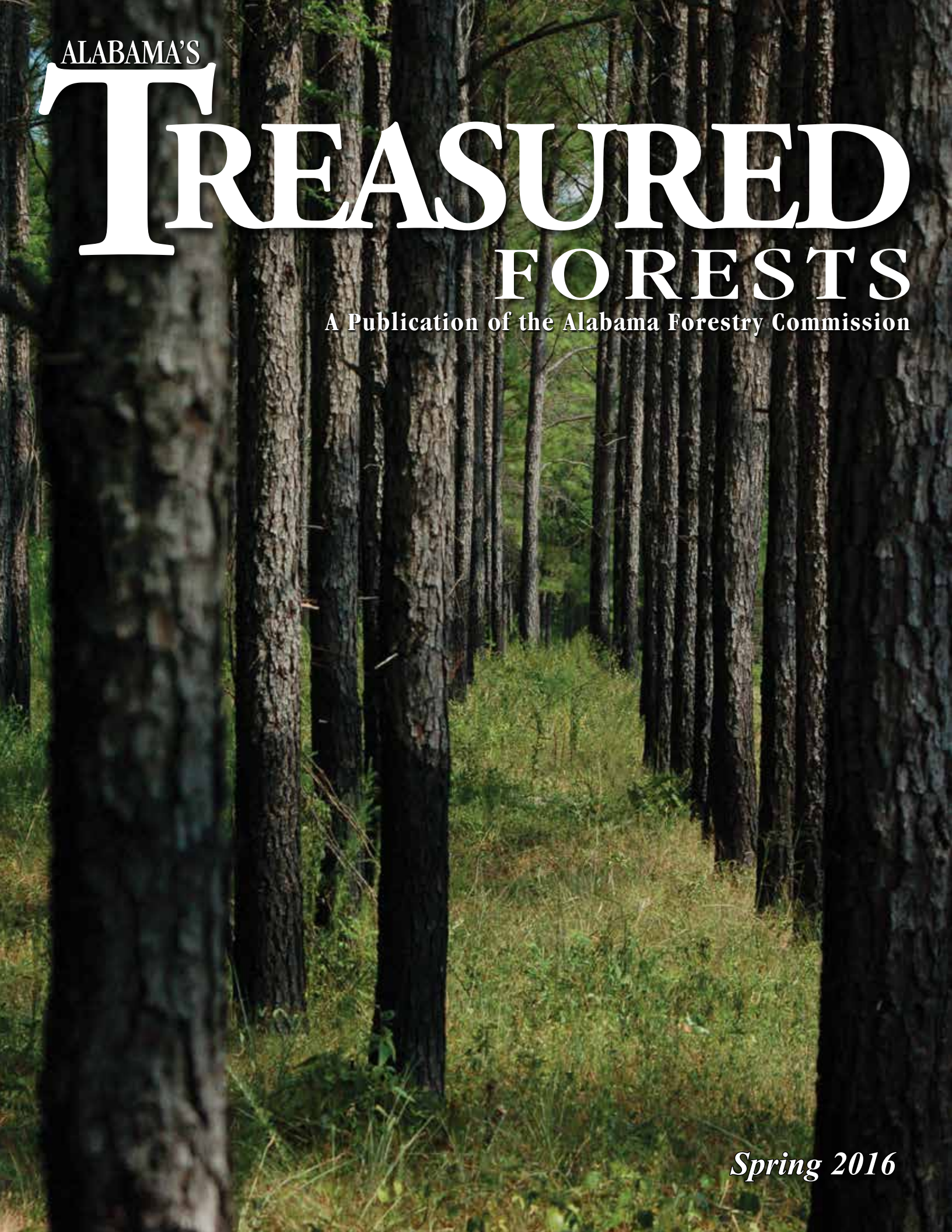


ALABAMA'S TREASURED FORESTS

A Publication of the Alabama Forestry Commission

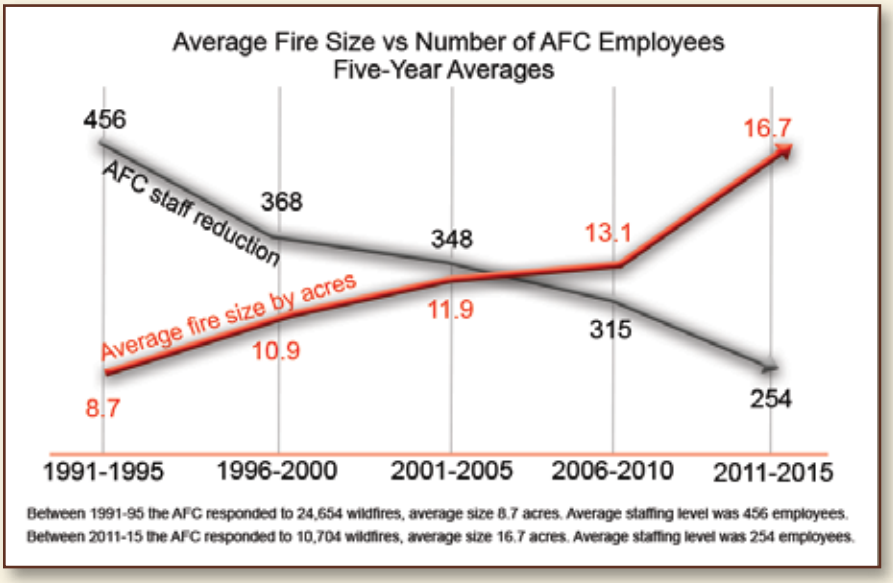
Spring 2016

Message from the *STATE FORESTER*

Greg Pate, State Forester

A disturbing trend has materialized over the last 15-20 years in Alabama that can have a significant impact on you as a landowner. The Alabama Forestry Commission (AFC) recently analyzed two very basic pieces of data against each other.

First, we looked at the average level of staffing of the AFC in five-year increments, beginning with the 1991-1995 interval and ending with the most recent 2011-2015 interval. Against those data points, we compared the average size of each wildland fire occurring during that same five-year period. The alarming results are illustrated on the graph below.



Since the 1991-95 time interval, AFC staffing has been reduced by 44 percent (from 456 to 254 employees) resulting in an increase of 92 percent (from 8.7 to 16.7 acres) in the average size of each wildland fire responded to by the AFC!

Also in the 1991-95 time interval, AFC personnel responded to a total of 24,654 wildland fires. Over the last five-year period, 2011-15, that number has declined to 10,704 wildland fires. It is imperative that we keep the number of wildfires low, whether through education, prescribed burning, or law enforcement. (Though the jurisdiction to enforce the burning laws of the state no longer rests with the AFC).

Just like the staffing level of the AFC, the memberships of many volunteer fire departments have declined over the last several years. This statistic, along with the fact that the forest industry in the state no longer owns much of the land and no longer has dozers to assist in fighting wildland fires, leaves Alabama in a serious situation. Given the current staffing levels of all the wildland fire first responders, when Alabama *does* have another period of high wildland fire occurrence, our state's resources will be quickly overwhelmed. This situation will place first responders and citizens, as well as your property, at greater risk.

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.

ALABAMA FORESTRY COMMISSION
Est. 1924

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

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Vol. XXXV, No. 1 Spring 2016

***Cover**: Healthy stand of longleaf pines on Cedar Creek Plantation in Butler County.*

Photo by Elishia Ballentine

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Time Well Spent

By Joel D. Glover, Certified Wildlife Biologist, Alabama Wildlife & Freshwater Fisheries Division

I believe the great singer/songwriter, Jim Croce, was speaking from experience when he penned the line, "there never seems to be enough time to do the things you want to do, once you find them." How one spends his or her time matters. It is indicative of our priorities. Had I not felt being outdoors was time well spent, I would likely not have opted for a career in natural resources. My vocation has worked well in that it has afforded me the opportunity to work with many landowners who wanted to manage their property well. One such is the Neighbors family, owners of Rolling Mountain Plantation, the 2015 Helene Mosley Memorial TREASURE Forest Award winner for Central Alabama.

One of the best rewards I receive from working with landowners is to have them put my recommendations into practice and yield the desired benefits. Landowners who actively manage their property understand the dedication necessary to make their property all it can be. In many ways, the Neighbors family is no exception. However, they are different in a very special way.

Early in my career I was approached by the Coosa County Extension agent and asked if I would serve as an assistant coach for the county 4-H wildlife judging team. He explained how the program not only introduced youth to the principles and practices of wildlife management, but also strengthened their life skills by enhancing their ability to study and write.

Quickly realizing the program had merit, I volunteered to assist. At the time, I didn't realize I was starting on a 20-year journey. I joined with several members of the Coosa County Forestry Planning Committee (CCFPC) who embraced the program, working hard to instill in the students both a land ethic and the essentials of proper stewardship. Since the majority of kids involved were members of both the wildlife and forestry teams, they got a hefty double dose of instruction.

In my first group of students were a brother and sister named Phillip and Heather Neighbors. These were exceptional students whose hard work and dedication allowed them to compete all the way to the national contests in both wildlife and forestry.

Following graduation, neither Phillip nor Heather pursued a career in natural resources; however, their 4-H training served them well. Both attended Auburn University, where Phillip received a bachelor's degree in civil engineering and Heather received a Bachelor of Arts in Public Relations. She later earned a Master of Science degree in Communications from the University of Alabama at Birmingham. Today, Heather serves as the Director of Audience Development for Time, Inc.

After being employed with a private engineering firm in Montgomery for 10 years, Phillip returned to his roots to work as an engineer for Coosa County. Although he had already been making improvements on the family property, it was at this point that Phillip met with AFC County Forester Blake Kelley and me to discuss the family's objectives and develop a forest management plan. As was our custom, we also explained the TREASURE Forest program and what it would take to have the property certified. We discussed the need for a diverse habitat, and how stands of various ages and composition were wise choices that would help meet their objectives.

Phillip relayed our recommendations to the family and the decision was made to clear-cut a stagnant loblolly plantation, apply for cost assistance for reforestation with longleaf, and create additional wildlife openings. The application was approved, and forest management began in earnest. Although the property had not been intensely managed in the past, Phillip knew it could produce improved wildlife habitat, enhanced recreation opportunities, and increased timber production.

The initial plan included enhancing wildlife habitat and increasing harvest opportunities by creating 10 acres of wildlife openings and planting them in winter forages. (This was a major emphasis for Phillip, an avid deer and turkey hunter). Site preparing and planting both longleaf and loblolly would provide much needed early successional habitat which was lacking on the property.

During 2007-08, the family site-prepped and planted 80.5 acres of longleaf and 11.2 acres of loblolly. Another 8.2 acres of young loblolly was pre-commercially thinned by hand. Taking advantage of the clear-cut and loading areas, 12.9 acres of wildlife openings were created. Prescribed burns were conducted on 153.9 acres to reduce hazardous fuels and improve wildlife habitat.

