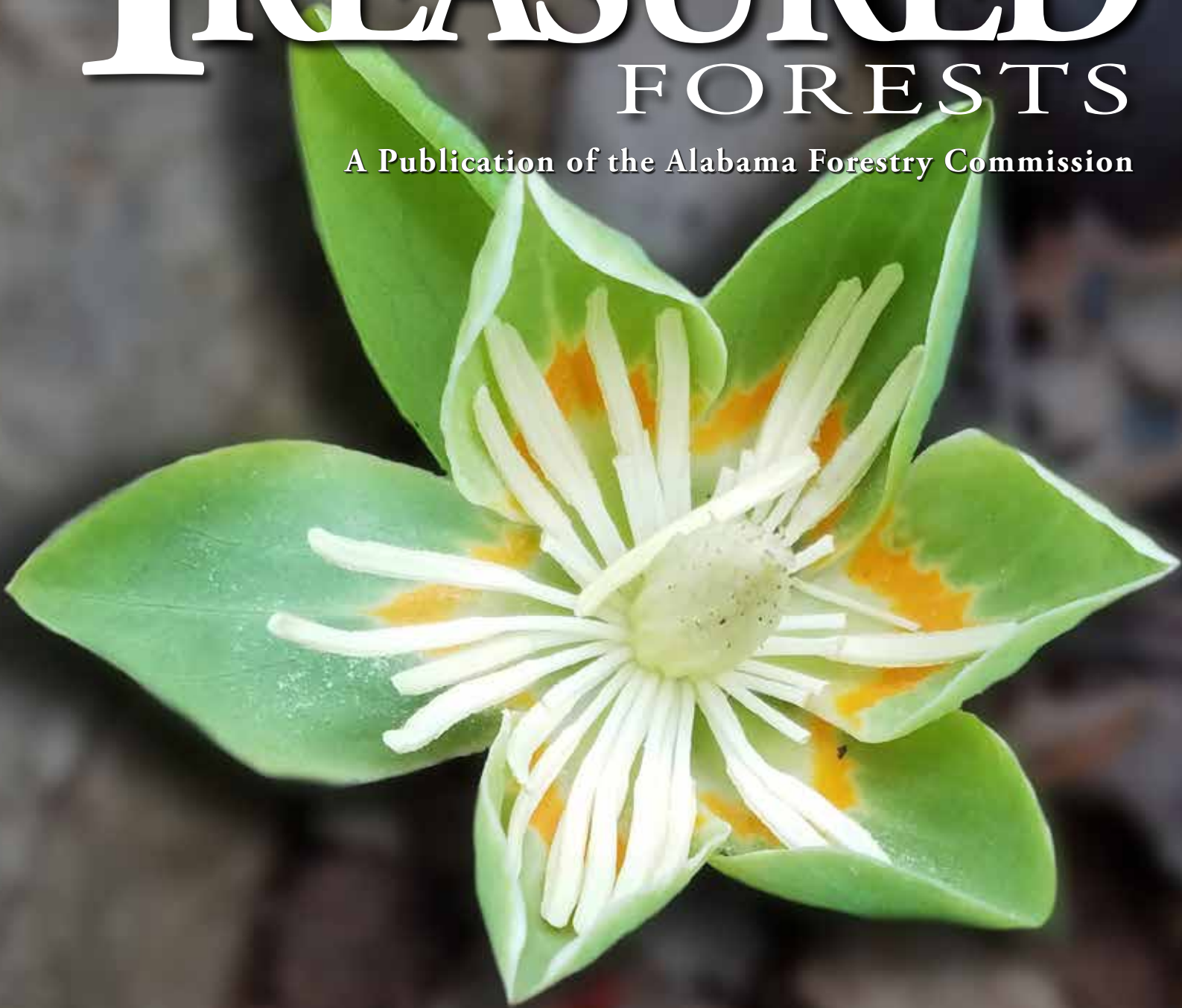


ALABAMA'S

TREASURED FORESTS

A Publication of the Alabama Forestry Commission



Spring 2017

Message from the STATE FORESTER

In April, the Commissioners appointed me as Alabama's state forester. While I am humbled by their decision and appreciate the trust they have placed in me, I am also excited by the opportunities and challenges this new position offers.

Growing up in a small town outside of Corpus Christi, Texas, I was always interested in forestry. As South Texas did not have many forests, I attended a small Christian college in Sewanee, Tennessee, receiving a bachelor's degree in Natural Resources. I then earned a master's degree in forestry from Auburn University. I've made Alabama home since 1990.

My career began with the Alabama Forestry Association. During 18 years of employment with that organization, I did everything from helping loggers and landowners comply with BMPs, to working with lawmakers on legislation important to forest landowners and industry. My responsibilities also included things such as negotiating air quality regulations with ADEM, as well as building and operating fuel stations for loggers.

My next position was as Chief of Staff for John McMillan, Commissioner of the Alabama Department of Agriculture & Industries, which put me in a management role for that agency's 400 employees. Later, I was offered a position with the Alabama Farmers Federation (ALFA) as their forestry, wildlife, and catfish division director. While at ALFA, the Alabama TREASURE Forest Association was moved under the umbrella of the organization and I served as executive director. In this role, among other things, I worked with forest landowners to help them better manage their land.

As State Forester, I also look forward to working with our state's landowners. Recently, 46 new TREASURE Forests were certified by the TREASURE Forest Subcommittee. My thanks go out to the AFC employees who submitted nominations, and I congratulate the new TREASURE Forest owners! This is a tremendous achievement; please display your sign with pride. The TREASURE Forest program is a great way to demonstrate your commitment to managing your land.

In the coming months, my first priority will be to address the significant financial concerns facing the Alabama Forestry Commission. I will spend much of this time at the State House working on budgets for this current fiscal year as well as 2018. I am hopeful we can be creative in developing solutions to resolve these issues and move the agency forward, ready to face whatever challenges arise.

Since 1924, the Alabama Forestry Commission has been THE state agency whose mission is to protect and sustain Alabama's forest resources. In working alongside a number of AFC associates over the years, I have developed a great respect for the services this agency provides to Alabama's people, economy, and natural resources. We've got a great team at the AFC and I look forward to working with all of them to achieve success. It is my vision to help make this agency stronger and more viable than ever before.



Rick Oates, State Forester

A handwritten signature in black ink that reads "Rick Oates". The signature is written in a cursive, slightly slanted style.

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



ALABAMA'S
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- 2 Message from the State Forester
- 7 Effects of Drought Continue to Plague Trees Across State by Elishia Ballentine
- 8 BY THE NUMBERS...Bark Beetle Infestation Resulting from the 2016 Fall Drought
- 9 A Rare Find in the Forest by Tim Albritton
- 16 BY THE NUMBERS...Drought/Wildfire Facts & Figures from October-November 2016
- 18 TAX TIPS for Forest Landowners for the 2016 Tax Year by Dr. Linda Wang
- 20 Changes in Forest Structure Affect Bees and Other Pollinators by Zoe Hoyle
- 22 Prescribed Fire in an Upland Oak Stand at Mary Olive Thomas Demonstration Forest by John S. Kush, Seth D. Hunt, Rebecca J. Barlow, and Jim Armstrong
- 26 Don't Move Firewood
- 27 Classifying Forest Insects by Feeding Habits by Dr. David Mercker
- 28 Memorial: Jerry Brown by Joel D. Glover
- 30 New TREASURE Forest Certifications
- 32 Plants of Alabama: Cinnamon Fern by Fred Nation



On the Cover:

Bloom from a yellow poplar tree (*Liriodendron tulipifera*) found on the Swayback Bridge Trail in Wetumpka, Elmore County. (Read more about it on page 31!)

Photo by Will Liner



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www.visitmyforest.org/



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Scan this QR code with your smartphone to view a digital edition of the magazine.

table of CONTENTS

Vol. XXXVI, No. 1

Spring 2017



◀ 4

'Fishers of Men' by Nick Granger



◀ 11

Waterdogs & Humpback Whales???
The Endangered Species Act: A Quick Review & Peek into the Future
by Ray Metzler



◀ 14

Where are You?
by Joel D. Glover and Ricky Porch



◀ 17

'Baptism by Fire' . . . My First
Wildfire Season by Matthew Sorrells



◀ 24

Meet the Emerald Ash Borer -
Alabama's Newest Invader

Alabama's *TREASURED Forests* (ISSN 0894-9654) is published by the Alabama Forestry Commission, 513 Madison Avenue, Montgomery, Alabama. Telephone (334) 240-9355. Website: www.forestry.alabama.gov
Bulk rate postage paid at Montgomery, Alabama.
POSTMASTER: Send address changes to: *Alabama's TREASURED Forests*, P.O. Box 302550, Montgomery, AL 36130-2550.

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

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

The prestigious Helene Mosley Memorial TREASURE Forest Award is based on how well a landowner displays the TREASURE Forest philosophy of good stewardship. This philosophy is reflected not only by the landowner's forest management accomplishments, but also their commitment and support of educational activities on the property which promote good forest stewardship to others. As winners of the Helene Mosley Memorial TREASURE Forest for the South Region in 2016, Glen and Scarlett Riley exemplify the TREASURE Forest philosophy on their Henry County property. Stewardship is also manifested in their marriage of nearly 58

years, as well as their personal creed taken from the New Testament, 'Be Fishers of Men.'

It is no coincidence that the Riley family places a great deal of emphasis on education, as their primary TREASURE Forest management objectives are education and recreation. Located near Abbeville in the Barnes community, their 283-acre TREASURE Forest supports several educational activities each year. As an active member of the Henry County 4-H 'Classroom in the Forest' Program Planning Committee, Mr. Riley says this annual event is one of the most rewarding for them. In fact, May of 2017 marked the twelfth year the Rileys have hosted the 'Classroom in the Forest' program on their property!



During this event each spring, approximately 225 fifth grade students from Henry County Schools take a field trip to the Rileys' TREASURE Forest to learn about proper forest management and stewardship by rotating through six stations. As the children visit each station they gain knowledge about tree identification, wildlife habitats, pond management, timber harvesting, and landowner rights. They also learn about ways to interact appropriately with nature through the 'Every Thing Needs Space' station. These educational topics are presented through combined efforts of the Alabama Forestry Commission, the Alabama Department of Conservation and Natural Resources, and the Alabama Cooperative Extension System, with assistance from members of the Riley family and community volunteers.

