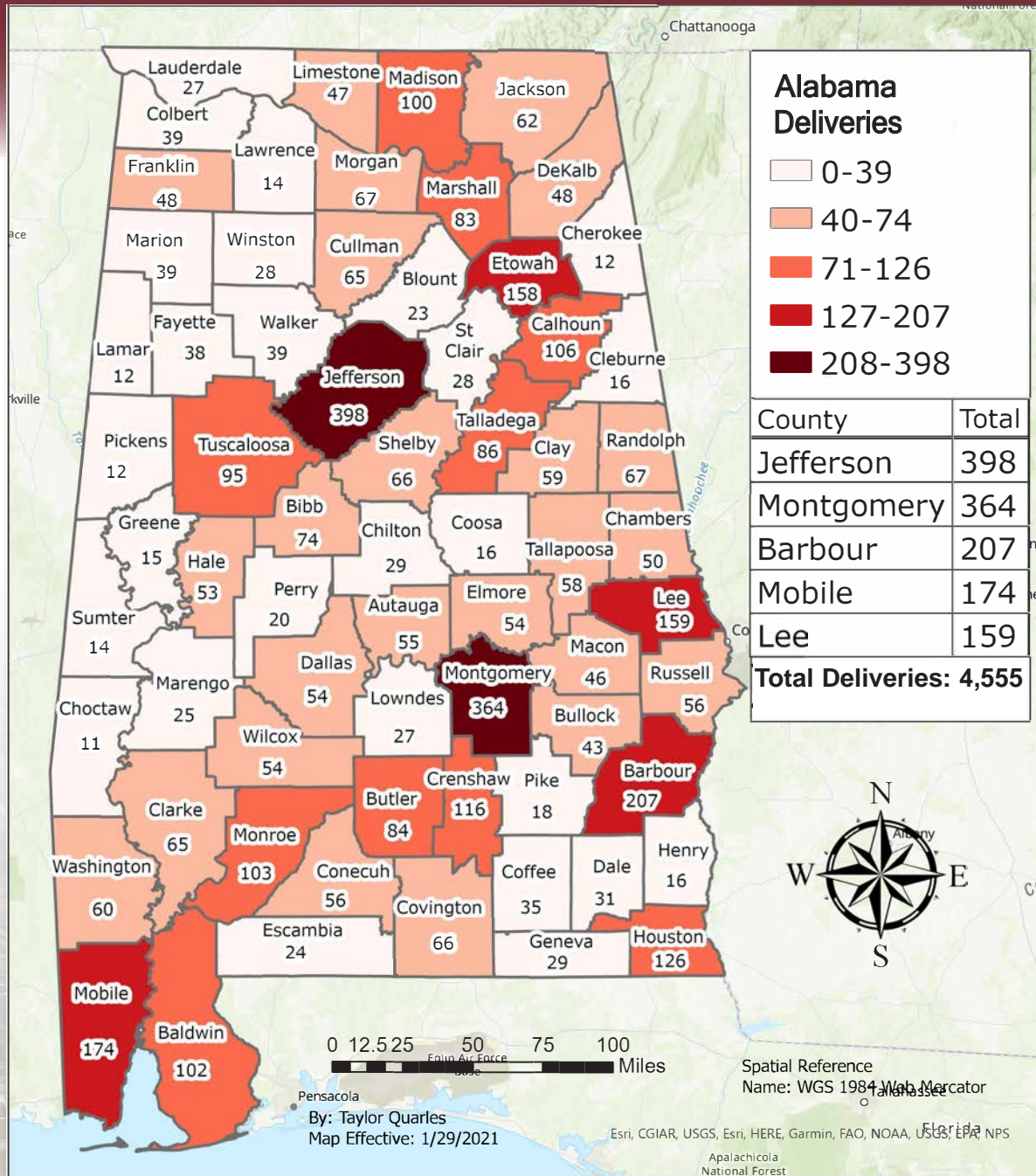
However, as a natural disaster of another type unfolded, did you know that the Alabama Forestry Commission participated in the COVID-19 pandemic response? Beginning in March 2020, the Alabama Forestry Commission's crisis response kicked into gear. The AFC provided Incident Management Planning, Safety, and Logistics support to "Alabama's Unified Command for COVID-19 Response" team, working alongside three other state agencies: the Alabama Department of Public Health (ADPH), Alabama Emergency Management Agency (AEMA), and Alabama National Guard.