While Phillip was busy working on the timber and wildlife aspects of the property, his mom, Sandra, undertook the recreational aspect by restoring the old home place. The centerpiece of this home place is the homestead that was built in 1843. Sandra diligently restored the home, furnishing it with authentic pieces from days gone by. Providing opportunities for youth and adults to step back in time and see how things were done many years ago, the old home place has been visited numerous times by various groups including school children and historical societies.

Based on the Neighbors' accomplishments toward their objectives, the Rolling Mountain Plantation was certified as a TREASURE Forest in 2008. This achievement was awarded to the family at the 2009 Coosa County Landowners Tour. Following that presentation, the family received certification from the Alabama Department of Agriculture and Industries as a "Century and Heritage Farm." This signified that the property had been owned by the same family for at least 100 years, reflecting interesting historical and important agricultural qualities. The family's property management was hitting full stride.

Using our recommendations and their personal knowledge, they began an aggressive thinning program to improve the quality of the stands and provide more browse for wildlife. Multiple tracts on the property were set up on a rotating prescribed burn schedule and more wildlife openings were created.

With the timber and wildlife management taking shape, the CCFPC approached the Neighbors with the idea of a landowner tour on their property. The family was receptive and hosted an informative tour with stations including hog trapping, longleaf planting, and thinning of pine plantations. Phillip addressed the group concerning the family's quest toward TREASURE Forest certification and how it had resulted in a well-managed property that was meeting their objectives.

(Continued on page 6)

Time Well Spent

(Continued from page 5)

A year or two later the committee again approached the family with an opportunity to host the annual CCFPC "adopt-a-school" program. Obviously understanding the benefit of introducing youngsters to the outdoors, the Neighbors agreed. Each year since, every fourth-grade student in the county has visited the property and learned the importance of our soil, water, forestry, wildlife, and environment. The family has not only graciously hosted this program for the past four years, but they also take an active role in the program. As a result of their excellent management and unselfish sharing of their property, the Rolling Mountain Plantation was selected as the Coosa County TREASURE Forest of the Year for 2012.

Although listed as a secondary objective, recreation is a major theme on Rolling Mountain Plantation. Two cabins, both located on creeks on the property, are utilized regularly by the family to get away from the rat race and reconnect to the land. Many church functions have also been hosted at the cabins. Hatchet Creek traverses the property and is frequently used to cool off on a hot summer day.

In addition to the family hunting both deer and turkey, the property has hosted several deer and turkey hunts for first-time hunters. This includes providing a hunt site during the 2013 TallaCoosa Youth Turkey School, in which Phillip served as an instructor and mentor for the program. Also in 2013, additional shooting/observation houses were constructed. When Phillip's two young children accompany him to the property as they often do, the shooting houses are just right for allowing the youngsters to observe nature, and/or take a good nap.

Phillip is proud to be an ambassador for the TREASURE Forest program. His father, George, accepted an invitation to become a member of the CCFPC. TREASURE Forest landowners who show a willingness to share their property and expertise with others can be a tremendous asset as members of forestry planning committees. Phillip's young son, John, has already developed an intense appreciation for the land. Knowing how important it is to instill a land ethic in children at an early age, we are grateful that the Neighbors' family is happy to share their time and property to educate youth and adults, promoting the TREASURE Forest program. I am convinced it is imperative that we introduce young people to the outdoors and help them understand the difference between conservation and preservation. Although the kids who attend the adopt-a-school program on the Neighbors property live in a heavily forested rural county with abundant wildlife, most of them have received very little outdoor education. That is a sad fact that the Neighbors and other landowners like them are trying to correct.

As a result of their outstanding stewardship and enduring commitment to teach others, members of the CCFPC decided the Neighbors property would be a great Helene Mosley candidate. The nomination was compiled and submitted for review. It was an honor for our CCFPC members to meet with the Helene Mosley selection team in support of the nomination, and I must admit I became somewhat emotional when I spoke to them about the property and our involvement with the family. I did my best to explain that for me as a natural resource professional, there is incredible gratification in seeing landowners putting recommendations into practice. We anxiously awaited the decision, and having served on numerous Helene Mosley teams in the past, I knew the competition was fierce.

Shortly after the selection team visited the property, we were contacted with the great news that Rolling Mountain Plantation would join the elite group of Alabama properties recognized as Helene Mosley Memorial TREASURE Forest award winners. This is a tremendous accomplishment. I will forever think of Phillip and Heather as "my 4-H kids," and it does my heart good to see them actively engaged in property management using the concepts they were taught so long ago. I know, without a doubt, my time spent with them was definitely time well spent.

SOUTHERN
GROUP OF STATE
FORESTERS

TO SEE THE FOREST, FOCUS ON THE TREES

Addressing Forest Inventory and Analysis (FIA) funding is crucial for all forest stakeholders in the South. Therefore the Southern Group of State Foresters supports federal funding of FIA at a level which maintains a seven-year measurement cycle. This allows states to contribute funding to implement the desired and needed five-year cycle. Without FIA data, forest managers, landowners, and policy makers would be unable to effectively monitor forest trends and make informed management decisions, with potentially dire consequences for our nation's forests.

Southern forests are one of the world's richest resources. Their 245 million acres are home to more than a thousand animal species, they filter and supply clean water and air to millions of people, and provide an abundance of products that enhance our daily lives ... all while beckoning us to come, play and enjoy their diverse beauty.

But that's not all. Southern forests are economic engines for their states, thanks to the private landowners who manage them for their families' livelihood and indeed, the Southern population. That's a lot of responsibility. And that's why keeping a close eye on changes to forestland is critical.

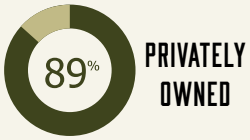
Since the 1930s, natural resource managers have relied on the ***Forest Inventory and Analysis (FIA)*** program, the most comprehensive forest monitoring and analysis system in existence. In its current form, FIA is the only reliable means of gauging changes to wildlife habitat, timber supplies, the environment and natural resources. FIA assesses the rate of land use changes, the loss of native plant species, the condition of timber and the spread of non-native insects and diseases on a five year cycle (prior to 2014) in the South.

Within the South, FIA data collection is done primarily by the states and analyzed by the USFS Southern Research Station. FIA data provides critical reports that become trusted handbooks for all who look to balance our resources through growth and conservation.

(Continued on page 8)

SOUTHERN FORESTS

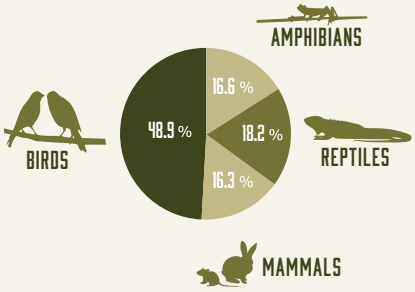
245 MILLION ACRES



FORESTS OF THE SOUTH

are owned primarily by private landowners, making it the nation's stronghold for private forest ownership.

WILDLIFE



SOUTHERN FORESTS ARE HOME TO

1,076 native animal species, of which 77 are threatened or endangered.

ECONOMIC IMPACT

JOBS 1,075,764 ANNUALLY

OUTPUT $230.6 BILLION ANNUALLY

FOREST INDUSTRY PUMPS

nearly $90 billion in value-added services and almost $50 billion in wages and salaries into the South's economy annually.

SOUTHERN
GROUP OF STATE
FORESTERS
CONSERVE · PROTECT · ENHANCE


David Mercker

FIA data, in its current form, has had a critical impact on many specific issues:

- Detecting changes in forest landscapes, which occur more rapidly in the South due to longer growing seasons
- Quantifying resources at risk to certain species-specific pests, including Emerald Ash Borer and Hemlock Woolly Adelgid
- Identifying potential habitat for proposed or listed endangered or threatened species
- Assessing forest disturbances, including wildfire, insects/diseases and extreme weather events
- Measuring carbon storage and change
- Meeting the needs of increasing interest in non-traditional and ecosystem service markets

In order to monitor forests' natural resource trends in a timely and utilizable manner, FIA data needs to be collected in Southern states on a five year cycle. Historically, the USFS has funded the program on a seven year re-measurement cycle, and state forestry agencies invest their own resources or "buy-down" to deliver a shorter five-year inventory cycle. *Southern states invest approximately $2 million annually of state funds in support of FIA program delivery.*

However, reduced federal funding for FIA over the last three years has led to a longer cycle length and has been detrimental to our ability to monitor the forest. If insufficient federal funding continues:

- Forest trends won't be evident as quickly, greatly limiting the ability of natural resource managers to address negative trends in a timely manner;
- Current status of, and thus sustainability of resources, cannot be accurately represented with older data
- Data would lose its value for all users, leading to potential overuse of the resource;
- Older data would not reflect the true impact of natural disasters.

Uses of FIA data have proven widely diverse, and new ways to use the data are being discovered every year. It is crucial to the health and sustainability of our forests - along with the wildlife, environment and economies they support - that funding for the FIA program remain strong.

WATER

36%

OF OUR FRESH WATER RESOURCES

originate from forests that cover about one-third of the United States.

PRODUCTS

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Tennessee
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Virginia

southernforests.org

HARDWOOD CORNER

TO BURN OR NOT TO BURN

An Introduction

By James P. Jeter, BMP Forester/
Hardwood Specialist
Alabama Forestry Commission

When I started submitting articles to *Alabama's TREASURED Forests* publication, it was never my intent to present my dominating opinion as the final authority on the topics that are covered. For those who know me, that might be a humorous statement for me to make, much less put in print, because I do have an opinion on things, if you ask.

On the subject of prescribed burning in hardwood stands, I have tried to discuss it from a perspective focused on timber production; after all, that is my career training and background. I also try to keep an open mind while broadening my education, and I learn something every day. As part of that continuing education process, I attended a three-day conference at the University of Alabama (imagine that!) entitled "Fire in Eastern Oak Forests." Above all else, it rekindled my thought process and the fact that all landowners have their own reasons for doing what they do, right or wrong.

Another point is that southeastern hardwood management is different than northeastern hardwood management, while upland hardwood management differs from bottomland hardwood management. Managing hardwoods for endangered species habitat is very different from managing for timber production. I could go on and on.

With that in mind, I would like for you to read and absorb the following two articles (pages 10-13), written by two different Alabama-registered foresters who live in the same area of North Alabama. I highly respect both of them, consider both men as friends, and cherish their opinions.

Please, before you conduct prescribed burning in your hardwood stands, study the issues, understand what might happen, and what the effects may be versus your desired outcome.

Fire in HARDWOOD – a North Alabama Perspective

By Lynn Washington, Registered Forester
Work Unit Manager, Alabama Forestry Commission

Are forest fires really bad? Has Smokey been telling us the truth all these years? Well of course he has, kinda, most of the time. Actually it depends on your long-term objectives . . . How do you want your timbered area to look? What are your expectations of income from your forest? What "use" of the area is important to you? And finally, is wildlife habitat enhancement one of your goals?