Additionally, the property is utilized by local church groups for a spiritual retreat and various functions. Local Boy Scout troops often come here to work toward earning their forestry-related merit badges. The Rileys have also hosted the Professional Logging Manager (PLM) Forestry Training program to provide professional development to logging crews, equipment operators, and other forest industry workers regarding Alabama's Best Management Practices.

The Rileys' TREASURE Forest, which is also certified as a Stewardship Forest and Tree Farm, consists of roughly 100 acres in planted loblolly pines and 100 acres in various ages of planted longleaf pines. The remainder is in bottomland hardwoods, wildlife openings, and two ponds. Pine stands have been selectively thinned as needed and prescribed burning has been conducted every two to three years. Herbicides are also used to control undesirable competition.

Bottomland hardwood stands have been excluded from timber harvesting and prescribed burning activities in order to enhance the wildlife population, in keeping with the Rileys' secondary forest management objective which is wildlife. The hardwood stands also serve as Streamside Management Zones (SMZs) against erosion and protect water quality. These streamside management zones consist of good mast-producing trees along the creeks which provide cover, travel corridors, roosting sites, and a

winter food source for wildlife. Wildlife openings are planted annually. The larger pond is stocked with bream, bass, and carp. The smaller pond is stocked with catfish and carp.

Mr. Riley maintains several miles of forest roads throughout the property and has created water bars and turnouts which aid in water diversion. These roads serve multiple purposes as they provide approximately 11 miles of fire lanes for protection from wildfires. They also afford access points to various locations within the property boundaries, thus making it easier to conduct management activities such as prescribed burns. Mr. Riley and his brother take pride in accomplishing all these activities themselves, which include completing road maintenance, prescribed burning, wildlife planting, and invasive species control.

In addition to managing for game species with wildlife openings, the Rileys also manage their property for non-game species. A notable example of their commitment to this includes marking gopher tortoise burrows on the property with stakes, and leaving nearby areas open for vegetation. This promotes a safe habitat

(Continued on page 6)



(Continued from page 5)

for the tortoises, allowing them to exist without interference from heavy equipment.

The Riley TREASURE Forest is comprised of many charming features. One area in particular that is special to the Rileys is a place they call 'The Living Water.' Located near a natural spring, this designated spiritual area is where Glen and Scarlet often go to pray, reflect, and grow closer to God. They installed a bench close to the spring, making it an ideal place to sit quietly and strengthen their relationship with God.

Another unique feature of the Rileys' TREASURE Forest are the road signs installed throughout the property. They chose to honor their children and grandchildren by naming all the roads



after their descendants. As family and visitors approach the intersections, they see wooden signs with names of loved ones.

Glenn and Scarlet Riley realize the importance of being good stewards of the land and protecting it for future generations. The couple takes pride in conserving the abundant natural resources throughout their property and are constantly seeking ways to fine tune their management techniques. Their TREASURE Forest is an excellent example of good stewardship. It is their hope that their land will continue to be a legacy that will bring forest education, recreational enjoyment, and spiritual growth for years to come.☸



Effects of Drought Continue to Plague Trees across State

By Elishia Ballentine, Editor

Trees are dying. The question is, why? Although the rainfall during December and January relieved much of the drought and related wildfire issues in Alabama, the harmful effects and complications associated with drought continue to plague the state's forestlands. While exact economic impacts are unknown at this time, the losses may be significant according to forestry professionals with the Alabama Forestry Commission (AFC).

"Some trees typically die immediately following an extended period of drought such as we experienced last fall, particularly smaller seedlings and saplings," said AFC Forester/Forest Health Coordinator Dana Stone. "The most damaging results, however, may take longer to emerge," she continued. "Drought-stressed trees can be weakened, causing them to be more susceptible to insects and diseases. These symptoms of long-term injury are just now appearing, especially in our state's pine forests."

Forest landowners began reporting the decline of hardwood trees as a direct result of the drought as early as late summer. Recently, calls to the agency have increased regarding pine trees.

Pines of various ages and sizes are dying, from seedlings to mature trees. Most of the affected pines have brown needles and pitch tubes, indicating bark beetle infestation. AFC foresters have inspected numerous spots, and the trees appear to be dying from a range of pests, including Southern pine beetle, Ips engraver beetle, and black turpentine beetle, or a combination of all three. In some instances, the deodar weevil was also present in beetle-infested pines. These insects generally infect the pines with associated fungi causing the trees to die more quickly.

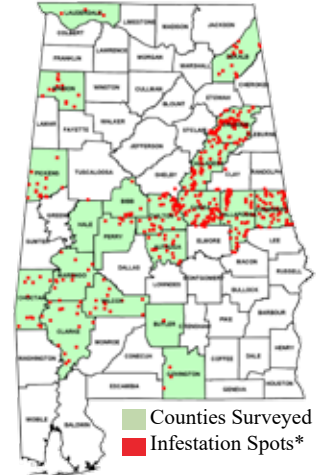
The Alabama Forestry Commission continues to conduct aerial surveys to assess beetle activity across the state, but landowners need to understand the seriousness of this situation. To ensure the overall health of your forest stand, you should monitor your property for signs of damage, and contact your local AFC office or registered forester for management recommendations before taking any action.

To learn more about drought-related pests or to locate the nearest AFC office, visit www.forestry.alabama.gov. 

BY THE NUMBERS

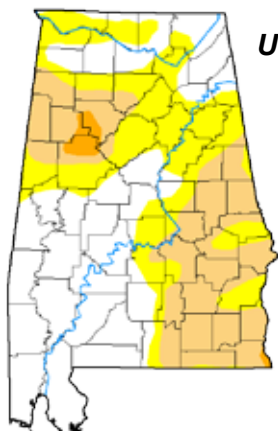
BARK BEETLE INFESTATION RESULTING FROM THE 2016 FALL DROUGHT

- 20** Alabama counties completed by aerial detection*
- 454** Infestation spots located during aerial surveys*
- 20,289** Infested trees within the 454 spots*
- 15.1** Million acres of forestland at extreme or exceptional drought in the fall could be impacted by beetle infestation
- 60+** Days without rain allowed loggers to maximize operations, saturating the market and leaving limited mills to accept beetle-infested wood
- 190,000** Landowners potentially impacted by beetle infestation
- \$ millions** Potential immediate financial loss to landowners as well as long-term impact on forestry industry



Landowners should monitor their property. While the Alabama Forestry Commission will continue to conduct aerial detection flights, the agency lacks sufficient resources and funding to fly frequently enough to contain the anticipated infestation.

**FOR MORE INFORMATION OR ASSISTANCE,
 PLEASE CONTACT YOUR LOCAL AFC OFFICE
 OR VISIT www.forestry.alabama.gov**



U.S. Drought Monitor
 May 9, 2017

- Intensity:
- Abnormally Dry
 - Moderate Drought
 - Severe Drought
 - Extreme Drought
 - Exceptional Drought

USDA
<http://droughtmonitor.unl.edu/>

**Totals may vary as AFC county personnel conduct ground checks and verify infestation spots. Numbers will be updated weekly on the website.*

The above numbers reflect short-term effects. The long-term impact of the 2016 drought is still unknown, with complete effects not manifesting for several years.

A Rare Find in the Alabama Forest

By Tim Albritton, State Staff Forester, USDA Natural Resources Conservation Service

A while back, a landowner was contacted through a mail campaign regarding the ‘My Alabama Woods’ Alabama Cumberland Plateau Project, a statewide shortleaf pine restoration initiative in which I am currently involved through a partnership with the American Forest Foundation. We are seeking to reach forest landowners that are not familiar with getting assistance through traditional government agencies. A few of the things offered through this project include an informational packet, an invitation to workshops, and/or a visit from a field forester.

When this particular landowner requested a visit from a field forester, it was forwarded to Brian Bradley, an experienced forester working with the Alabama Soil & Water District in Lawrence County. Brian met with the landowner and visited his property that summer. However, the cutover timberland was so dense with briars and regrowth following a timber harvest seven years earlier, an additional winter visit was necessary.

When scheduling the winter visit, the landowner was not available so Brian asked me to go along. We have known each other for many years and I gladly accepted his invitation, looking forward to an opportunity to get in the woods. As the State Staff Forester with the NRCS, the majority of my time is spent in meetings, not in the forest, so I relish the occasion to make a field visit to a tract of timberland these days – even one full of briars. Brian had planned to put in a few inventory plots across the tract and collect some data.

Putting in inventory plots systematically across a tract of forestland is still the best and most simple way to determine what is really out there. I didn’t say it was the easiest! While fighting our way through the briars and thick brush, we came upon a single eastern hemlock. We both thought it unique and took a picture with our cell phones. Then we noticed a stand of evergreen trees to the north, both thinking it was eastern red cedar or something

similar – surely not a stand of hemlock. Our curiosity got the best of us, so we ventured off course to check out this stand of trees. To our surprise, it was a pure stand of eastern hemlock. A rare find in deed!

Although we do have hemlock trees in the state, a pure eastern hemlock stand is hard to find in Alabama. According to Forest Inventory & Analysis (FIA) data, there are only 13,000 acres in eastern hemlock stands. The Alabama counties where

(Continued on page 10)



PA DCNR-Forestry, Bugwood.org

(Continued from page 9)

hemlock has been tallied on FIA plots include: Franklin, Lawrence, Marion, Walker, and Winston. When considering our state's forests occupy some 23 million acres, accidentally coming up on a stand of eastern hemlock is not very probable. (Special thanks to the Alabama Forestry Commission for providing us with the inventory data.)

If you own forestland, you should plan a visit to your Alabama woods – there's no telling what you might find!