- From March 13 through December 18, 2020, Commission duties included inventory tracking at ADPH warehouses and transportation of medical supplies.
- Each week four to six drivers traveled across the state – ultimately totaling approximately **700,000** miles – delivering face masks, gloves, and hand sanitizer to hospitals, nursing homes, and other medical facilities, as well as AEMA and other state offices – to reach the people needing them.
- Total AFC manhours committed toward COVID-19 delivery: **22,770**.



- This COVID-19 effort also carried many other incredible statistics. The AFC delivered approximately **28,437,689** medical items across Alabama. Included in this total were 340,000 hand sanitizer bottles; 38,500 containers of disinfectant wipes; 1,600 bottles of bleach; 10 million surgical masks; 1.9 million N95 masks; 1 million KN95 masks; 831,000 cloth masks; 8,000 Lysol cans; 1.1 million face shields; 12,000 disinfectant sprays; 1.9 million surgical gowns; 7,800 biohazard kits; 10.6 million latex gloves; 5,200 PPE kits; 1,100 coveralls; 110,000 boot covers; and 5,000 thermometers. 🏠

## AFC DELIVERIES BY COUNTY



# Not all classrooms have four walls

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# MEMORIAL



Photo courtesy of Charles Bradford

## CHARLIE HAMILTON

1937-2021

*Contributed by Charles Bradford and Montgomery Woods*

**M**arion Charles Hamilton, age 83 of Grove Hill, Alabama, passed away on July 18, 2021. Funeral services were held on July 21, 2021, at Grove Hill United Methodist Church, with burial at Serenity Gardens Cemetery in Waynesboro, Mississippi.

Charlie, as his friends knew him, was born on September 20, 1937, in Fulton, a small sawmill town in southwest Alabama. He came from a hard-working family of loggers and grew up working in the woods. He graduated from Sweet Water High School in 1956 and continued his education at Auburn University, graduating with a Bachelor of Science in Forestry. After graduation, he enlisted in the US Armed Forces Reserve and then joined the Alabama National Guard, serving as an MP for 10 years.

Charlie's career in the wood products industry began at Scotch Lumber Company in 1962, where he was responsible for land management and timber procurement. He was not only instrumental in the building of Scotch Plywood in Waynesboro, Mississippi; Beatrice, Alabama; and Fulton, Alabama, but also became manager of all three mills in 1965.

In 1985, Charlie acquired Hamilton Timber Company in Nanafalia, Alabama. In 1996, he and Montgomery Woods opened the Hamilton Woods Veneer Mill in Grove Hill. He retired from Scotch Plywood in 2012, then sold his interest in Hamilton Timber Company a year later.

During the height of his career, Mr. Hamilton served two terms as a member of the Alabama Forestry Commission (1994-2004), holding the Vice Chairman position in 1995 and 1996.

"Mister Charlie" was a legend in Clarke County. From humble roots, he became a forest industry icon. He grew millions of trees and cut nearly as many. His work and his life were all about the pine timberlands of South Alabama, but his story did not stop there.

His friends all say Charlie Hamilton was a true man of his word, a person of honesty and integrity. He demonstrated a very strong work ethic. He cared for his businesses, his employees, and the community in which he lived. Family life was very important to Charlie, and he loved the time he spent with his wife, children, and grandchildren. He also loved to hunt, fish, camp, and cook out with his buddies. No story about Charlie is complete without a reference to a cigar in some way.