Fire can be a useful tool, but so can dynamite. I don't recommend using dynamite unless you know what you are doing. It is the same for using prescribed fire as a tool. A prescribed burn can be very useful; an out-of-control wildfire can be very damaging. Keeping a fire under control can be difficult. Alabama Forestry Commission associates are experts at controlled burning, but even we have lost control of prescribed burns in the past. Private vendors also lose control of prescribed burns at times. This past fall, in Jackson County, Alabama, a site-prep operation conducted by a planting vendor went awry. High winds pushed the fire across control lines and resulted in multiple volunteer fire departments responding to control the blaze, in addition to our AFC bulldozers and personnel.

In another situation, a simple task of burning leaves went wrong for a private landowner in Jackson County last spring and again, multiple fire departments responded. The Alabama Forestry Commission also responded to this fire which was on the side of a mountain. We put breaks around the active fire. We raked and used leaf blowers in the inaccessible areas of rock and

steep terrain. Recently I had an opportunity to evaluate the damage from this particular fire from more than a year ago. During the fire, the flames were not intense, yet there are multiple mature oak trees that were damaged or have died due to the fire. I spotted one large oak, 20 inches dbh [trunk diameter at breast height, or 4.5 feet above the forest floor], DEAD, without any noticeable problem except the scorch marks on the trunk. The burned-over area sprouted out well last summer after the fire, but this spring, herbaceous material is sprouting out heavily and is very dense. If the "goal" had been to enhance wildlife habitat, this fire would have been very useful. However, the fire was an accident and the landowner received a visit from our law enforcement division shortly thereafter.

Most of the timberland in Jackson County and the oak/hickory forests of North Alabama are hardwood forests. These hardwood forests add to the beauty of our state. Not that a pine plantation in central Alabama is not pretty; I see dollars growing in a pine stand just as a farmer does when he gazes out across acres of corn or soybeans. However, from a purely aesthetic perspective, a mature hardwood forest is hard to beat, and a hot fire damages hardwood timber.

The trees that live can be devalued by the fire and later succumb to its effects. Fire or prescribed burning in hardwoods does a number of damaging things. One, fire causes a fire scar at the base of hardwood timber. Since the bark of hardwood trees does not have the same insulating capacity as pine trees, the fire scar is an entry port for decay sand stain. The bark is cracked due to the heat of the fire, and the crack opens the tree to stain and rot. This can adversely affect the health of the tree. Two, this can devalue the tree from that of a sawlog to pulpwood. This can be a reduction in value for a prime 20-inch white oak from approximately $1,000 dollars a thousand board foot to an average of $8 dollars a ton for our local markets in North Alabama. One such local market for oak logs is a mill that builds staves for whiskey barrels. This mill pays prime prices for quality white oak logs. The price per foot depends on quality as well as size. If a tree has a 'dote' heart, due to fire-induced rot, the landowner has lost money.

Most fires in our area are 'set' fires, not controlled burns. These fires are often off the side of the mountains in hardwood timber. The timber is almost always damaged, even if the damage isn't evident initially. Several years ago, I wrote an article for our local newspaper concerning fires and burning in hardwood timber on the mountainsides of Jackson County. In the article I wrote that a fire had burned an area of Sand Mountain around Thanksgiving. Quoting from that article, this was my evaluation a year after the fire. "Initially, the fire seemed to have cleaned up the area without doing much damage. However, I flew over this area early in the spring. From the airplane, you can see a lot of dead timber. The fire did not burn extremely hot, so the area bushed out substantially in the spring. There was no real (lasting) 'clean-up' effect to this fire."

This demonstrates that prescribed burning does not result in a 'park-like' appearance after one prescribed fire. It is necessary to conduct multiple burns to get the result of an open condition in timbered areas. Back in the days of the American Indian, the open areas and grasslands of Alabama were due to repeated burning without concern for market prices on sawtimber. Their goals were access and keeping areas open. Property boundary lines did not exist. They used fire without the benefit of bulldozers to create fire breaks. They were not interested in selling timber, and the price for sawtimber had no bearing on their management. Nor did they care about the quality of hardwood timber.

The wide-open quail plantations in South Georgia place an emphasis on fire to maintain an open condition, based on an objective of recreational use for hunting quail, not growing timber for long-term income. The burning regime on these quail plantations is 'annual' burns rather than prescribed burns every three to five years. Repeated burning will certainly create a more open understory. Repeated burning will also create lower quality hardwood timber.

In conclusion, it is all about your goals. Are you growing quality hardwood timber, or is your objective to grow more deer? Fire can create good habitat for deer. Selective logging can also create good habitat for deer. Prescribed burning is a useful tool, but it depends on what you want from your forest.

HARDWOOD Forests & Fire

By Brian Bradley, Alabama Registered Forester

Imagine you're attending a forestry conference and a speaker's topic is "Burning Hardwood Forests." Many folks in attendance may question why anyone would deliberately introduce fire into a stand of hardwood trees. As Lynn [Washington, in the previous article] and others correctly point out, the naturally thin bark of hardwood trees is a poor insulator for the cambium layer just under the bark. Once damaged by the fire's heat, butt scars can develop, possibly leading to heart rot and degrading the most valuable lumber in the hardwood tree, the butt log.

We probably all agree fires can pose a significant hazard to hardwood trees, especially those being grown for sawtimber. But, I'd suggest that in some instances fire plays a legitimate role in managing one's deciduous forest – it depends on a variety of factors, but I'll touch only on three: the owner's objectives, size of ownership, and hardwood tree species and age.

Let's look at objectives. If managing for whitetail deer is your primary goal and the tree tops in your forest are all touching one another, i.e., a closed canopy, fire might be your friend. Why? A wildlife biologist would say the shade from the dense canopy is preventing natural deer food such as bushes and herbaceous plants from becoming established on the forest floor. Growing this natural chow requires some kind of overstory disturbance, such as patch clearcuts, selective thinning, or individual tree removals. Prescribed fire can reduce the leaf layer, and coupled with increased sunlight from the opened canopy, plant seeds will germinate. Soon landowners will see deer feasting on a smorgasbord of new vegetation. Likewise, in hardwood forests with existing undergrowth, burning 'top kills' low-growing plants, which stimulates tender new shoots that sprout from the root stock, resulting in more deer food.

Another variable is ownership size. A landowner with 350 acres has more latitude than one with only 40 acres. Even if timber production is the primary objective, the larger acreage allows the owner the option of sacrificing timber growth on selected areas, such as poor quality sites. Burning these specific areas could create a mosaic of different ground vegetation, thus enhancing wildlife and recreational opportunities. Forgoing some potential timber production would not be a terrible loss for the larger landowner, especially if it was balanced with quality timber growing on more productive sites.

A third variable is tree age and species. Most young hardwood trees have thinner bark than their older grandparents, making the youngsters more susceptible to fire damage. So generally, the older trees with thicker bark can better withstand the damaging effects of fire. For example, mature chestnut oaks are thick-skinned, and repeated winter season fires would clear out some of the understory with minimal tree damage. One could speed up the process by using herbicides to kill the mid-level trees and then using fire to maintain the open oak woodland. Keep in mind that some species such as water oak, even at older ages, are relatively thin-skinned, so the tree species mix would certainly influence the decision to burn or not burn.

In conclusion, is controlled fire in hardwood forests a good thing, or are proponents simply blowing smoke? I suggest that there are circumstances where burning is an entirely appropriate way to meet a landowner's objective – it depends on the situation. Like spokes on a bicycle all leading to the hub, there are different management techniques to reach your goals. Controlled fire in hardwood forests may be a route to consider.

A good website dealing with fire and hardwoods is: **http://www.appalachianfire.org.** Another good fire resource publication is the US Forest Service's "*Introduction to Prescribed Fire in Southern Ecosystems*," available online at: **http://www.srs.fs.usda.gov/pubs/su/su_srs054.pdf.** Below are a few excerpts:

"Prescribed burning is also useful for regeneration of hardwood forests." (page 6)

"In upland hardwood stands, a predominantly woody understory and midstory often prevent adequate herbaceous groundcover to meet wildlife management objectives. In the Ridge and Valley of Tennessee, thinning has been shown to reduce canopy closure to approximately 60 percent. Low intensity prescribed burning is then implemented during the early growing-season on a 2- to 3-year fire return interval to stimulate herbaceous understory growth and soft mast production, while controlling woody regeneration." (pages 7-8)

"However, there is growing evidence that prescribed fire can be used in mature hardwood stands to control the composition of advanced regeneration, particularly to favor oak." (page 8)

"In more open hardwood woodlands a 3- to 4-year fire return interval will maintain suitable habitat for northern flicker, red-headed woodpecker, prairie warbler, indigo bunting, eastern towhee, fox sparrow, chipping sparrow, and chestnut-sided warbler." (page 15)

"However, in recent years prescribed burning has been used in hardwood stands for site preparation, to favor establishment of oaks, enhance conditions for wildlife, and to restore stand structure to historical conditions." (page 16)

Fragile and Fleeting . . . Ice Flowers in the Forest

By Dan Green, Forestry Management Specialist, DeKalb County
Alabama Forestry Commission

If you can get out early enough in the late fall or early winter, when the temperature is hovering around freezing or below and the air is still, you might get to see some ice flowers. These phenomenal attractions are rather rare and fleeting. When the sun fully rises, they often melt! Besides getting the timing down, the conditions must be right. The ground must be still unfrozen, yet the air above has to be cold enough to form ice. If you get down to ground level, you'll see that some 'leaves' are as thin as onion skin and quite fragile.

This large feathery-looking ice flower actually measured 9 inches in length.

Ice flowers, ice ribbons, ice fringes, ice filaments, and (very commonly) frost flowers are names describing the beautiful frozen formations found at the base of just a few plants in North America. The two most common plants in our area are dittany (*Cunila origanoides*), sometimes called wild oregano, and white crownbeard (*Verbesina virginica*), also known as wingstem or frostweed. 'Ice flowers,' the term coined by Dr. Bruce Means, an adjunct professor of Biological Science at Florida State University, is actually the most appropriate name as these structures are a product of freezing water and not frost. Dr. Robert Harms, a professor emeritus of linguistics from the University of Texas, proposed the scientific name *Crystallofolia* from the Latin *crystallus* (ice) and *follium* (leaf).

Ice segregation is the process which best describes how ice flowers are formed. First, cold (but not frozen) water is brought up axially by root pressure and capillary action to the base of a (usually dead) plant. With freezing temperatures above the ground, the water freezes and expands in the stem forming very small longitudinal cracks. The water then exits tangentially (as ice) through these openings and begins to form crystals. As the water freezes, it pushes previously formed crystals outward and draws more water to the openings by molecular cohesion. The continuation of this process forms the characteristic leaves or ribbons or petals we see.

No, it's not cotton, but a field full of ice flowers!

You might ask, "Why just late fall and early winter?" The simple answer is, before that time the temperatures generally aren't cold enough for freezing above ground, and in late winter the ground is often frozen, preventing water from moving through the soil. Also, by late winter we've usually seen multiple freezes and thaws which literally tear up the structures (stems) that produce the 'flowers.' There are always exceptions though, so be ready on those bitter cold, calm mornings.