The American Forest Foundation's partners include the Alabama Cooperative Extension System (Alabama A&M/Auburn Universities), the Alabama Department of Conservation and Natural Resources, the Alabama Forestry Association, the Alabama Forestry Commission, the Alabama TREASURE Forest Association, Auburn University School of Forestry & Wildlife Sciences, International Paper, the National Fish & Wildlife Foundation, the National Wild Turkey Federation, the Shortleaf Pine Initiative, the US Forest Service, and the USDA Natural Resources Conservation Service. Engaging with 600 private landowners through technical assistance to improve the economic, recreational, and ecological values of the region, these Alabama Cumberland Plateau Project partners have helped landowners restore over 1,000 acres of shortleaf pine and enhance over 2,500 acres of shortleaf habitat since 2014. 🌲



To learn more about the Shortleaf Pine Initiative, visit <http://shortleafpine.net/>. For more information on the Alabama Cumberland Plateau Project or My Alabama Woods team, check out this website: <https://www.forestfoundation.org/current-projects> or contact the following:

Chris Erwin

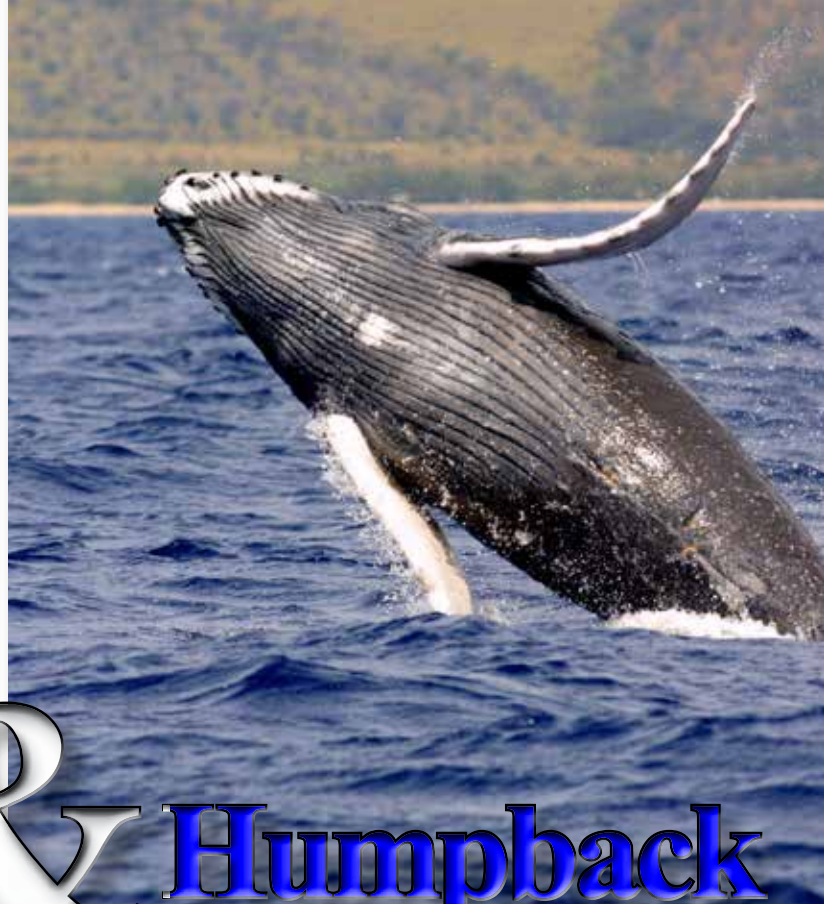
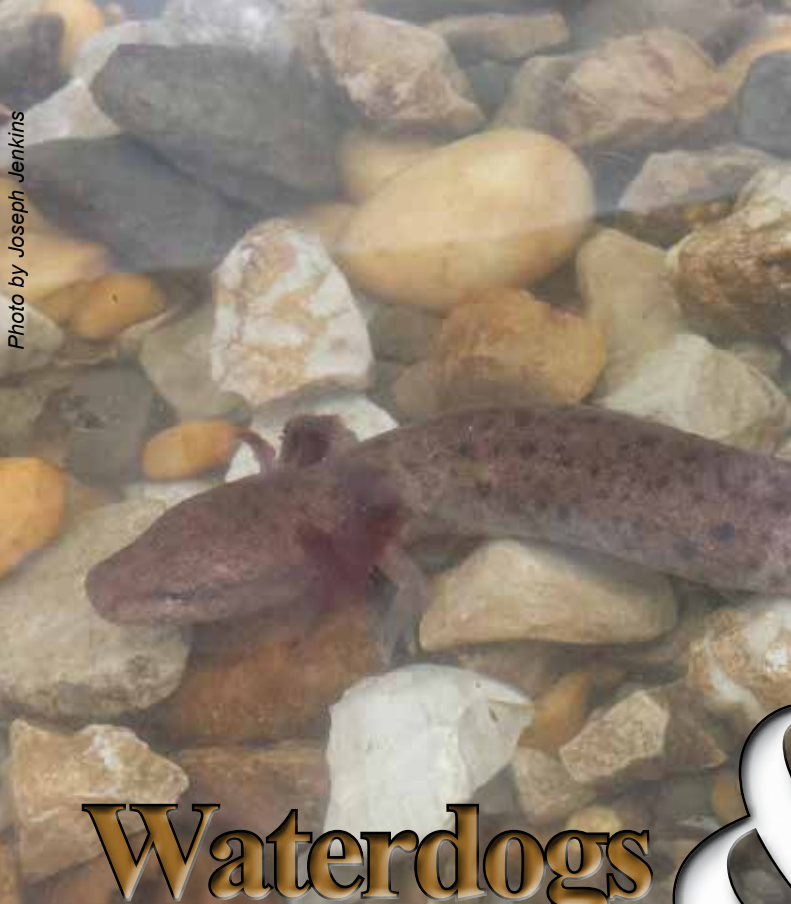
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Vern Wilkins, Indiana University, Bugwood.org



Waterdogs & Humpback Whales???

The Endangered Species Act: A Quick Review & Peek into the Future

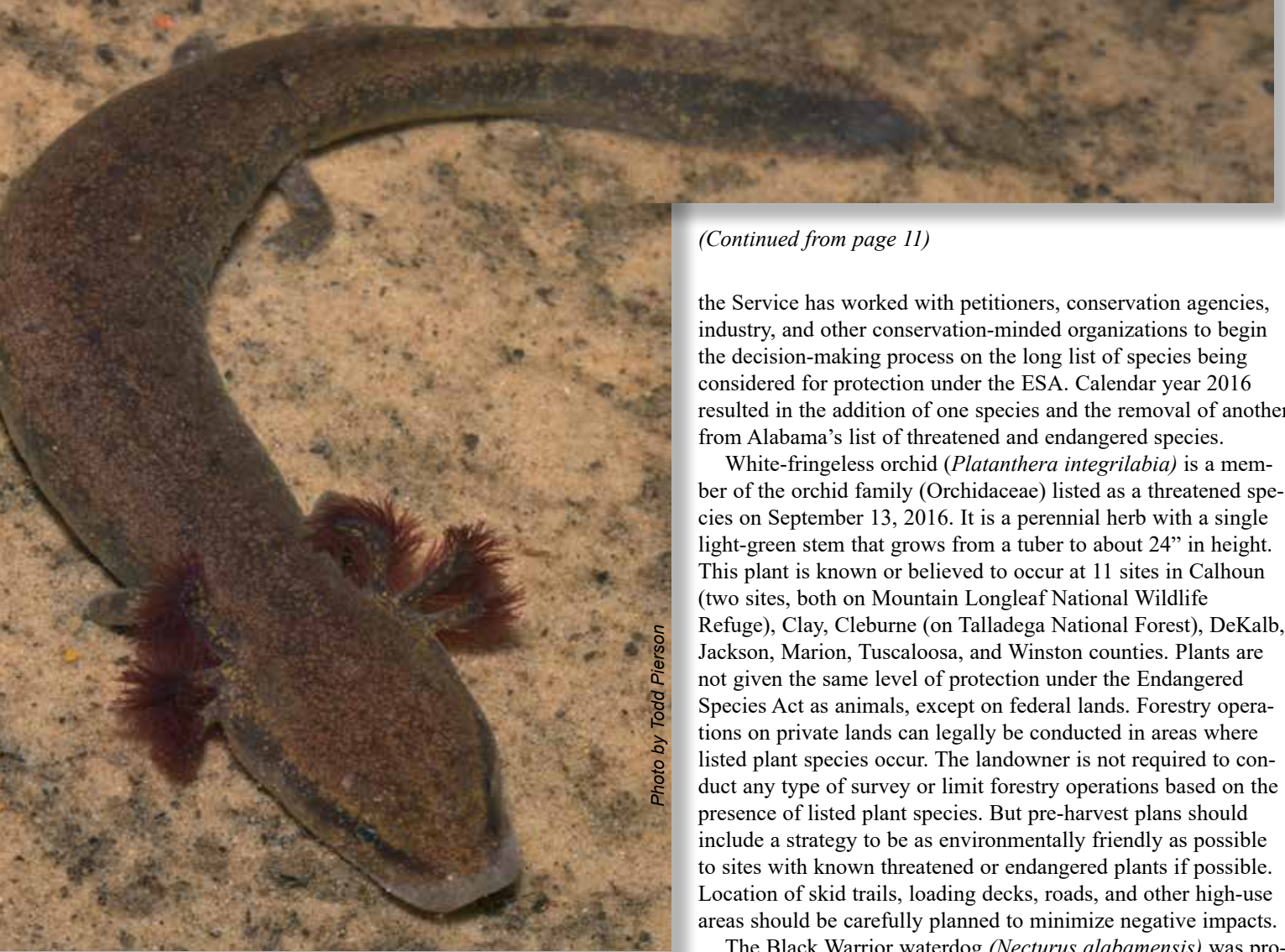
By Ray Metzler, Wildlife Biologist, Alabama Forestry Commission

On December 21, 2016, the U.S. Fish and Wildlife Service (Service), in accordance with the Endangered Species Act of 1973 (ESA), removed the humpback whale (*Megaptera novaeangliae*) from the list of species being *protected*. In its place, the distinct population segments (DPSs) of Cape Verde Islands/Northwest Africa, Western North Pacific, Central America, and the Arabian Sea were listed as *endangered* and the Mexico DPS as *threatened*. Humpback whales in the remaining DPSs are no longer protected under the Act. What on earth does this action have to do with forest landowners in the state of Alabama? Granted, removal of the humpback whale from the list of protected species did not impact forestry activities in Alabama by any means. However, it does show that the Service and the National Marine Fisheries Service are focused on removing species from the ESA once delisting or down-listing criteria have been met. Hopefully, ongoing efforts by Alabama's conservation agencies, organizations, groups, and individuals will continue to have a positive impact on the distribution and population status of other listed and 'proposed for listing' species.