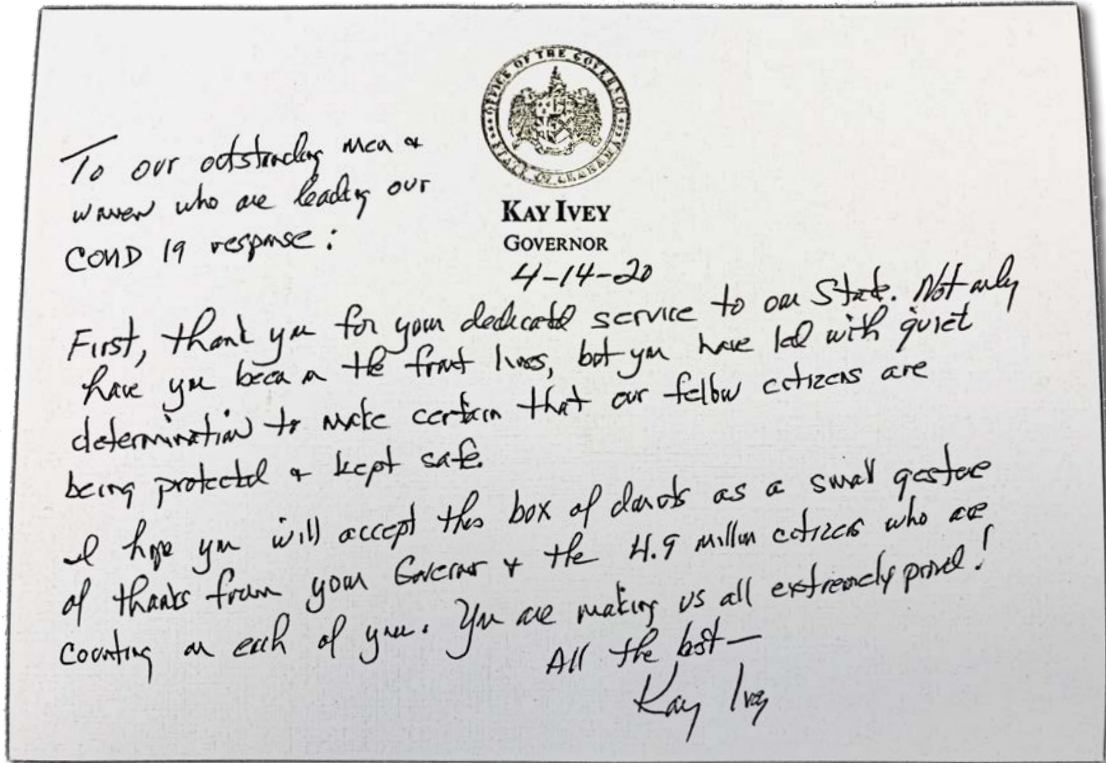
Charlie is survived by his wife of 43 years, Sherry; five daughters: Melissa Hamilton, Kate Huggins, Meg Copeland, Suzanne Howell, and Jessica Pierce; seven grandchildren; brothers, Bill and Jack Hamilton; and sister, Nita Hamilton Skellie. He was preceded in death by his parents, Millard Calvin Hamilton and Thelma Green Hamilton; brother, M.C. Hamilton; and sister, Betty Hamilton Bradford.

Memorial donations may be given to the Grove Hill United Methodist Church or the Child Advocacy Center. ☪

# LETTERS OF APPRECIATION

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# AFC'S COVID-19 RESPONSE



## TO AFC COVID-19 RESPONSE TEAM:

It has been a distinct honor to serve with you on the COVID-19 response. Your skill, professionalism and attitude were a perfect combination at the moment the Unified Command and Alabama needed you most. You accomplished much and led by example. I cannot imagine being where we are today without your assistance. Many people that will likely never know of your work, owe a debt of gratitude for your efforts to protect their health. You helped save lives. The entire Command does know and is deeply grateful. You have my most sincere personal thanks as well.

It has been my personal pleasure and an honor to work beside as well. I only regret I did not get to spend more time with each of you. You are true professionals, patriots and darn good company. If I may ever be of service to any of you, do not hesitate to let me know. All of my contact information is below. I hope to meet again under happier conditions. Stay well!

Thank you!

Jim Hawkins,  
Colonel (USA Retired)  
Alabama Interagency Coordinator for COVID-19 Response

## TO ALABAMA FORESTRY COMMISSION:

Each Alabama School system will receive 200 face shields, 1200 bottles of hand sanitizer, 200 K95 masks for school nurses, and 8 thermometers from Alabama Emergency Management Agency — thanks to the Alabama Forestry Commission for help with the delivery of the supplies for schools.

Sincerely,

Eric Mackey, Ph.D.  
State Superintendent of Education  
Alabama State Department of Education





**TO ALABAMA FORESTRY COMMISSION:**

I hope all is well with you and your family in these unprecedented times. Times, I hope to never experience again. Even so, we do our best to find the good in the worst, because acknowledging only the bad most certainly would lead to defeat.

In my short tenure as State Dental Director of the Alabama Department of Public Health (ADPH), possibly the most obvious "good" I have observed is the willing spirit of the most unlikely sources to come together for the good of all during tragedies such as the COVID-19 pandemic. Recently, I had the opportunity to witness and be a part of that very type of situation with two of your staff, Kevin Crawford and Jeff Keener.