If not for my wife, I may have never seen these little treasures. She's been a jogger for 46 years and since I have to keep in shape for the AFC's yearly pack test, I regularly go with her in the mornings . . . and when I say 'morning,' I mean 5:30 a.m. out the door. This means going to bed earlier than most, but watching the sun come up, hearing the birds get cranked off, being fully awake when I go to work, and seeing things such as ice flowers make it all worthwhile.

"Twilight of an Era"

Native Cattle in the Longleaf Forest

By Charles M. Simon, Covington County Extension Agent

Artist Wes Hardin recently completed painting another mural in downtown Andalusia, bringing the total to eleven 'public' works of art. One of these in particular was created to recall the region's unique forest history. An 80-x-14-foot mural was commissioned to help people remember an era when the Spanish-origin cattle grazed the understory of the vast longleaf pine forest of the Gulf Coast. This old breed of cattle gave meat, hides, and tallow, as well as draft animals to a succession of owners, from the Spanish cattle ranches and missions of Florida, to the Southeastern Native Americans, and finally to settlers of the newly-formed United States.

Entitled "Twilight of an Era," the new mural depicts the historical period of 1890-1910. During this time span, 'old growth' timber, predominately longleaf pine, was rapidly being harvested, opening up the land as a result. The pace of the introduction of new breeds of cattle picked up momentum as the 'tick barrier' was gradually eliminated (thanks to federal and state cattle tick eradication programs across the Southern United States), and the use of pastures and fences was being promoted by a new generation of agricultural progressives. The old free-ranging 'native' cattle were being cross-bred or eliminated completely from the farm. By the 1960s, only a few of the pure native cattle survived on rangeland owned by families, such as Dewey and Okla Barnes of Covington County, who still saw value in the breed.

The mural portrays a young boy 'salting' his family's free-ranging native cattle. The old growth longleaf pine forest has had its understory 'freshened' by a recent burn, while the cattle are grazing new-growth native grasses such as wiregrass and bluestem, along with other recovering understory plants. Note that the cattle are 'marked' by having their ears cut in specific ways to denote ownership, a practice of the period. Brands were also used, but curiously not as much in Covington County. Carried out when the young calves were caught, ear marking was easier and permanent. The type mark and brand chosen were registered in one's name at the local courthouse. Today, cattle ear marks are no longer utilized as an indication of ownership. Only hot brands and ear tattoos are now recognized by the State of Alabama.

The young boy's horse, carrying a surplus McClellen saddle and old quilt used as a pad, along with the family dog, look on as he pours salt into a 'lick log.' Hollowed-out trough cavities in these logs were filled with coarse salt which was essential to the cattle and helped keep them in an area. The family's dog is an example of an all-purpose farm 'cur' dog that was used for hunt-

ing, gathering, and/or catching of cattle. Their canine fierceness intimidated the cattle to bunch together and forced straying cattle back to the group so they might be driven to another location. The dogs could also grab straying cattle by the muzzle or ear for additional control. Examples of these dogs included black mouth curs, Catahoula curs, mountain curs, or any other mixed-breed cur-like dogs that were trained to do this herding-type work.

The mural is not only a colorful illustration of the lifestyle and material culture of a people, but also tells a story of a type of forest range management that used fire and cattle grazing to provide income to rural people that were here a century ago. Our history along the Gulf-Coast was not that of the 'Plantation South' but rather of the small, independent 'yeoman' farmer/stockman who made his living utilizing the resources that the longleaf pine forest provided. A distinct culture arose and thrived for generations. Hopefully, their contributions to our county and region will not be forgotten.

Today, many see the need to bring longleaf pine back to its rightful prominence in our Southern forestlands, along with the original natural understory described by early travelers through the region as "vast grasslands under forest." Longleaf forests are being replanted, accompanied by a return of prescribed fire used liberally for promoting timber growth and understory restoration by controlling invasive plants. Also, new groups of enthusiasts are trying to save the old lines of native cattle from disappearing. Today, they are called 'Cracker Cattle' and 'Pineywood Cattle,' depending on the family linage. It seems to have come full circle!

Some cattle producers still allow limited access to their forestlands for shade, water, and grazing for undergrowth control. Others have even begun using the proven forest/pasture combination called 'silvopasture.' This forest management technique uses widely-spaced pines that allow a significant amount of sunlight to support a pasture of bahia grass or Bermuda grass to grow beneath the pine canopy. Silvopasture provides a long-term investment in pine tree production and short-term cash flow from cattle.

Finally, a question that is asked by many, "Why is the calf painted outside of the mural?" If you raise cattle, you know! It has to do with calves and fences.

The "Twilight of an Era" mural was made possible by contributions from the Alabama State Council on the Arts, Covington County Cattlemen's Association, the Covington County Forestry Committee, the Solon and Martha Dixon Foundation, Dr. and Mrs. James Barnes, Mr. Albert Cravey, and in memory of Charles (Chas) H. Simon.

HIDDEN TREASURES

Keeping the Forest as a Forest

By Nicholas Granger, Registered Forester/Work Unit Manager
Alabama Forestry Commission

Situated along the Pea River and located in central Coffee County is the property of Mike and Joan Newman. This 199-acre certified TREASURE Forest/Tree Farm consists of planted loblolly pines, mixed pine hardwood, bottomland hardwoods, wildlife openings, planted hardwoods, and a dove field.

The Newmans take great pride in the appearance of their property, aggressively managing it to achieve multiple benefits. The excellent condition of the Newman property reflects countless hours of planning, dedication, and hard work, earning it the title of Alabama's 2014 Tree Farm of the Year.

Pine stands have been selectively thinned as needed, while prescribed burning and herbicides have been used to control undesirable competition and to enhance wildlife habitats. Hardwood stands have been excluded from timber harvest and prescribed burn activities in order to enhance the wildlife population and serve as a streamside management zone (SMZ) against erosion. Both hard and soft mast-producing trees have been planted throughout the property to provide an additional food source for wildlife. Several acres of wildlife food plots are planted and maintained annually as well.

A great conversation piece that intrigues visitors is the artificial power line Mike installed above a field of sunflowers, sesame, and corn to attract dove. Several miles of forest trails are maintained for leisure walks throughout the property, and a pavilion was constructed as a picnic area for family gatherings that provides a picturesque view overlooking the Pea River.

Mike and Joan share their property with members of the community in a variety of ways. Local Boy Scout troops visit to earn their forestry-related merit badges. The family hosts the First Baptist Church father/son camp-out and occasional Sunday School class gatherings. The Newmans also enjoy sponsoring deer and turkey hunts for local youth in the community. At least 11 girls and boys have harvested their first deer here, while two have harvested their first turkeys. As a fundraising event, the Wiregrass United Way auctions a deer hunting trip to the Newman's property. It also provided the venue for a bonfire attended by helicopter flight students stationed at Fort Rucker military base.

In the fall of 2014, the Newmans hosted the South Alabama Regional Forestry Field Day which was attended by over 150 landowners and agency personnel, as well as special guest, the Honorable Martha Roby, U.S. Representative for Alabama's Second Congressional District. Attendees enjoyed a catered lunch at the pavilion and participated in several tours throughout the property to gain information about hardwood management, wetland management, herbicide use in loblolly pine stands, and dove field management.

Believing their property is a gift from God, Mike and Joan Newman realize the importance of being good stewards of the land. In doing so, they strive to keep the forest 'as a forest,' and hope their land is a legacy that will be enjoyed for many future generations.

Tax Tips for Forest Landowners for the 2015 Tax Year

by Dr. Linda Wang, National Timber Tax Specialist, U.S. Forest Service

Federal income tax laws can influence a private woodland owner's financial decisions about land management. Yet, special favorable tax provisions on timber that are intended to encourage private forest management and stewardship are commonly unknown. To help woodland owners in filing their 2015 tax returns, this publication explains the federal income tax laws on timber. The information is not legal or accounting advice. It is current as of September 30, 2015.

Timber Property Classifications

For tax purposes, a woodland property may be classified as an investment, business or personal-use property. Tax deductions and losses that are allowed for investment or business properties may be limited or denied for personal-use property. So the classification is important in that the tax treatment on each type of property differs widely. If your primary purpose of owning land is for personal enjoyment (such as fishing and family retreat), your property may be taxed as personal-use property. In contrast, if your primary purpose of land ownership is for making a profit from growing timber, your timber may be taxed as an investment property or a business when such profit-seeking timber activities are more regular, active and continuous than an investment. Which status applies depends on the specifics of each case. The IRS presumes a profit motive if profit is realized in at least three of the past five years. Such profit, however, includes expectation of future profit from the appreciation of asset.

Example 1: Mr. Smith sold timber for $20,000 profits in 2015. He replanted the land with loblolly pines. He treats his woodland property as an investment.

Basis and Depletion Deduction

Timber basis. Basis is the cost of the timber to the owner. You may deduct it from timber sales, which reduces the tax due on the sales. To establish the timber basis, find out how the property was acquired. For purchased property, the timber basis is the amount you paid for it. For inherited property, the basis of timber is its fair market value (FMV) on the decedent's date of death. If you receive the timber as a gift, the timber basis is the lower of its FMV or the donor's basis.

Example 2*:* Mrs. Anderson inherited forest land a year ago but didn't establish the timber basis. A consulting forester provided a retroactive professional appraisal on her timber value on the date of the decedent's death, which established her timber basis.

Depletion. Depletion is a deduction against timber sale.

Example 3: Mrs. Anderson sold 600 cords of pulpwood. She took depletion deduction of $6,000 ($10,000 of total timber basis ÷ 1,000 cords of total volume x 600 cords of timber sold).

Timber Sales

Sale of standing timber. Sales of standing timber held as an investment for more than one year qualify for long-term capital gain, which is taxed at advantageous lower tax rates than ordinary income. Sale of inherited timber is considered long term. Report the sale of standing timber held as an investment on Form 8949 and Schedule D.

Both outright sales and pay-as-cut sales of standing timber by a business qualify for long-term capital gain (Sec. 1231 gain) after the timber has been held for more than one year. Report the sale of standing timber held for business use on Form 4797 and Schedule D. If you sell timber outright in a business, you also are required to file Form T unless you only have an occasional timber sale (see "Filing Form T" below).

Example 4: Your consulting forester advised an improvement cutting and estimated that there were 800 cords that should be sold. The highest bid was $30/cord. You signed the contract for sale of standing timber owned as an investment. You report a capital gain on Schedule D and Form 8949.

Sale of products cut from timber held for use in a business. If you cut your own timber or have it cut by a contractor working at your direction, either for sale or for use in your business, the gains are ordinary income unless you elect to use sec. 631(a) on Form T, Part II.

Example 5: You paid a contractor $2,000 to cut standing timber held for business use for over one year into logs, and you sold the cut logs to a mill for $30,000. The FMV of the standing timber was $23,000 on January 1 and your basis in it was $1,000. If you elect to use sec. 631(a) on Form T, report a $22,000 long-term capital gain ($23,000 FMV – $1,000 basis) on Form 4797 and Schedule D, and $5,000 of ordinary income ($30,000 sale price – $23,000 FMV – $2,000 contractor fee) on Schedule C. If you fail to make the election, all $27,000 profit is ordinary income.