Alabama is one of 18 states that filed suit in the U.S. District Court for the Southern District of Alabama in late November against the Service challenging recent changes to critical habitat rules, asserting they allow the federal government to designate 'entire states' as habitat for imperiled species. The legal challenge came ten months after a series of updates to critical habitat rules under the Endangered Species Act were finalized. The states' lawsuit takes particular aim at a rule that gives the Service more flexibility in including so-called unoccupied habitat in a critical habitat designation. Previously, the agencies only could consider such habitat – which isn't a current home to the species but is within the historic range – if they determined that the species could not recover without it. In other words, occupied habitat came first. The new rule got rid of that provision.

The Service is accustomed to being sued or petitioned in regards to the Endangered Species Act of 1973. In fact, there were more than 1,000 petitions to list organisms as threatened or endangered between the years of 2007 and 2012. The result of these petitions is the potential to add 117 species in Alabama for proposed protection under the ESA. During the past few years,

(Continued on page 12)



Black warrior waterdog

(Continued from page 11)

the Service has worked with petitioners, conservation agencies, industry, and other conservation-minded organizations to begin the decision-making process on the long list of species being considered for protection under the ESA. Calendar year 2016 resulted in the addition of one species and the removal of another from Alabama’s list of threatened and endangered species.

White-fringeless orchid (*Platanthera integrilabia*) is a member of the orchid family (Orchidaceae) listed as a threatened species on September 13, 2016. It is a perennial herb with a single light-green stem that grows from a tuber to about 24” in height. This plant is known or believed to occur at 11 sites in Calhoun (two sites, both on Mountain Longleaf National Wildlife Refuge), Clay, Cleburne (on Talladega National Forest), DeKalb, Jackson, Marion, Tuscaloosa, and Winston counties. Plants are not given the same level of protection under the Endangered Species Act as animals, except on federal lands. Forestry operations on private lands can legally be conducted in areas where listed plant species occur. The landowner is not required to conduct any type of survey or limit forestry operations based on the presence of listed plant species. But pre-harvest plans should include a strategy to be as environmentally friendly as possible to sites with known threatened or endangered plants if possible. Location of skid trails, loading decks, roads, and other high-use areas should be carefully planned to minimize negative impacts.

The Black Warrior waterdog (*Necturus alabamensis*) was proposed for listing as an endangered species on October 6, 2016. This Alabama endemic species is found only in the Black

Occupancy of Black Warrior Waterdog by Proposed Critical Habitat Units and Existing Overlapping Critical Habitat Designation for Federally Listed Species

Unit	Location	County	Occupied	Private Ownership (miles)	Federal Ownership (miles)	Existing Critical Habitat (miles)
1	Lye Branch	Tuscaloosa	No	10	0	0
2	Lake Tuscaloosa	Fayette and Tuscaloosa	No	67	0	38*
3	Yellow Creek	Tuscaloosa	Yes	19	0	0
4	Lost Creek	Walker	No	58	0	0
5	Locust Fork	Blount, Etowah, Jefferson, and Marshall	Yes	243	0	63**
6	Mulberry Fork	Blount, Cullman, Marshall, and Walker	No	114	0	0
7	Blackwater Creek	Walker and Winston	Yes	80	0	0
8	Sipsey Fork	Lawrence and Winston	Yes	7	71	64***
Totals				598	71	165

* *Alabama mocassinshell, dark pigtoe, orangenacre mucket, ovate clubshell, triangular kidneyshell*

** *Alabama mocassinshell, dark pigtoe, orangenacre mucket, ovate clubshell, triangular kidneyshell, upland combshell*

*** *Alabama mocassinshell, dark pigtoe, orangenacre mucket, ovate clubshell, southern acornshell, triangular kidneyshell*

Warrior river drainage above Bankhead Dam. It is a large, nocturnal, completely aquatic salamander that is gilled throughout life. It prefers moderate-to-large streams with moderate flows and alternating pools and rapids. Large slab rocks and other cover are generally present, but semi-permanent leaf packs are thought to be very important for cover and feeding, especially during its early life stage. Diet, thought to be similar to other *Necturus* species, is comprised of small fish, fish eggs, tadpoles, crayfish, aquatic insects including mayflies and caddisflies, and other aquatic life. Scientists believe the most robust populations occur in the Sipsey Fork in Winston County within the boundaries of the Bankhead National Forest.



The table (opposite) summarizes the proposed rules for the 669 river miles designated as Black Warrior waterdog critical habitat. Current law allows the Service to designate unoccupied areas as critical habitat, if they are within the historic range of the species and if they can demonstrate it is essential to the conservation of the plant or animal being listed. There were no special rules proposed that limited forestry activities within the designated critical habitat. Adhering to Alabama's Best Management Practices (BMPs) for Forestry should provide adequate protection to the Black Warrior waterdog and its habitat. Over 450 comments were received by the Service regarding the listing of the Black Warrior waterdog and designation of critical habitat. While reviewing and compiling all of the comments will take some time, a final rule regarding the listing of this species and designated critical habitat will probably be completed during 2017.



Photo by Patrick O'Neil

(top) Habitat for trispot darter (bottom).

The Service also published a seven-year work plan to assist in the decision-making process regarding the hundreds of species being proposed for protection under the ESA on a national scale. Alabama's list for 2017 includes the Barbour's map turtle, holiday darter, and trispot darter.

The Barbour's map turtle inhabits the Choctawhatchee, Pea, and Chattahoochee rivers and their associated habitats in southeast Alabama. The holiday darter is believed to only occur in the Shoal Creek watershed within the Talladega National Forest in Calhoun and Cleburne counties. The trispot darter (*E. trisella*) was thought to be extirpated from Alabama until 2008 when it was rediscovered in Little Canoe Creek, a tributary of Big Canoe Creek of the Coosa River in St. Clair County. Since 2008, it has also been found in Ballplay Creek in Etowah County and several locations in Georgia. During 2017, the Service is expected to publish proposed rules for the listing of these species for protection under the ESA.

The vast majority of species being considered for protection under the ESA during the next few years utilize aquatic habitats and should not negatively impact forestry operations that adhere to Alabama's Best Management Practices for Forestry (BMPs). Terrestrial species under consideration for listing in future years include the monarch butterfly, southern hognose snake, Florida pine snake, and the gopher tortoise. Listing of terrestrial species may impact forestry activities if rules are developed that limit the

use of certain forest management practices within the range of a species.

The Alabama Field Office, located in Daphne has demonstrated their willingness to work cooperatively with government agencies, conservation organizations, industry, and individuals within the current framework of the Endangered Species Act to more effectively manage populations of Alabama's threatened and endangered species.

The forestry community has been engaged in the rule-making process regarding the listing of plant and animal species under consideration for protection under the ESA. Procedures and third-party certification programs such as Sustainable Forestry Initiative, Forest Stewardship Council, and American Tree Farm System have been developed that essentially require compliance with BMPs. These third-party certification requirements and many other changes have occurred during the past few decades that greatly reduced negative impacts of active forest management on the landscape and habitat for threatened and endangered species. The forestry community must continue to self-monitor for compliance with BMPs, get to know the folks in the Service's Alabama Field Office, and stay actively engaged in the ESA rule-making process to ensure that the future of Alabama's forest industry remains vibrant as well as environmentally friendly. ♻️

Where ARE YOU?



*By Joel D. Glover, Wildlife Biologist, Alabama Wildlife & Freshwater Fisheries
and Ricky Porch, Coosa County Forestry Specialist, Alabama Forestry Commission*

Within 15 minutes of the dispatchers call, the first responders arrived at the gate on the property. They discussed the information they had received. They had been told the victim was supposed to be near the road that goes by the lake. If only they had known which road and which lake, their response time would have been much quicker.

What if they were responding to an emergency on your property? Sure, you know the place like the back of your hand. You know where the 'coyote road' is and why it is called that. You know where the 'gobbler field' is and remember seeing the gobbler. You know that trail where the wheel came off the four-wheeler. Unfortunately, all of your knowledge is of no help whatsoever when you are the incapacitated person whom the emergency personnel are attempting to locate.

A tremendous asset on any property is a good road network. Good access provides the landowner with the opportunity to monitor the property for wind damage, pine beetle infestations, and trespassers, while increasing the value for recreational purposes and when selling timber.

A good road network that includes proper signage gives the added benefit of clear communication. While your family and a few friends may know where you killed the nice 8-point or the

location of the 'Bubba Stand,' they may not be available when needed. However, being able to tell a first responder to "go through the gate, turn left on Coyote Cove Road, follow it to the first food plot and the stand is on the left," could prove to be valuable information.



It has been my experience that most roads on landowner properties have names, although many of them aren't 'officially' marked or well known. It surely gets my attention when I enter a property and find good signage. Recently while going to meet with a landowner, he instructed us to follow the main road and we would come to the area of long-leaf pine we were needing to check. We followed the road and shortly came to a

fork. Both roads looked exactly the same, making it difficult to determine which one was the 'main' road. How often have you given or received this type of directions?

There are many intriguing road names that most likely have interesting stories behind them. Focusing on the names of woods roads I have seen across the state, I have even considered writing an article entitled "What's in a Name?" Believe me, there are some weird ones out there. However, most of the road names are

descriptive either of the location or something that happened at that location.