The ADPH Office of Oral Health was fortunate enough to be given 100,000 each of KN95 masks and face shields by Emergency Management Agency for distribution to dental offices statewide. This personal protective equipment is highly sought in the dental community for protection of the dental staff, their patients, and all of their families. The caveat was, however, the supplies had to be acquired and delivered to their distribution sites. Thanks to the efforts by Kevin and Jeff, 75,000 of each were loaded and delivered to the Alabama Dental Association for distribution. There, Kevin and Jeff, along with Dr. Zack Studstill and I, spent hours sweating and wiping our eyes while unloading the supplies. Their professionalism and desire to help in this situation to the extent they assumed is a true testament to the pride they take in their responsibilities, as well as their own moral fiber and work ethic.

Dr. Scott Harris, State Health Officer, and I offer our appreciation for the "above and beyond" duty of the Alabama Forestry Commission by virtue of the efforts of Kevin and Jeff to Alabama dental personnel. Please know that if the Office of Oral Health may ever be of service to you, please do not hesitate to let me know. Granted, an unlikely association of two very diverse entities perhaps Alan Turing (*The Imitation Game*) expresses it best; "Sometimes it is the people no one imagines anything of that do the things that no one can imagine."

Sincerely,

Scott Harris M.D., M.P.H.  
State Health Officer  
Alabama Department of Public Health

&

Tommy Johnson, D.M.D.  
State Dental Director  
Alabama Department of Public Health

Summer 2021

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**TO RICK OATES, STATE FORESTER:**

I know that the Alabama Forestry Commission must have many outstanding employees who are willing to perform over and above their usual job responsibilities. I can make that statement because Dr. Tommy Johnson of AL Public Health and I were introduced to and worked with two of your employees, Kevin Crawford and Jeff Keener as we unloaded thousands of KN95 surgical masks and plastic face shields, boxed for distribution to Alabama Dentists.

Kevin and Jeff's work is an excellent example of how government and private citizens can and must come together in a time of crisis like COVID-19. They had a smile on their faces during the entire unloading process, in spite of the time it took to unload in Alabama's August Heat! Because of their work, Alabama Citizens can continue to safely visit their dentist, who will be wearing plastic face shields and KN95 masks.

I commend Kevin and Jeff for their "can do" spirit and the entire Forestry Commission for the work we do together to keep our state as safe as possible in these most unusual times.

Sincerely,

Dr. Zack Studstill  
Executive Director  
Alabama Dental Association





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# White Oak

(*Quercus alba*)

By Josh Angel, Alabama Registered Forester,  
Forest Inventory & Analysis (FIA), Alabama Forestry Commission

If you asked an Alabama native to pick their favorite tree species, you are likely to get many different answers. Some may base their choice on beauty, economic value, or wild-life benefit. A species that is sure to make everyone's short list is the white oak (*Quercus alba*). One of the most recognizable trees in the Southeast, the white oak is a tree that truly has it all.

Reaching 80-120 feet tall when mature, white oaks have a stately appearance. Open grown white oaks can often have a crown spread that is as wide as the tree is tall. The diameter of a mature white oak log can often be measured in feet. The bark has a light gray appearance and is flaky toward the upper portion of the tree. The leaves are often 5-9 inches long and 3-5 inches wide. White oak leaves usually have seven to nine rounded lobes and frequently turn red in autumn. The acorns are usually around one inch long and drop from the tree in the fall.

White oaks are an important tree for wildlife, providing them with food and shelter. The acorns are a food source containing less tannin than red oaks, a quality making the acorns less bitter and more palatable than other oaks. The flaky bark of the white oak provides roosting areas for bats, and the large spreading form of the tree provides nesting areas for many bird species.

The economic value and uses for white oak lumber are vast. It is prized for its light-to-medium brown appearance. Quarter-sawn white oak is especially sought after for the construction of kitchen cabinets, furniture, and flooring. Coopers use white oak staves to create leak resistant barrels. This quality makes the wood valuable for construction of whiskey and wine barrels [See article on page 13].



Alabama's white oak  
'Champion' measured at  
112 feet tall and is located  
in Colbert County.



The author grew these white oak  
trees from acorns on his farm.