Net Investment Income Tax

For taxpayers meeting income threshold, investment timber sales and passive business timber sales are subject to a 3.8 percent net investment income tax, effective January 1, 2013. This 3.8 percent tax, enacted as part of the 2010 healthcare reform law, applies *only* to single taxpayers with adjusted gross income ("AGI") over $200,000 or couples with over $250,000 AGI. "Material participants" in timber business are not subject to this tax.

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Tax Tips

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Example 6*:* Husband and wife's adjusted gross income is $260,000, including a $50,000 capital gain from their investment timber sale. The timber gains of $10,000 (the lesser of the excess of their adjusted income of $260,000 over the $250,000 threshold or the capital gains of $50,000) are subject to the 3.8 percent tax ($380 tax), in addition to the capital gain tax on the sale.

Installment Sales

An installment sale involves receiving one or more payments after the year of sale, allowing you to defer tax by spreading your gain over two or more years. Interest is charged on deferred payments.

Example 7: You sold timber for $10,000 ($8,000 after deducting timber depletion and sale expenses) in 2015. Your *gross profit percentage* is 80 percent ($8,000 ÷ $10,000). The buyer paid you $5,000 in 2015 and will pay the remaining $5,000, plus interest, in 2016. Report a $4,000 gain ($5,000 x 80%) for 2015, using Form 6252.

Timber Management Expenses

Timber management expenses may include fees to a consulting forester; cost for competition control; the expense for insects, disease, and fire control; pre-commercial thinning or firebreak maintenance. Investment timber owners may deduct expenses on Schedule A, but they are subject to a 2 percent of adjusted gross income reduction. Business timber owners who are "materially participants" deduct them in full on Schedule C. Property taxes are deductible.

Reforestation Costs

Taxpayers (except trusts) may deduct up to $10,000 ($5,000 for married couples filing separately) per year of reforestation costs per *qualified timber property* (QTP). Any amount over $10,000 per year per QTP may be deducted over 84 months (*amortized*). Trusts are eligible for amortization deduction. Qualifying costs include the direct costs to plant or replant a stand including natural regeneration.

Example 8: You spent $17,000 to reforest after a harvest. Deduct $10,000, plus 1/14th of the remaining $7,000 ($500) on your 2015 tax return. Deduct 1/7th of the $7,000 ($1,000) on your returns for 2016–2021 and the last 1/14th ($500) on your 2022 return. If you qualify as an investor, take the $10,000 deduction as an adjustment to gross income on the front of Form 1040; if you hold your forest land for business use, take it on Schedule C. Elect to amortize and take amortization deductions on Form 4562, Part VI.

Depreciation and Sec. 179 Expensing

Depreciation is a tax deduction that is based on the cost (basis) of assets used, such as those for machinery, computers, cars, vans, logging equipment, bridges, culverts, fences, temporary roads or the surfaces of permanent roads. For example, light-duty truck and logging equipment are depreciated over five years.

Also, business taxpayers may deduct up to $25,000 in the first year in qualifying property in 2015, subject to a $200,000 phase-out and business taxable income limitation (sec. 179 expensing). Land is not depreciable.

Cost-share Payments

If you receive a cost-share payment from a qualified government program, you may exclude part or all of the payment from your income if the cost share is used in capital expenditure. Otherwise, it is ordinary income. Qualified federal programs include the Forest Health Protection Program (for southern pine beetle and mountain pine beetle), Conservation Reserve Program, Environmental Quality Incentives Program, Wildlife Habitat Incentives Program, and Wetlands Reserve Program (discontinued February 7, 2014). Several state programs also qualify for exclusion. The excludable amount is the *present value* of the greater of $2.50 per acre or 10 percent of the average annual income from the affected acres over the last three years.

Example 9: You received a $3,900 cost-share payment from the Conservation Reserve Program and used it as capital expenditure for your 100-acre woodland. If you had no income from the property in the last three years, you could exclude up to $4,798 (($2.50 x 100 acres) ÷ 5.21%). The interest rate is from the Farm Credit System Bank. If you had $6,600 of income from the property, you could exclude the entire payment: (10% x ($6,600 ÷ 3)) ÷ 5.21% = $4,222 > $3,900. Attach a statement to your tax return describing the program and your calculations.

Timber Casualty and Theft Losses

Loss of timber from a casualty — a sudden, unexpected and unusual event such as a fire or severe storm — may be deductible from your taxes. The deduction is the *lesser* of the decrease in FMV caused by the casualty or your basis in the timber block (the area you use to keep track of your basis). Similarly, a theft loss deduction is limited to the *lesser* of the decrease in FMV or your basis in the stolen timber. A competent appraisal usually is required.

Filing Form T (Timber)

You must file Form T (Timber), *Forest Activities Schedule*, if you claim a timber depletion deduction, sell cut products in a business (under sec. 631(a)), or sell outright timber held for business use. However, there is an exception for owners who only have an occasional timber sale, defined as one or two sales every three or four years.

Conservation Easement

You may take a deduction on qualified donation of conservation easement in 2015. *Absent of new legislation extending the enhanced incentives*, the deduction is up to 30 percent (vs. 50 percent or 100 percent if qualified by the enhanced provision from 2006 to 2014) of the taxpayer's AGI in a year. Any excess donation over the 30 percent limit may be carried forward to the next five years.

Maintaining Forest Trails

By Sara B. Baldwin, Ph.D, Registered Forester

Forest trails provide access for many activities, and are an important component of the overall forest management scheme. In the 20-plus years that I have been managing forest trails, along with thousands of miles of riding trails managed by others, I have learned some important lessons about maintenance and sustainability.

Trails that hold up to their intended use without damaging the natural forest resources and without damaging the maintenance budget are called 'sustainable.' Building sustainable trails – rather than haphazard access routes – will reduce maintenance needs while enhancing the safety and usefulness of any trail system. In other words, planning ahead about "how am I going to maintain this?" will help ensure greater sustainability for your trail system.

Trail maintenance can be divided into three related tasks: vegetation management, water management, and soil management.

Vegetation Management

Having vegetation on your trails helps protect the soil from traffic and minimizes impacts from heavy rains. Hopefully, when you planned your trail system, you made sure that most or all of it can be mowed with reasonably available equipment, such as a tractor and rotary mower. Walk-behind trimmers are also very useful for this frequently needed maintenance step. However, mowing is only the bottom of the trail vegetation picture.

Plants grow toward the openings that even narrow trails create; in the spring, every sprout and limb reaches across the trail. So if you look up from your mowed trail, the '**tread**' in trail terminology, the next thing you will find is every species imaginable encroaching from the sides. A particular culprit is blackberry, which sends long canes out each year. Some forest practices have made blackberry briars as prolific as kudzu, and the canes are hazardous to any trail user not protected by body armor.

The options available for maintaining sidewall vegetation in the 2- to 6-foot high range go hand-in-hand with forest stand management. Mature open forests have relatively little of this type growth and may be maintained by hand with machetes, pruners, or trimmers. Prescribed burning in growing timber stands targets growth at this 2- to 6-foot high level, reducing required trail maintenance. Thick growth in young stands, or along the sides of wider openings such as forest roads, often requires targeted spraying. Backpack or all-terrain vehicle (ATV)-mounted pump sprayers are essential tools, along with a good working knowledge of herbicide use.

Looking higher, above 6 feet or so, into the mid-story of the forest – yikes! – there is even more vegetation to maintain. Consider the height clearance of a trail for comfort and safety. For uses such as hiking, biking, and ATV riding, 6 to 8 feet may be enough. However, riding trails need taller clearance; a bare minimum of 10 feet. One culprit at this height is muscadine, which drapes among mid-story trees – a wildlife food source, but a real hazard to a rider or biker on a fast moving workout. Maintaining taller vegetation can be done with the hand tools mentioned above, but keep in mind that any overhead work requires head and eye protection.

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Maintaining Forest Trails

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Water Management

Every time it rains, water impacts forest trails. Draining water off the trail is the key to sustainability. Mud is a warning sign of poor drainage, which leads to resource damage, safety problems, and maintenance nightmares. Washouts are also a sign – that your drainage is too much, too fast, leading to the same ultimate results. Planning your trail route will help avoid the worst of these extremes. Avoid chronically wet areas. Avoid steep slopes, and limit stretches that go straight up or down hill.

Mud that persists in dry weather will keep getting worse with traffic. Every hoof, boot, bike, and tire will press and dig deeper, trapping water as drainage gets worse and worse. Plant cover disappears and the soil loses integrity. Users avoid these spots, creating multiple, braided routes around them, damaging natural resources. Maintenance is required to create drains. Mulch and fill may be applied as a further step. Re-routing the trail around the problem area may be a final solution. In wetlands, hardening the trail by raising the tread above the natural soil will help make a trail sustainable. Materials such as gravel, synthetic webbing, board walks, and bridges are expensive solutions.

Washed-out trails occur when the drainage is so intense that the plant cover disappears and the soil erodes. They are a safety hazard of dangerous footing and can damage vehicles. Washouts often start slowly and get worse quickly. Managing eroded stretches while they are small is easier than changing their course later. The maintenance steps of creating drainage, applying mulch or fill, and finally re-routing pertain to these problems as well. The wing ditches and turn-outs on forest roads provide good examples and can be utilized on a smaller scale. Steps – logs or timbers placed at a slight angle to travel – create miniature water bars and turnouts, helping hold soil in place. Re-routing a washed-out stretch of trail, and gradually switching direction back and forth across the slope, is often the cheapest sustainable solution.

Soil Management

With time and traffic, the soil of forest trails will break down. It will lose its ability to support plant cover, and can either become saturated with water or erode away. Sustainable trails – those that are well planned and constructed – will last longer. Maintenance helps; recognizing problems and fixing them early will prolong trail life.

Soil types wear differently. Sandy soils in the coastal plain break down into pure deep sand. The walking and riding get tough, the biking impossible, and vehicles just get stuck. Clay soils in the piedmont become compact, getting rock hard and slick. Mountain soils seem to disappear – the soil sinks away leaving nothing but rock. When any of these conditions occur, trail closures are needed.

Restricting traffic and using temporary closures may precede permanent closures and re-routing. Trails can support foot traffic when they can't stand up to heavier use by horses and motorized vehicles. Worn trails can stand light traffic better than heavy traffic. Providing alternate routes can spread out traffic. Restoring trails – fixing drainage and re-establishing plant cover – takes time, but can allow a trail manager to eventually re-open a favorite route.

A few important lessons about maintenance and sustainability have taken years to learn. Today there are resources and reference books on sustainable trail construction. Many are available from the USDA Forest Service, and probably the most useful is **http://www.fs.fed.us/t-d/pubs/pdfpubs/pdf07232806/pdf07232806dpi72.pdf.**

Mowing the tread. Notice the sidewall of blackberries in this growing stand of timber.

Thickets can be maddening where clearing of side-wall and overhead are needed. To burn or spray?

A trail washed out down to rock is difficult to travel, even in four-wheel drive.