At my own hunting club, we have a place known as the 'Osmose Field.' The name came from the day when two friends and I were set up on a gobbling turkey with great anticipation of taking the bird. The gobbler was just out of sight, off the edge of a wildlife opening, when we heard a noise coming from behind us. I slowly turned my head and was shocked to see a flashing yellow light on top of a white pickup with OSMOSE written on the door. The driver pulled into the wildlife opening, turned around, and drove away, obviously staying just long enough to run off our turkey. Seeing how we were a half mile from the nearest Osmose-treated utility pole, I could not believe these guys had pulled into our field at 6 a.m. That spot became known as 'the Osmose Field' and has been ever since.

Another story was related by my co-author regarding one of his experiences. Meeting with a fellow to look at some work he wanted done, they were going down the road when the man said, "I've killed a lot of nice deer out of the Boogie Stand right down there," pointing to a woods road as they were passing by it. Curious about the name's origin, Ricky asked the man how he came up with such a name for a tree stand. A wide grin came across his face, and he replied that he didn't have permission to hunt there, so whenever he was in the stand and heard someone coming, he had to boogie!

Over the years, I have visited many properties which had little or no access. This is normally due to a scarcity of adequate roads. While I do not believe the map of your property should look like spaghetti on a plate, I do recommend that landowners have decent vehicle access to most segments of their property. However, just because a road is in place does not mean it must be driven regularly. There are certain times of the year, such as turkey nesting season (May through July), when traffic on all roads should be kept to a minimum. Although, it is much better to have a road you rarely use, rather than need a road you do not have. Keep in mind, well-maintained wide fire breaks also provide good access. Depending on your acreage, you may need two roads comprising 500 feet or several totaling five miles. Either way, it should be readily accessible and have enough signage to facilitate navigation.

A word of caution about road signage . . . unfortunately, a sign bearing a neat road name that is placed at the entrance of your property along a public road often proves too tempting to sign thieves. A good alternative is a gate that has contact information on it. This doesn't need to be so large that anyone passing by could read it, but if someone needs to get in contact with you the information would be available.

You can also understand how helpful it would be for someone trying to provide emergency assistance to have good signage. While strongly recommending good roads and sufficient signs, I would be remiss not to mention that with the technology available to us today, there is really no reason why we should not be able to locate someone lost or hurt on a given property. However, a trip to the farm or the woods is often a desperate attempt to get away from technology. I clearly remember the first time when checking a fellow on a dove field, while I was looking at his license and inspecting the plug in his shotgun, he received a phone call! My first thought was, who the heck brings a phone to the woods with them??? Of course today, 20 years later, the answer is, everyone.

While not necessarily advocating that you keep your phone with you at all times in the woods, it can be a tremendous asset in the event of an emergency. Today's phones normally have built-in GPS and the ability to 'drop a pin' that can be sent to someone else to let them know where you are going to be. Additionally, there are numerous apps available which perform just such a service. As a matter of fact, the Outdoor Alabama app – which is needed to record deer and turkey harvests – has a 'find me' feature on it! I could write several pages of horror stories about how someone either did not tell anyone where they would be hunting, or, told them one place then went somewhere else.

Recently, I took part in the rescue of a fellow who had fallen from a tree stand, suffering a broken back and broken leg. He was located about 100 yards from the nearest road which was a rustic woods road. Fortunately, the rescue team had a UTV (utility task vehicle) equipped to carry someone on a backboard. The presence of the road and the proper equipment greatly facilitated the half-mile trek to the paved road and the waiting Life Flight helicopter. Trying to carry someone on a backboard a half mile through the woods isn't pleasant for anyone involved! Another note is that if this fellow had carried his phone with him instead of leaving it in the truck, he could possibly have avoided laying on the ground for 36 hours.

Lastly, roads signs and communication devices are helpful. However, above all else, let someone know where you are going and when you plan to return. It may make all the difference. ☞

Editor's Note



Congratulations to Wildlife Biologist Joel Glover (right), who received a Lifetime Achievement Award 'in recognition and sincere appreciation of outstanding service, leadership and tireless work towards programs of the Alabama Natural Resources Council. Thank you for going above and beyond serving the landowners of Alabama and leading the way in promotion and coordination of the TREASURE Forest Program.' In his career, Joel was involved with over 800 TREASURE Forest inspections/nominations. Wildlife and Freshwater Fisheries Director Chuck Sykes (left) presented the award at a recent Council meeting, prior to Glover's retirement.

BY THE NUMBERS

2016 OCTOBER-NOVEMBER DROUGHT/ WILDFIRE FACTS & FIGURES

2,191

2,191 Number of wildfires suppressed by Alabama Forestry Commission wildland firefighters



29,431

29,431 Number of acres burned



107

107 Number of fires AFC battled November 28th, burning over 3,000 acres, THIS WAS THE MOST WILDFIRES FOR ONE DAY ON RECORD. This was also the day 14 people died in the Gatlinburg Tennessee fire

13,435

13,435 Man-hours AFC firefighters spent suppressing October and November wildfires

\$1.5m

\$1.5m Cost of AFC wildfire suppression in those two months (Includes associated wildfire suppression expenses and personnel.)

59%

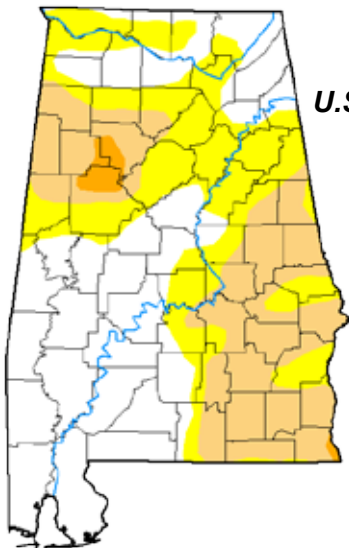
59% Percentage of all 2016 wildfires occurred in October and November

183

183 Number of AFC firefighters statewide

23m

23m Number of acres protected from wildfires by AFC firefighters



U.S. Drought Monitor
May 9, 2017

- Intensity:
- Abnormally Dry
 - Moderate Drought
 - Severe Drought
 - Extreme Drought
 - Exceptional Drought

USDA, NWS, NOAA
<http://droughtmonitor.unl.edu/>

If drought conditions continue into the spring, the state could easily face another devastating fire season.

The long-term impact of the 2016 drought is still unknown. However, our forests are already showing signs of tree mortality and numerous beetle infestations which could reach epidemic proportions if the drought continues.



'Baptism by Fire'

My First Wildfire Season

By Matthew Sorrells, Jefferson County Forester, Alabama Forestry Commission

Hired into the Alabama Forestry Commission as a new forester on September 1 of 2016, I realized my role would be tough when it came to wildfires since I was currently the only employee for Jefferson County. Having background experience on prescribed burns, I already possessed an understanding of fire weather. However, as far as being a wildland firefighter, I was green as grass.

Until taking the agency's course on Heavy Equipment Training, I didn't know how to operate or maintain the fire suppression equipment. I have Forestry Specialist Dearl Driggers from the Southeast Region to thank for everything I learned during that week-long class. He trained me how to operate a dozer and transport, and emphasized the importance of communication with the 'ground man.' Little did he know, along with the rest of those course teachers, they would be coming to see me real soon in Jefferson County.

It was the drought-generated fall wildfire season of 2016, and I had a literal 'baptism by fire' in my first three months. Many have come before me, but probably few have undergone the same situation as I did. From October 1 to December 1, Jefferson County experienced a total of 64 wildfires consuming 2,086 acres. I won't say that it was the worst scenario in the state, but it was definitely difficult in my circumstances as a brand new 'lone ranger' employee. Thanks to AFC leadership, we were able to get an emergency rotation of firefighting crews and equipment from the southern half of the state to come and assist the northern regions during that period of time. About the middle of the first week of each rotation, there was usually a conversation that went along the lines of "I think I'll stick to my flat ground," as if

the hills in their southern counties had a 'Home Sweet Home' sign on them.

It's hard to recall each fire, but I do remember my first was in the Adger community. Soon after, I would come to know Adger like the back of my hand. Those crews that were stationed with me in Jefferson would soon relate Adger to one of those four letter words that if your momma heard you say them, she would wash your mouth out with soap. For lack of a better description, I like to call that entire corner of Jefferson County 'Highwall Heaven,' although others might consider it a little further south of Heaven.

As with most of the old fire season stories I've heard, there was little sleep over those two months. A 'good night's rest' was typically three to four hours. I can remember on a few occasions coming back to the office and resting on a cot since sunrise was only a couple hours away. There was even one week I was afraid to take a shower, because every time I turned on the water I got a fire call! I'm sure everyone around me was thankful I eventually did wash off the 'stank.' MREs ('meals ready to eat' military rations) and water were always kept in my truck, just in case we were out on a call past two meal times.

I want to extend my gratitude to everyone I met during that first fire season. Special thanks to the fire crews that rotated through Jefferson County. Each person brought knowledge and experience. I took the time to soak up every bit I could because it's not every day you get an outside perspective. Our workforce is dwindling, but I encourage those of us that have just begun to seek out the veterans that have been here a while, before they decide to move on and we lose that experience and insight. You never know what you might learn from their wisdom. 🙏



for Forest Landowners *for the 2016 Tax Year*

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

This report provides up-to-date federal income tax information affecting timber transactions. It assists woodland owners, logging professionals, foresters, and their tax accountants in filing 2016 tax returns. The information presented here is for educational purposes only and is not intended for legal or accounting advice. It is current as of September 30, 2016.

Types of Timber Property

Income and expenses associated with timber property that are held for different purposes are subject to different tax rules. Timber property held mainly for personal use (personal enjoyment vs. income generation) may have little or no tax deductions. Property held as an investment (profit from growing timber or expectation of future profit from asset appreciation) is eligible for tax deductions. Property held as business is where your commercial timber activities are regular, active, and continuous. Business expenses are deductible, but are subject to passive loss rules (i.e., if your participation in the business is not material, loss deductions are limited). Which tax status your property falls under depends on the specifics of each case, as the tax regulations only provide the general guideline.

Example 1: Mr. Smith owned a 30-acre timber tract. The consulting forester he worked with helped him manage his timber for profit. This year, the forester administered a final harvest on his behalf and sold timber for \$10,000 profits. Smith reports the transactions under investment property.