Mud is a warning sign of poor drainage and maintenance ahead.

Northern Long-Eared Bat

How Its Listing Under the Endangered Species Act Affects Alabama Forest Landowners

By Ryan Peek, Registered Forester, Landowner Assistance Coordinator
Alabama Forestry Commission

Recently federally listed as a *threatened species* under the Endangered Species Act, northern long-eared bats may now be significant to Alabama forest landowners. In the following paragraphs, we discuss in detail the forest management implications resulting from this listing. 'Threatened species' are those that are likely to become endangered in the future, and 'endangered species' are those that are in danger of becoming extinct. The US Fish and Wildlife Service published the final listing and interim rule to the Federal Register on April 2, 2015. The rule took effect on May 4, 2015.

Being able to identify and having some background knowledge about this particular bat is important for forest managers and landowners. The northern long-eared bat (*Myotis septentrionalis*) is small to medium-sized with a body length of 3 to 3.75 inches long and a wingspan of 9 to 10 inches. The bat's fur is dark to medium brown on the back, and tawny to pale brown on its underside. The two species it is most commonly confused with are little brown bat and western long-eared bat; however, the easiest way to distinguish this species from others in its genus is by its long ears. The Greek word *myotis* means 'mouse-eared.' When the northern long-eared bat lays its ears forward, they extend past its nose up to two-tenths of an inch.

Photo by Al Hicks (NYDEC)/USFWS

During the winter, these bats hibernate in caves and mines, called hibernacula. They utilize areas in the hibernacula that have a constant temperature, high humidity, and no air currents. The bats will hibernate in small cracks and crevices, sometimes with only the nose or ears visible. During the summer, they will roost under the bark of trees, in cavities, in crevices of live or dead trees, or in snags (dead standing trees). They may roost singly or in colonies. Males and non-reproductive females will continue to roost in mines or caves, if convenient. It is very uncommon for this species of bat to roost in human structures.

The northern long-eared bat was recently listed as a threatened species because of a disease causing significant mortality that affects hibernating bats. White-nose syndrome, caused by the fungus *Pseudogymnoascus destructans*, is so named for the white fungus that appears on the muzzle and other parts of the bat. It is estimated that this disease has killed over 5.5 million bats in the United States and Canada. Northern long-eared bat populations have declined sharply, up to 99 percent, across a large portion of its range. First documented in New York around 2006, the disease has since spread west as far as Missouri, as well as south to Mississippi and Alabama. While the range of this bat extends across 33 counties in Alabama, only seven counties in the state currently have infected hibernacula.

White-nose syndrome causes bats to behave strangely during winter months, flying outside during the middle of the day or clustering at the entrance of a cave or mine. White-nose syndrome has been confirmed in the following species of bats: big brown bat, eastern small-footed bat, gray bat (endangered), Indiana bat (endangered), little brown bat, northern long-eared bat (threatened), and the tri-colored bat.

Section 4(d) of the Endangered Species Act (ESA) allows the US Fish and Wildlife Service to establish special regulations for **threatened** species, subspecies, and Distinct Population Segments. [Section 4(d) rules do not apply to **endangered** species.] These 4(d) rules take the place of the normal protections of the ESA and may either increase or decrease the ESA's normal protections. The ESA specifies that 4(d) rules must be "necessary and advisable to provide for the conservation of such species." One use of 4(d) rules is to relax the normal ESA restrictions to reduce conflicts between people and the protections provided to the threatened species by the ESA.

The provision in the Endangered Species Act 4(d) rule states that all purposeful take is prohibited within the range of the northern long-eared bat. The ESA defines 'take' as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The ESA defines 'incidental take' as take that results from, but is not the purpose of, carrying out an otherwise lawful activity. There are two exceptions to the rule. The first is the removal of northern long-eared bats from human structures. The second exception is actions related to capture, handling, and related activities for northern long-eared bat by individuals permitted to conduct these same activities (typically researchers and scientists) for species of bats (for a period of a year).

While the northern long-eared bat covers a large range, white-nose syndrome has not yet spread throughout its entire range.

Therefore, a buffer has been established around areas that have infected hibernacula, known as the white-nose syndrome buffer zone. For areas of the country outside of the white-nose syndrome buffer zone, the interim 4(d) rule exempts incidental take from all activities. For areas within the white-nose syndrome buffer zone, take from hazardous tree removal is exempt from the ESA prohibitions. The 33 counties in Alabama that are within the range of northern long-eared bat are also located in the white-nose syndrome buffer zone.

For areas of the country within the white-nose buffer zone, the interim 4(d) rule exempts incidental take from the following activities (with provisions*): forest management practices; maintenance and limited expansion of transportation or utility lines; prairie habitat management; and limited tree removal projects, provided these activities protect known maternity roosts and hibernacula. *The following measures are required in order for the exemption to apply:

1. Activity occurs more than one-quarter mile from known, occupied hibernacula.
2. Activity avoids cutting or destroying known, occupied roost trees during pup season, which is June 1 – July 31.
3. Activity avoids clear-cuts and similar harvest methods, seed tree, shelter wood, and coppice regeneration within one-quarter mile of known, occupied roost trees during pup season.

Northern Long-Eared Bat Interim 4(d) Rule
Alabama Counties Affected by White-Nose Syndrome

Note: Northern Long-Eared Bat range and WNS Buffer Zone subject to change as new data are collected.

Photo by Steve Taylor/University of Illinois/USFWS

Northern long-eared bat showing signs of white-nose Syndrome (WNS).

The conversion of mature hardwood or mixed forests into intensively managed monoculture pine plantations is not exempt under the 4(d) rule. This is because monoculture pine plantation stands provide very poor quality bat habitat. The 4(d) rule does not require landowners to conduct a survey for northern long-eared bat, but a survey would help identify whether bats utilize the area. The landowner has added certainty that incidental take resulting from the exempted activities is not prohibited under the 4(d) rule.

Forest managers must be aware of the required measures stated above for exempted activities to be valid. Recommendations include identifying any potential roost trees on a property and being mindful of conducting harvest operations during the bats' pup season. Pleading ignorance will not provide a strong defense if found out of compliance with the ESA 4(d) rule. General forestry considerations when northern long-eared bats are present or presumed present include avoidance of roost sites, leaving wooded corridors between roosting and feeding sites, and protecting known hibernacula. Leaving a wooded buffer around hibernacula will help insulate the bats from the rest of the harvesting operation. Utilization of herbicides and pesticides in areas adjacent to foraging and roost sites should be carefully controlled and monitored for unanticipated adverse effects.

Northern Long-Eared Bat Distribution in Alabama by County: Bibb, Blount, Calhoun, Cherokee, Clay, Cleburne, Colbert, Cullman, Dekalb, Etowah, Fayette, Franklin, Greene, Hale, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Limestone, Madison, Marion, Marshall, Morgan, Pickens, Randolph, Shelby, St. Clair, Sumter, Talladega, Tuscaloosa, Walker, and Winston.

Alabama Counties with White-nose Syndrome-Infected Hibernacula: Colbert, Jackson, Lauderdale, Lawrence, Limestone, Marshall, and Morgan.

Information utilized to write this article came from the Federal Register Volume 80 Number 63, the US Fish and Wildlife Service, and the white-nose syndrome website. For additional information on northern long-eared bat or white-nose syndrome, please visit the US Fish and Wildlife Services website and **whitenosesyndrome.org**.

Monsters in the Yard: Carpenter Ants

By Robert Maddox, Morgan County Forestry Management Specialist
Alabama Forestry Commission

You may have seen one . . . an ant that's no ordinary ant. Larger and faster, these look like ants that maybe you can't squash with one stomp of your boot. These are the ants that if you don't kill them the first time, you think perhaps the colony will seek revenge. These bugs can truly become monsters in the yard. They are Carpenter Ants.

Existing as a colony, carpenter ants have four distinct castes or roles. Size varies among the castes. Queens of the colony can measure up to 1 inch. Winged males, only seen in mature colonies at certain times of the year, come in at just under an inch usually. The major worker, the most often observed of the species, tops out at three-eighths to one-half inch. The minor worker measures about one-quarter inch.

They can cause a lot of damage, particularly to wood, but not like you may think. Unlike termites, carpenter ants don't actually eat the wood; they make galleries. Their colony/gallery building enhances the decay of the wood, creating more openings for moisture, molds, fungus, and other insects to speed up the decay process. They become a pest to people when a colony invades a home, damaging the structural integrity of the wood in the home. Exterior wood such as decks, steps, and porches, and interior wood including subfloors, windows, doors and their frames are the most common targets. Weakened trees around the home also pose a safety concern to people.

Visually, carpenter ants differ from termites in a few ways. The ants have dark colored bodies, narrow waists, and bent antennae. They are also commonly seen in the open. Termites are light colored, have no visible waist constriction and straight antennae. Termites avoid light and rarely leave their colony. Also, carpenter ant galleries are different than termite galleries. Ant galleries are smooth with an almost sanded appearance. They are clean of trash and debris. Termite galleries often are rougher looking with sawdust scattered throughout. A mixture of sawdust and soil in the galleries is common with subterranean termite damage.

The diet of a carpenter ant consists of varied sources of proteins and sugars. They can forage as far as 100 yards in search of food. When foraging outdoors, they feed on living and dead insects as well as honeydew. Indoors, the ants focus on meats and fats as well as sweets (honey, syrup, jelly, and sugar). Most foraging is done starting in the early evening and can last well into the night.

Photo by Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org

White circle indicates carpenter ant in the frass (wood shavings left over from gallery making).

Nests are most often found in moist wood, including rotting stumps and trees, tree roots, wood lying on the ground, and in firewood piles. They have even been found in creosote-treated cross-ties, as the ants don't actually eat the wood. Inside buildings, nests have also been found in moist wood, often caused by plumbing leaks, cracked foundations, condensation, or poor air circulation. Moisture, whether in the wood or the nearby air, is key to hatching the colony's eggs in the nest. Although they prefer excavating moist wood, they will tunnel into sound wood when conditions are favorable.

When a colony reaches a large enough size, it may form a satellite colony to increase its forage range and worker capacity. The satellite nests do not require the moisture the parent colony does, as no eggs will be hatched here. These are often the nests found in homes in dry areas, where they are sometimes discovered in hollow-core doors and wall voids. Carpenter ants can also nest in foam insulation. The workers in these satellite nests move constantly between their nest and the parent colony.

How do you know if you have a carpenter ant infestation?

- Frass, or the trash left over from gallery making – this is a pile of wood shavings, dead ants, parts of insects, and maybe some soil. It is often found outside of nest openings, or in spider webs and window sills.
- Small windows or slit-like openings cut into infested wood – these can have piles of frass outside them.
- Sighting of major worker ants – they are mostly active at night, but can be seen during the day. A colony or nest may be within 100 yards of the sighting.
- Sometimes you can hear them in the wood. A rustling or clicking sound may be an indicator of gallery building or a nest. Tap against the wood. If you hear an increase in clicking, that's the alarm of the ants.
- A definite indicator of an active large infestation is the emergence of large winged ants in the spring. These swarms can become trapped if coming from an indoor nest. Look for them crawling out of vents or wall openings as well as trapped in spider webs.