Example 2: Mrs. Thompson used her property primarily for family retreat and personal enjoyment. She treats her property as personal-use property. Gains from the timber sale are taxed as capital gains. Timber sale expenses may be subtracted from the gross sale proceeds to calculate the taxable gain. Property taxes paid may be deductible; however, timber expenses may not be deductible for personal-use property.

Timber Expenses

Expenses paid for timber management for profit-making purposes are deductible. Examples of such expenses include fire-break maintenance; overnight travel cost; property taxes; fees to a consulting forester or accountant; cost for vegetation competition control or for insects, disease, and fire control; expense for pre-commercial thinning; and depreciation from equipment used. Investment timber owners may deduct expenses on Schedule A, but they are subject to a 2 percent of adjusted gross income (AGI) reduction (as 'miscellaneous itemized deduction'). Business timber owners who are 'material participants' deduct them in full on Schedule C.

Example 3: You paid \$800 for firebreak maintenance and \$200 for a woodland management plan. Your timber is an investment property and your AGI was \$40,000. Your timber expense deduction is \$200 ($\$800 + \$200 - 2\% \times \$40,000$) due to the 2 percent AGI floor.

Timber Basis and Deduction

Basis is the amount of investment in the timber asset to the owner. Specifically, 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.

Example 4: You inherited a 98-acre woodland five years ago but didn't set up the timber basis at that time. Now you worked with a consulting forester who provided a retroactive professional appraisal of the timber quantity and value on the date of the decedent's death. Your timber basis was established to be \$25,000 of 100 thousand board feet of pine sawtimber and \$4,000 of 200 cords of pine pulpwood. If you receive the timber as a gift, the timber basis is the lower of its FMV or the donor's basis.

Timber basis reduces your taxes because you can deduct it from timber sales (depletion deduction) or claim a timber loss deduction in the event of casualty.

Example 5: You sold 50 thousand board feet of sawtimber in 2016. Your depletion deduction from the sale is \$12,500 (\$25,000 of total timber basis ÷ 100 thousand board feet of total volume x 50 thousand board feet 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 lower tax rates than ordinary income. Report the sale of standing timber held as an investment on Form 8949 and Schedule D.

Example 6: In 2016, you sold standing timber owned as an investment. You report it as a capital gain on Schedule D and Form 8949.

Sales of standing timber by a business qualify for long-term capital gain (Sec. 1231 gain) if the timber has been held for more than one year (Sec. 631(b)). Report the sale on Form 4797 and Schedule D. Form T, Forestry Activity Schedule may be required (see 'Filing Form T' below).

Sale of products cut from timber held for use in a business (Sec. 631(a)). 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 7: The FMV of your standing timber was \$24,000 on January 1 and your basis in it was \$2,000. You paid a contractor \$3,000 to cut standing timber held for business use for over one year into logs, and you sold the cut logs to a mill for \$29,000. If you elect to use Sec. 631(a) on Form T, report a \$22,000 long-term capital gain (\$24,000 FMV – \$2,000 basis) on Form 4797 and Schedule D, and \$2,000 ordinary income (\$29,000 sale price – \$24,000 FMV – \$3,000 contractor fee) on Schedule C. Without the Sec. 631(a) election, however, all \$24,000 profit will be ordinary.

Net Investment Income Tax

Only for single taxpayers with AGI over \$200,000 (or 250,000 for couples), investment timber sales and passive business timber sales are subject to a 3.8 percent net investment income tax. 'Material participants' in timber business are not subject to this tax.

Example 8: Mr. and Mrs. Walters' AGI is \$270,000, including a \$40,000 capital gain from their investment timber sale. The timber gain of \$20,000 (the lesser of the excess of their AGI of \$270,000 over the \$250,000 threshold or the capital gain of \$40,000) is subject to the 3.8 percent tax (\$760 tax), in addition to the capital gain tax on the sale.

Installment Sales

An installment sale is a sale in which you receive one or more payments in a tax year after the year of timber sale, allowing you to defer tax by spreading your gain over two or more years. Interest is charged on deferred payments and is ordinary income.

Example 9: You sold \$10,000 of timber (\$7,500 after deducting timber depletion and sale expenses) in 2016. Your gross profit percentage is 75 percent (\$7,500 ÷ \$10,000). The buyer paid you \$6,000 in 2016, and you took a note payable in 2017. Report a \$4,500 gain (\$6,000 x 75%) for 2016, using Form 6252.

Reforestation Costs

Reforestation costs are direct costs incurred to establish commercial timber stands. Taxpayers 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 only.

Example 10: If your reforestation cost was \$8,000 in 2016, you may deduct it fully in 2016 for your married filing joint return. If you spent \$17,000 to reforest, deduct \$10,000, plus 1/14th of the remaining \$7,000 (\$500 in 2016. Deduct 1/7th of the \$7,000 (\$1,000) for 2017-2022, and the last 1/14th (\$500) in 2023. For investment timber, report the reforestation deduction as an adjustment to gross income on the front of Form 1040. For business taxpayers, report it on Schedule C. Elect to amortize and take amortization deductions on Form 4562, Part VI. Attach a statement to your return showing the date, location, and amount of the expenditure.

Depreciation and Sec. 179 Expensing

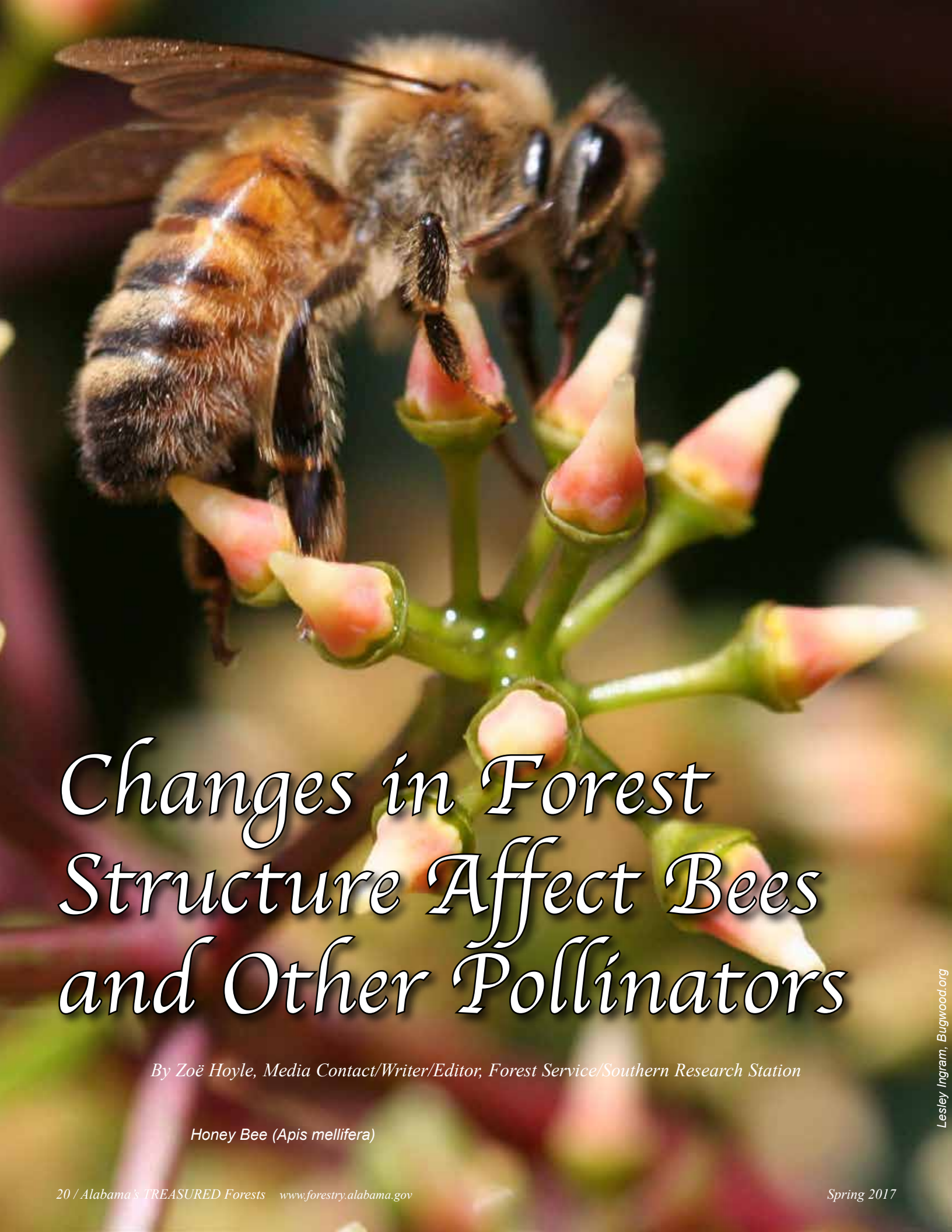
For timber held to produce income, depreciation allows a tax deduction that is based on the cost (basis) of assets used: tractors, machinery, computers, cars, logging equipment, bridges, culverts, fences, temporary roads, or the surfaces of permanent roads. For example, logging equipment and light-duty trucks are depreciated over five years. Land, however, is not depreciable. Also, business taxpayers may deduct up to \$500,000 in the first year for qualifying property in 2016, subject to a \$2,000,000 annual phase-out and business taxable income limitation (Sec. 179 expensing). Separately, business taxpayers may take bonus depreciation equal to 50 percent of the cost of qualifying new business property.

Cost-share Payments

If you receive a payment from a qualified program, you may exclude part or all of the payment from your income if the cost share is used for 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, Conservation Security 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 11: The total qualified capital expenditure for your 200-acre woodland was \$10,000. The Conservation Reserve Program paid \$6,000 and you paid \$4,000. If you had no income from the property in the last three years, you could exclude up to \$9,785 (((\$2.50 x 200 acres) ÷ 5.11%) from your income. The interest rate is from the Farm Credit System Bank. If you had \$9,600 of income from the property in the last three years, you could exclude up to \$6,262 ((10% x (\$9,600 ÷ 3)) ÷ 5.11%). Attach a statement to your tax return describing the cost-sharing program and your exclusion calculations.

(Continued on page 31)



Changes in Forest Structure Affect Bees and Other Pollinators

By Zoë Hoyle, Media Contact/Writer/Editor, Forest Service/Southern Research Station

*Honey Bee (*Apis mellifera*)*

Over the past century, many forests have shifted from open to closed canopies. The change in forest structure could be contributing to declines in pollinator species, especially native bees, according to a new study by U.S. Forest Service scientists published in the journal *Forest Ecology and Management*.

The study shows how common present-day forest conditions affect pollinators, especially bees. “Bees prefer open forests,” says Jim Hanula, a research entomologist at the Southern Research Station (SRS) Insects, Diseases, and Invasive Plants research unit. “We found that total tree basal area was the best predictor for how many bees would be present.” Tree basal area describes the amount of space occupied by tree stems within a given piece of land. Hanula and his colleagues found that in stands with high basal areas, bees were scarce. Bees were also less common in stands with dense shrub layers.

Hanula and his colleagues measured pollinator abundance and diversity across seven types of forest in the Oconee National Forest in Georgia, including dense young pines, thinned young pines, mature open pine with extensive shrub and sapling cover, mature open pine with extensive herbaceous plant cover, mature upland hardwood forest, and mature riparian hardwood forest.

Before becoming part of the National Forest System in 1959, the land now included in the Oconee National Forest was mostly deforested. Its land use history is shared by many other forests in the Southeast, where huge swathes of forests were clearcut during the late 19th and early 20th centuries. Because of the deforestation, as well as the repeated wildfires that swept through the region, reforestation and wildfire prevention were primary conservation goals throughout much of the 20th century. The new forests that have grown in their place tend to have closed canopies and denser shrub layers than before.

“We found that bees were most abundant in mature pine forests with open canopies with flowers and grasses in the understory which provide long-term, stable habitats for bees.” Pollinators were also common in recently cleared patches of forests, but those quickly close and become dense stands of young pine trees that tend to support the fewest bees.

The results have already been incorporated into bee-friendly management principles recently drafted for federal lands. Hanula and co-author Scott Horn, an SRS entomologist, were part of a Forest Service team that wrote and edited the Forest Service best management practices to promote bee health. “We’ve been studying pollinators for more than 10 years,” says Hanula, “and it was great to be a part of something like this that will help guide management and future research.”

One of the principles discussed in the report is how open forests benefit bees. Before European settlement, forests in the Southeast were a mosaic of open pine and hardwood, prairies, and woodland savannas. Maintaining open canopy pine forests with diverse herbaceous communities typically requires prescribed fire, and although bee conservation is not a routine management objective, concern over the fate of pollinators is increasing.

Pollinator conservation is highly compatible with other goals, such as maintaining habitat for the endangered red-cockaded woodpecker. Without insect pollination, most plants would be unable to reproduce. “Pollinators are critically important to forest ecosystems and to people,” says Hanula. “Managing for open forests has a number of benefits, and could also help sustain these species for the future.”

Access the full text of the journal article at www.srs.fs.usda.gov/pubs/48343 or read *Pollinator-Friendly Best Management Practices for Federal Lands* at www.fs.fed.us/wildflowers/pollinators/BMPs/documents/PollinatorFriendlyBMPsFederalLandsDRAFT05152015.pdf

Headquartered in Asheville, North Carolina, the Southern Research Station comprises more than 120 scientists and several hundred support staff who conduct natural resource research in 20 locations across 13 southern states (Virginia to Texas). The Station’s mission is “...to create the science and technology needed to sustain and enhance southern forest ecosystems and the benefits they provide.” Learn more about the Southern Research Station at www.srs.fs.usda.gov/.



Prescribed Fire in an Upland Oak Stand

on the Mary Olive Thomas Demonstration Forest

By John S. Kush, Seth D. Hunt, Rebecca J. Barlow, and Jim Armstrong
Auburn University School of Forestry & Wildlife Sciences

In Alabama, timber markets have shifted dramatically. Hardwood pulpwood is bringing as much money as pine pulpwood, and oak and mixed hardwood sawtimber are selling for more than pine sawtimber. This price phenomena is a marked change from historical stumpage trends. However, many landowners are still hesitant to actively manage their hardwood forests. They may still believe that markets are unfavorable or that hardwood stands should be left untouched for a perceived wildlife value. While this change in markets has brought new opportunities to landowners with hardwood forests, it begs the question of whether landowners are thinking about the regeneration process of these hardwood stands, particularly oak stands.

Successful oak regeneration and management has two main requirements: the presence of competitive oak regeneration and timely release of this oak regeneration. To achieve the conditions needed, prescribed fire can be the most important and cost-effective tool to use. But often, this is the last thing that comes to mind when landowners think about hardwood management. Information and demonstration sites are needed to illustrate the benefits of this often overlooked tool.

To demonstrate how prescribed fire can be used in southern hardwood management, in 2014 we initiated a project at the Mary Olive Thomas (MOT) Demonstration Forest near Auburn, Alabama. The MOT is a 400-acre woodland that was given to the Alabama Cooperative Extension System (ACES) in 1983 for forest management demonstration and outreach purposes. Management of the forest is overseen by the School of Forestry and Wildlife Sciences (SFWS) at Auburn University.

Approximately 10 acres on the MOT were selected for this demonstration because of its high proportion of oaks, hickories, and yellow-poplar in the overstory, a beech-dominated midstory, and an absent understory. Individual trees on the stand were

stem-mapped and cataloged to determine the species composition, stand density, and stand basal area. No management activities had been conducted in over 30 years, other than a firewood salvage in 1996 after Hurricane Opal caused many overstory trees to topple.

The results of this inventory showed that the stand averaged 138 trees and 96 square feet of basal area per acre. Basal area per acre per species group was 22.3, 17.5, 17.3, 21.2 square feet for white oaks (*Quercus* spp.), red oaks (*Quercus* spp.), yellow poplars (*Liriodendron tulipifera*), and hickories (*Carya* spp.), respectively. Notable species found in the overstory consist of white oak (*Quercus alba*), northern red oak (*Quercus rubra*), post oak (*Quercus stellata*), yellow poplar, pignut hickory (*Carya glabra*) and American beech (*Fagus grandifolia*). The midstory is comprised mostly of American beech of both small and large diameters. American beech accounted for 8 square feet of basal area per acre. The understory is relatively open, lacking much in the way of advance regeneration of desirable species and has a developed leaf litter layer. The litter layer averaged around 2.9 +/- .8 inches with an average dry weight of 5.1 +/- .9 tons per acre. Tree cores at breast height from several oaks indicated they were generally over 60 years of age. The yellow poplar is younger; a majority cored were 40 years old.

The stand offers several options in terms of upland hardwood management. Depending on the objectives, management and the subsequent regeneration process of the stand can focus on either oaks or yellow poplar. Given the presence of white oak and northern red oak, the stand offers a unique opportunity to demonstrate oak regeneration techniques. However, widespread difficulty has been encountered when trying to regenerate oaks on average or productive sites due to erratic seed production, acorn

consumption by animals, defoliation and browsing of oak, and decreased fire frequency.

Regardless of the species choice, management practices are a necessity to promote seed germination and seedling development. This meant that the deep leaf litter layer needed to be reduced, and midstory competition from the American beech addressed. American beech is a very shade-tolerant tree that is capable of growing under an existing overstory. Even just a few American beech in the midstory can shade out potential regeneration of more desirable species such as oak. Although prescribed fire was our most effective tool to reduce the litter layer so seeds could make contact with mineral soil and successfully germinate, there was concern about the potential for damage to the existing overstory, especially damage at the base of the trunk which could impact wood quality.

After an extensive review of the literature, it was determined that larger diameter oaks and yellow poplar should not be adversely impacted by properly conducted prescribed fires. Frequent, low-intensity fires are a natural part of upland southern hardwood systems. Oak seedlings are naturally adapted to fire. They develop strong root bases before they begin growing upwards, which initially is quite slow. As a result, fire will only top-kill oak seedlings, and the powerful oak root base will resprout growing stronger each time so that it is eventually able to outcompete other faster growing species. With lack of fire, upland oaks are often outcompeted by faster growing species and will eventually die due to lack of sunlight. The proper use of fire will kill and reduce oak competition, allowing them to develop.

In early 2015 we started to look for burn days. We wanted conditions where the leaf litter layer was damp at the soil surface and a steady wind of 2-3 mph. In mid-March we got what we thought was a good day to burn. Once our fire lines were secured, we had four people run lines, each about 120 feet apart, in order to avoid a large flaming front. The winds were less than forecasted and in some areas there was little fire movement. It was estimated that about 65 percent of the stand burned, removing about the same percentage of leaf litter. During the following summer and fall, we did visual checks of trees to assess basal stem damage to overstory trees. Oaks, yellow poplar, and hickories sustained no damage. There was some damage to smaller stems of American beech, but no mortality was seen.

Within the areas that did burn, we found over 100,000 seedlings per acre of yellow poplar regeneration present. It is interesting to note that this stand had a high percentage of yellow poplar seed that was in the soil seed bank. This is where seed is naturally stored in the soil waiting for conditions to be optimal for germination. In some cases, seed can remain viable for up to seven years. However, the following summer we found that most of the yellow poplar regeneration had died due to the low light conditions within the stand. Very little oak regeneration was found. This was also due to the high amount of shade/basal area.

Since we did not obtain the coverage we had hoped from the 2015 fire, we burned the stand again in March 2016. We followed the same procedure, but this time picked a day with lower humidity, 40-45 percent, and higher winds, 3-5 mph. This time we achieved 100 percent coverage of the stand and complete leaf litter layer removal using the same ignition techniques as the 2015 fire. This fire did have an impact on the American beech, causing mortality in the smaller diameter classes, less than 6 inches DBH, and basal damage to some of the larger beech trees. We also noticed considerable die-back in the tops of many of the beech trees. The oaks, yellow poplars, and hickories continued to show no signs of basal stem damage. With this burn, we saw a slight increase in oak regeneration for a few months after the fire, particularly white oak. However, by the end of the 2016 growing season there was no surviving oak regeneration. We cannot say whether the mortality was due to the dense shade created by the overstory or the drought experienced by the state, probably a combination of both factors.