An effective control program for carpenter ants will depend on where the colony and any satellite nests are located. Care must be taken when trying to eradicate a nest. If you don't get them all at once, the nest could fragment and spread. Satellite nests could move to moist wood and form a new parent colony. Planning and appropriate treatment are key.

To find a colony or nest takes patience and some creativity. Following the worker ants to determine where they enter the nest is the most effective plan. Worker ants are most active during spring and summer months, usually between sunset and midnight. Ants are attracted to protein sources during the spring and early summer, and it is easier to follow them when they are carrying food. An excellent bait is tuna packed in water, not oil. Follow the ants with a red-lensed flashlight because ants can't see red light.

Once the colony or nest is found, it is possible for the homeowner to eliminate the ants. It is advised however to contact a licensed pest exterminator to handle the job. They have access to a wider selection of more effective pesticides to control this pest. The homeowner can still be very helpful in this process by locating the nest and monitoring the time and number of ants sighted.

If the homeowner decides to try to eliminate this pest themselves, here is an overview of different control methods:

- Baits – This method is generally not effective in eliminating colonies and nests of carpenter ants, as the many things they eat make it difficult to predict if they will go for the bait. Casting the bait between a satellite nest and a colony provides the best chance an ant will pick it up and carry it

(Continued on page 31)

Carpenter ant deposits frass at nest opening.

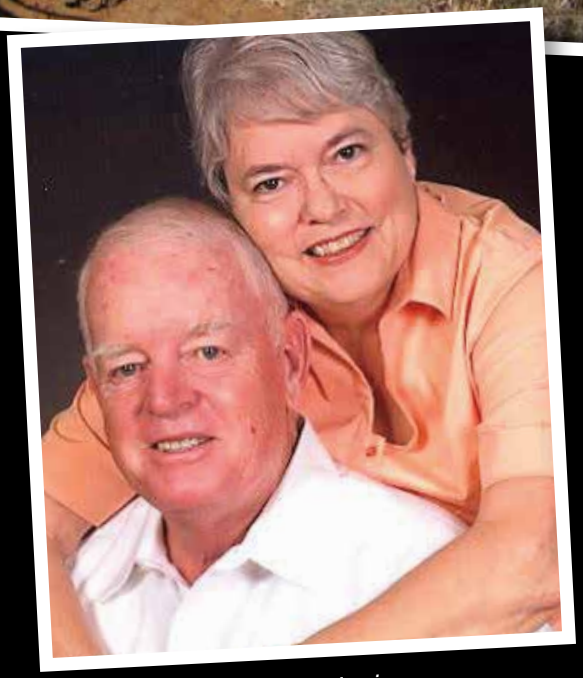
MEMORIAL

Richard Kent Hanby, Sr. 1938-2015

Richard Kent Hanby, Sr., aged 77, formerly of Dadeville, Alabama, passed away at home in San Angelo, Texas, on November 14, 2015, after a lengthy illness. A memorial service was held at Sierra Vista United Methodist Church in San Angelo on December 27.

Born in 1938 in Buffalo, New York, as a child Kent moved with his family to Birmingham, Alabama, where he spent most of his school-aged years. After graduating from Meridian High School (Meridian, Mississippi) in 1957, he served four years (1958–1961) active duty in the United States Navy as a gunners mate technician, 2nd class. His service included being aboard the USS Kitty Hawk on its commissioning voyage around South America. Kent graduated with Honors from Auburn University with a Bachelor of Science in Forestry in 1965. He also completed a Master of Forestry degree from Yale University in 1971.

Hanby's forestry career spanned 50 years and many career moves, including a total of eight years working for Union Camp Corporation throughout the Southeast, over three years as a saw mill manager in Pomeroy, Ohio, and other management positions at forest product and equipment companies in Winchester, Kentucky, and Selinsgrove, Pennsylvania. He returned to Alabama in 1982 to work as state lands manager for the Alabama Department of Conservation and Natural Resources for over a decade. In 1993, he returned to Auburn to finish out his career working for his alma mater as Director of Student Services and instructor of Fire Management for Auburn University's School of Forestry and Wildlife Services. He retired in 2003, but continued to teach fire management part-time, leading Alabama Certified Prescribed Burn Manager workshops for the Alabama Forestry Commission until 2014. In 2006, Kent was a founding member of the Alabama Prescribed Fire Council and he remained actively involved in its work.



Kent and wife, Janice

Kent Hanby was respected for his vast knowledge and skills in the prescribed fire field not only in the state, but also across the Southeast. He was a strong advocate for prescribed burning, and much of the increase in awareness of successful prescribed burning and smoke management is credited to his tireless efforts.

Hanby is survived by his wife of 52 years, two daughters, two sons, nine grandchildren, his sister, a niece and nephew, and many cousins. He will be lovingly remembered by family, friends, colleagues, and students for his adventurous spirit and love of nature, forests, and fire management.

In Their Own Words ...Letters to the AFC

21 April 2015

To Bruce Springer
Alabama Forestry Commission
Clanton, Alabama:

On behalf of the U.S. Army Corps of Engineers, I would like to take this opportunity to thank the Alabama Forestry Commission, specifically the Chambers County unit rangers, for their assistance with prescribed burning this year at West Point Lake.

Rangers James Williams and Jimbo Robinson helped Corps of Engineers rangers complete the burning of over 2,400 acres of public land in addition to the plowing of fire breaks before prescribed burning took place. Please pass along my sincere appreciation to the members of the Chambers County unit office.

We look forward to working with your agency in the future. If I may be of assistance to you in any matter regarding West Point Lake, please contact me.

Stephen F. Logan
Operations Manager, Department of the Army
Mobile District, Corps of Engineers
West Point, Georgia

15 May 2015

To Greg Pate and Dan Jackson
Alabama Forestry Commission
Montgomery, Alabama:

I wanted to take just a moment of your time today to recognize two fantastic employees of the Alabama Forestry Commission! During the past month I have had the great opportunity and pleasure of working beside both the Bullock County Forester; Mr. Matthew McCollough and Ranger; Mr. Mark Richardson. Both of these men are not only very knowledgeable about their profession but they are extremely dedicated to providing the best possible forest services to the landowners of Bullock County. We are most fortunate to have these two me working in our county!

Matthew recently updated my forestry plan and helped me to obtain the information needed to be certified into the Alabama Stewardship Program and the National Tree Farm Program. I had previously been certified in the TREASURE Forest Program. With their assistance, I have recently completed a control burn on my property near Union Springs which I would not been able to do without their knowledge and assistance! It was a great joy to watch them go about their job each day knowing that I could trust both their professional training and their experience. I can't begin tell you how appreciative I am of their work ethic and the attitude they go about their job and I wanted to let you know how much I appreciate them and what they have done for me and my family! They are indeed a great blessing!

Charles A. Hall
Montgomery, Alabama

3 July 2015

Letter to the Editor:

My father was a big cotton farmer in Morgan County near the Tennessee River. When he died unexpectedly in 1952, my mother was left with three young children (I was the oldest at 8 years old), a big mortgage on the farm that had been losing money every year for a long time, and a dwindling labor force. She didn't know what to do with 1,054 acres of worn-out red clay and a family to feed, so she put the place on the auction block. I can remember vividly . . . first they sold every cow, mule, hog, fence post, and roll of wire – everything that would move – and the buyers were hauling it off. This hurt me.

Then finally the land came up. Those were hard times, especially for "dirt farmers." When the high bid got to $48 per acre by a neighbor, my mother stopped the auction and huddled with the auctioneer. They announced a "no sale."

The old place was washing away. Back then I think the main job of the Alabama Forestry Commission (AFC) was fighting wildfires, but the county forester was a Mr. Nichols who would visit from time to time. He told us about a government program designed to prevent erosion. It paid landowners $10 per acre, per year, for 10 years to plant trees on land like ours. It fit us like a glove so we did it, with Mr. Nichols shepherding us all the way.

When the trees were about 15 feet tall, a big wildfire came through and killed everything. It almost killed me and the others fighting it – all we had was limbs and tree tops to beat it out. Mr. Nichols and his crew, as well as all the neighbors, were right there with us, but they didn't have any equipment like they do now – just manpower. The wind came up and it got in the tree tops, with us right in the middle of it. The only thing that saved us was a big ditch with some water in it that we lay down in – it roared right over us! You talk about scared!

So, we replanted and started over, again. We knew nothing about managing like we do now.

Now comes the second major encounter with the AFC. When I was away in college, my mother called saying that, out of the blue, a fellow had contacted her and offered big money for the timber to do a clear-cut. (I call them "timber pimps" or "road riders" – I get a call or letter about every month asking if we'll sell.) I told her to just hold on and let me see what we had.

I called around and found a young fellow with the AFC who agreed to take a look and advise us. His name was Steve May, county forester for Morgan County – I think he's still with the AFC. By then, their mission had shifted to the technical side to get landowners to do the things they should to get maximum benefit from growing trees.

May said we just needed to thin and manage the stand rather than clear-cut. He taught us how to bore for growth rates, control burn, monitor for diseases, put in fire brakes, etc. Plus, he showed us how to do a timber sale. He explained how to conduct a timber cruse, optimum basil area – in short, how to manage timber.

We did all those things, and you could just see the timber growth rates take off. And by the way, the money from the thinning alone was about what that road rider had offered! This showed me the value of a continuing relationship with the AFC.

Today I own rural timberland in four Alabama counties, so I have to deal with four different foresters, and they keep changing. From time to time, it's been suggested that I hire a consultant, but I have had terrible luck there.

Years ago I met another fellow named Jim Jeter who was with Gulf States Paper at the time, although he's been with the AFC for over 20 years now. He is abso-

(Continued on page 30)

In Their Own Words (continued)

lutely my "go to" man and knows all facets of timber. Unfortunately, he will retire soon and I don't know what I'll do. However, with the good foundation he and others at the AFC have given us, we'll be fine. Thanks, AFC.

Ed Cain
Birmingham, Alabama

9 October 2015

To Terry Ezell
Alabama Forestry Commission
Decatur, Alabama:

We lived in Decatur in 1979 when we bought our land at Piney Grove in Lawrence County. It was much easier to work the place from Decatur than Birmingham, where we've lived about 30 years. Results: much more competition from kudzu, Chinese privet, etc. I've been battling them – alone.

Recently, Chris Horne toured our place (TREASURE Forest about 25 years) and gave me a lot of helpful information. Probably equally important, Chis made me know he was really interested in our efforts to improve our pine tree farm. In every way, he was professional, very pleasant, informative, and supporting. I feel confident landowners in Alabama will be well served through Chris's advice and support. He is a bright star in our state forestry program.

Whit King
Birmingham, Alabama

23 October 2015

To Ricky Fields
Alabama Forestry Commission
Bay Minette, Alabama:

I would like to take this opportunity to thank you and the Commission for assistance with firebreak preparation and with a prescription bum on 240 acres within Gulf State Park. Richard Johnson and William Robertson participated in the aforementioned projects within the Park as far as a forest management plan and the assistance they provided was very helpful.

The Alabama State Parks Division has developed a forest management plan at Gulf State Park that includes Invasive Species Management, prescribed fire, longleaf restoration and the enhancement of certain plant and animal species of special concern within the coastal environment of Alabama. The Alabama Forestry Commission has been an integral part in assisting the Division in prescribed fire planning and implementation on site. They have also helped foster a greater cooperative relationship between the Park and the cities of Orange Beach and Gulf Shores. This is critical for community planning, wildland urban interface and assists the local/rural fire departments in learning more about prescribed fire and fire behavior. Noting past cooperation with both wildfire and prescribed fire within the Park, the State Parks Division would again like to express their sincere appreciation to the Commission for their assistance and cooperative mindset as we strive to be better stewards of the lands in our charge.

In my personal 31 years with the Alabama State Parks Division and as a planner for prescribed fire within the Division, a rule of thumb has been to always have the Forestry Commission on site if possible during the burn period. This is a direct reflection to the professionalism and dedication of individuals working for the Alabama Forestry Commission.

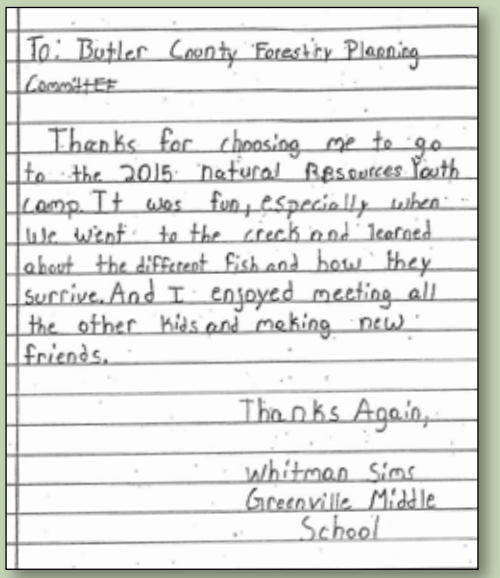
Forrest Bailey, Chief
Natural Resources Section
Alabama State Parks Division
Montgomery, Alabama

23 November 2015

To Benji Elmore
Alabama Forestry Commission
Brewton, Alabama:

I would like to express my appreciation for Alabama Forestry Commission employees Ricky Fields and Jason Barrett for the recent burning of Knoll Park in Fairhope. Knoll Park has been left in its natural state and is a popular spot for bird watchers. In the spring, the park's hundreds of azalea bushes bloom beautiful pinks and reds. This longleaf pine 4.6-acre park, bordered by Fairhope and Magnolia avenues and Bayview Street, certainly is a special place within our community. In addition, Knoll Park was recently recognized as an urban forestry project by America in Bloom. I appreciate Ricky and Jason's efforts as this would not have been such a success without their assistance and knowledge.

Jack Burrell
City Council President, City of Fairhope
Fairhope, Alabama

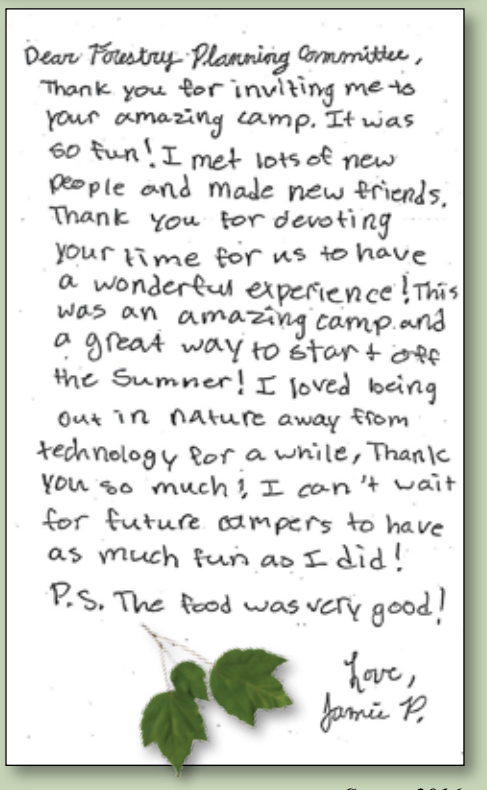


To: Butler County Forestry Planning Committee

Thanks for choosing me to go to the 2015 natural Resources Youth camp. It was fun, especially when we went to the creek and learned about the different fish and how they survive. And I enjoyed meeting all the other kids and making new friends.

Thanks Again,

Whitman Sims
Greenville Middle School



Dear Forestry Planning Committee,
Thank you for inviting me to your amazing camp. It was so fun! I met lots of new people and made new friends. Thank you for devoting your time for us to have a wonderful experience! This was an amazing camp and a great way to start off the Summer! I loved being out in nature away from technology for a while, Thank you so much! I can't wait for future campers to have as much fun as I did!
P.S. The food was very good!

Love,
Jamie P.

Carpenter Ants

(Continued from page 27)

on. If the colony or nest cannot be located, bait broadcasting may be the only method available.

- Canned insecticide sprays – Killing groups or foraging workers has no effect on the colony. More workers can be hatched or moved in from satellite nests. Some 'barrier' sprays may have some use, but these must be refreshed often.
- Nests in trees - Carpenter ants don't harm or kill a tree outright. They prefer nesting in moist, already decaying wood. That's not to say they won't nest in the heartwood of a tree. The ants will compromise the structure of the tree until enough rots or is weakened by their excavations to fall over. Treat a nest in a tree using a dust insecticide that is labeled for use in landscape trees. Try to work the dust into the nest cavity if possible.
- Nest in walls or other voids – Dust and foaming insecticides are recommended for interior use. The effectiveness of dust in eliminating the ants depends on a couple of factors. Placement of the dust is key. The ants have to walk through it. They then ingest it while grooming. If improperly applied, the ants will detour around the affected area. Dusts can cake up in damp areas. This makes pickup by the ants difficult. Dust should be combined with other insecticides that are labeled for interior use, such as foam mentioned earlier, for effective control.
- Spot treatment of infested wood or foam panels – Care must be taken when targeting these areas as an incomplete treatment can lead to fragmenting the nest or colony and spreading the infestation. Direct spraying or injecting a liquid insecticide into the nest is the method of control recommended for these areas. For maximum effect, treat any wood nearby that is susceptible to attack as well.

Look closely to spot a carpenter ant on this tree limb.

Preventing a carpenter ant infestation is always preferable to dealing with one once you know you have it. These are some things a homeowner can do to reduce the chance of an infestation from occurring or reoccurring.

- New homes are susceptible to carpenter ants. Construction may have disturbed a colony, fragmenting it and forcing it to establish a new nest, close to or inside the home. Also, removal of existing trees may leave behind decaying wood that is ideal nesting material. Homeowners should check all stumps, roots, and other likely nesting areas within 100 yards of the home periodically for signs of an infestation.
- Eliminate high moisture conditions near wood. Replace moisture-damaged wood. Stored scrap wood should be kept dry and if possible elevated to allow air to circulate.
- Keep firewood away from the home and off the ground. Once this gets wet for any length of time, it becomes ideal nesting material.
- Trim any branches that touch the home or touch powerlines leading to the home. Carpenter ants will use this like a highway to travel to the home in search of food. They can drop as far as five feet to land on a roof.
- Remove stumps and roots of recently cut trees. Get rid of them before they attract a colony looking for a home. Patch or seal openings in living trees if possible. These openings, trimmed branches, or wounds, can be entrances for a colony.
- Seal as many openings from the exterior to the interior of the home as possible. Entry points for carpenter ants can include cracks in foundations, hose faucets on the outside of the home, air conditioner drains, as well as around the edges of windows and doors. Use a fine mesh screen to cover attic vents and crawl space openings.

If you see one of the big ants in your yard, it's not necessarily time to panic. However, it is time to be aware and alert. That ant may have just been a forager from a colony or satellite nest. Remember that their foraging range is about 100 yards. Look around to see what you can do to make your yard or home less appealing to them if they decide to relocate.

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TREES OF ALABAMA

STATE CHAMPIONS!

By Brian Hendricks, Registered Forester/
Alabama's Champion Tree Program Coordinator
Alabama Forestry Commission

As each year passes, the task becomes more challenging of discovering trees that are larger than current state champions. Nevertheless, Alabama crowned seven new state champion trees in 2015. Of these seven, six are outright champions and one is a co-champion. A co-champion is a tree whose total score is in close proximity of the current champion.

Alabama now has a total of 148 champions distributed throughout 49 of its 67 counties. Baldwin County holds claim to the most champions in the state with 17, followed by Madison County with 12, and Wilcox County which has 11 champions. It's also exciting to note that two of the seven new champions – the post oak and red hickory – have a good chance of being declared national champions in 2016! See below for a list of the seven new champion trees for 2015.

2015 'Champion' Shumard Oak
Marengo County

The purpose of Alabama's Champion Tree program is to discover, recognize, and preserve the largest tree of each species in Alabama. Anyone can nominate a tree for Champion Tree designation; however, an Alabama Forestry Commission (AFC) forester is responsible for collecting the tree's measurements. When determining a champion, three of the tree's components are taken into consideration: circumference, height, and crown spread. For a tree to be eligible, it must be a species that is recognized as native or naturalized in Alabama. A naturalized tree is from an 'introduced' species that has established itself in the wild, reproducing naturally and spreading.

Once a new champion is identified, both its owner and nominator receive a certificate. Additionally, AFC county personnel present the nominator with a permanent tree marker to be placed in proximity to the base of the tree. New champions are added to the AFC's *Champion Trees of Alabama* publication which can be found on the AFC website.

If you know of a tree that you think might be the largest of its species in the state, you are encouraged to send in a nomination by completing an on-line form. Visit the AFC website at **www.forestry.alabama.gov** and click on the 'Champion Tree Program' link found on the home page. Due to limited AFC resources, a nominator is strongly encouraged to review the measurements of the current champion to get an idea if his candidate tree has a chance of defeating the current champion's score before sending in a nomination. After all, there are millions of 'big' trees in Alabama, but to be a CHAMPION, it must be THE biggest.

Nominations may be sent in year round; however, for a tree to be eligible for Champion Tree designation in 2016, the nomination form must be received by the program coordinator no later than June 1, 2016.

TREE SPECIES	COUNTY	NOMINATOR	OWNER
Beech, American (co-champion)	Autauga	Deven Peek	City of Prattville
Buckeye, Red	Cherokee	Keith Niedermeier	Paul Rogers
Hickory, Red	Butler	Wayne K. Webb	State of Alabama
Holly, Dahoon	Baldwin	Chan West	U.S. Fish & Wildlife Service
Oak, Post	Colbert	Karen Smith	Dale and Karen Smith
Oak, Shumard	Marengo	Chris Chambers	The Westervelt Company
Sweetgum	Marengo	Ben Sherrod	U.S. Army Corps of Engineers