The Mary Olive Thomas Demonstration Forest was designated as a TREASURED Forest in 1979. A virtual tour of it can be found on the ACES web site: <http://www.aces.edu/natural-resources/forestry-wildlife/MOT.php>. The management goals of MOT are to incorporate not only timber production but other values such as wildlife and aesthetics. Our efforts in this hardwood stand on MOT demonstrate the possibilities of upland hardwood management to landowners, and provide opportunities for hardwood management education within the SFWS. We hope that over time this demonstration will not only improve the condition of this upland hardwood forest, but will also help address some of the concerns and misconceptions about the use of prescribed fire in southern hardwood management. To date, we are very pleased with results from the two prescribed fires. ♣



Meet the Emerald Ash Borer

Alabama's Newest Invader

Unfortunately, Alabama is now the latest state to host another unwelcome exotic tree-killing insect. Emerald ash borer, a federally-regulated insect pest, was recently confirmed in Calhoun County. Already existing in neighboring states with counties that border Alabama, the news is not too surprising. Natural spread and long-distance movement of this non-native pest would inevitably cause its discovery here.

Originally from Asia, the emerald ash borer was first detected in Michigan in 2002. This wood-boring insect most likely came into the United States on untreated wood packing material from China. Since then, it has spread into several states and Canada. The emerald ash borer attacks all species of ash (*Fraxinus* genus) in North America, preferring green ash (*F. pennsylvanica* Marsh.) and black ash (*F. nigra* Marsh.).

Aware of the possible threat, Alabama's agricultural and forestry agencies have continuously monitored the presence and spread of the emerald ash borer since 2008. Each year in the spring, over 400 surveying traps are deployed statewide in areas with a significant population of ash trees. The traps are routinely checked and insects caught are sent to the laboratory for identification.

The importance of monitoring for the presence of the emerald ash borer is to protect the existence of native ash trees across our state. Even though ash species make up a small percentage of Alabama's total forest cover (approximately 1.4 percent), it is still a vital part of the state's forest ecosystem and timber industry. Several million board feet of ash wood is utilized annually. Of the 119 active primary mills in the state, 13 still currently use ash timber. During the previous year, approximately 7,275,000 board feet of ash was processed. In addition to knowing the exact volume of ash trees in our cities and towns, their ecological, scenic, and cultural significance in our urban forests is immeasurable.

The adult insect is metallic green and approximately 1/2 inch long. The bullet-shaped body is narrow and elongated. The head

is somewhat flat with two large, black eyes and two short antennae. The adult borers emerge from pupation near the surface of the tree from April to early July, with peak emergence occurring in June. When they emerge, they create D-shaped exit holes approximately 3/16 inch in diameter in the infested tree trunk and branches. For the next two weeks, the adults feed on ash foliage to complete maturation. Once the adults reach this developmental stage, they mate and soon die. Some may continue to be active until October.

Each female adult borer lays approximately 70 eggs in bark crevices or between bark layers generally from May to August. In some cases, an adult female can lay as many as 300 eggs. In seven to ten days, the eggs hatch and the larvae appear, creamy white in color. Although adult wood borers cause minor damage to host trees, the larvae are the most destructive. The newly hatched larvae bore into the tree until they reach the phloem and cambium layers. They feed and create winding galleries underneath the bark, preventing the transportation of water and nutrients. Once the larvae reach a mature size (1 to 1.5 inches long), they tunnel into the outer sapwood (xylem layer) to pupate. As winter approaches, the emerald ash borer larvae or pupae becomes inactive. By the following spring, usually by late March, they become active again and resume their developmental process. In the US, the entire life cycle of the emerald ash borer is generally one year.

Healthy or stressed, all native ash trees greater than 1 inch in diameter are susceptible to attack. The



Daniel Herms, Ohio State University, Bugwood.org



emerald ash borer will first infest the larger branches in the crown, making the initial stage of attack unrecognizable. Eventually, affected areas will have yellowing of the foliage, then dying and dead branches appear in the upper crown. As a response to the infestation, the tree will often produce epicormic shoots at the lower areas of the trunk where wood tissue is still healthy. As the pest moves down, attacking lower areas of the tree, the bark will sometimes split on the infested trunk and branches in the later stages of attack, exposing areas of the wood borer's galleries. Girdling of the tree is quite evident due to the feeding activity in the phloem and cambium layers. With water flow and nutrients disrupted, the entire ash tree will ultimately succumb within two to five years.

Controlling the emerald ash borer is difficult, and there is currently no known method to completely halt its spread. Some landscapers and arborists are using systemic insecticides for high-valued or ornamental trees. Research is also being done to test native wasps and beetles that might prey on this exotic pest. The primary recommendation, however, is to prevent the introduction of the emerald ash borer through early detection and destruction of infested trees. Cut down the infested tree, chip the wood into 1 square inch or smaller pieces, and burn the debris at the original location. If burning is not possible, cut down the

tree, chip the wood into 1 square inch or smaller pieces, and leave the debris on site. Tarpaulin or other types of plastic covering can be placed over the chipped debris for an extended period of time to reduce the emergence and survival of the pest. Since the borer can live in cut wood, do not move infested wood debris or firewood long distances into other areas.

According to Dana Stone, Forest Health Coordinator with the Alabama Forestry Commission, "This is the time of the year that the emerald ash borer will become active again. Calhoun County and neighboring county residents should be cognizant of symptomatic ash trees." She continued, "Specific guidelines and a systematic process must be followed when analyzing any form of infested ash material. Samples should only be collected and transported by trained personnel. If there are plausible infested ash trees, please report the condition to the Alabama Forestry Commission. Our employees will conduct a site visit to evaluate the situation and identify the problem."

The Alabama Department of Agriculture & Industries (AGI) working with the USDA Animal and Plant Health Inspection Service (APHIS), the USDA Forest Service, and the Alabama Forestry Commission recently established a quarantine for the affected area to limit the insect's human-assisted spread within the state. The regulated area consists of Cherokee, Cleburne, and Calhoun counties. Regulated articles include any product that may harbor the emerald ash borer (at any developmental stage: egg, larva, pupa, or adult) including hardwood firewood, ash nursery stock, non-heat-treated ash lumber, and other unprocessed ash wood material (stems, roots, stumps, etc.).

The quarantine will allow the movement of a regulated article outside of the regulated area once the hauler has entered into a compliance agreement and obtained a permit from the AGI, only during the emerald ash borer's 'no fly' period from November 1 to March 1. Any wood-processing facility outside of the regulated area receiving regulated articles from the regulated area must also enter into a compliance agreement with the AGI.

For information about the emerald ash borer, contact Dana Stone, Forest Health Coordinator with the Alabama Forestry Commission, by email Dana.Stone@forestry.alabama.gov or telephone (334) 240-9363. To learn more, visit the AFC's website at www.forestry.alabama.gov or The Southern Regional Extension Forestry's website at www.southernforesthealth.net/.

For questions regarding the quarantine, contact Christel Harden, Plant Pest Administrator/State Plant Regulatory Official with the Alabama Department of Agriculture & Industries, by email Christel.Harden@agi.alabama.gov or telephone (334) 240-7226. ♣



David Cappaert, Bugwood.org

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Classifying Forest Insects by Feeding Habits



By Dr. David Mercker, Extension Forester, University of Tennessee

Forest entomology is a challenging science. Most of us have little more than passing knowledge of insects in the forest and yard settings, including foresters. Yet Extension educators receive numerous calls involving trees and insects – damage, identification, and control. The Woodland Steward (Fazio 1987) has an excellent section whereby common forest insects are classified according to their feeding habits. By understanding feeding habits, insect control (if necessary) becomes easier. Following is a brief summary of the classifications.

Defoliators – Defoliating insects eat the leaves of trees (both broad leaves and needles); the damage is easily seen via loss of foliage and ‘droppings’ located under the crown. Insects regularly feed on leaves and normally damage is minimal except when outbreaks occur. In our region, some of the more common defoliating insects include sawflies, forest tent caterpillar, variable oakleaf caterpillar, and leafminers.

Bark Beetles and Other Bark Borers – Over 100 insect species fall into this very destructive category. Adults excavate the sugar-rich phloem just under the bark where they lay eggs; larvae hatch and continue eating their way from the main gallery through many smaller galleries. In our region, some of the more common bark beetles include southern pine and Ips engraver beetles, emerald ash borer, walnut twig beetle, flatheaded borers, and two-lined chestnut borer.

Wood Borers – Similar to bark beetles, wood borers mine deeper into the tree and damage the new wood (called sapwood or xylem). Sometimes wood borers cause little to no damage (such as for overwintering purposes), while other times their galleries can sever the flow of water to the foliage and cause rapid mortality. Fine sawdust (also called frass) is often seen on the bark and near the trunk. In our region, some of the more common wood borers include ambrosia beetles, oak borer, and carpenter worms.

Terminal Feeders – This category of tree pests feed on buds or roots; a few even cause damage by girdling twigs. Rarely is their damage lasting (unless repeated annually); rather, they mostly deform the bowl and crown of younger trees. In our region, some of the more common terminal feeders include Nantucket pine tip moth, pales weevil, twig borers, and girdlers.

Sucking Insects – Insects that rob trees of their food by drawing fluids from the leaves and fine branches are sucking insects. Rarely do they cause death, but can spread tree diseases. In our region, some of the more common sucking insects include aphids, woolly adelgid, scales, spittlebugs, and cicadas.

When attempting to identify forest/tree insects, it helps to first classify their feeding habits. Control is then made easier. Some insects, such as the emerald ash borer, are very serious threats and restrictions on movement of wood products exist. ☞

Reference: Fazio, J.R. 1987. The Woodland Steward. The Woodland Press. Moscow, Id.

MEMORIAL

Jerry Brown 1941-2017



By Joel Glover, Alabama Wildlife & Freshwater Fisheries

Were do you begin to tell the story of a wonderful friend? Jerry Brown was so many things. A devoted husband, a faithful friend, an award winner again and again. Having personally reviewed over 900 TREASURE Forest nominations and served on Helene Mosley Memorial TREASURE Forest Award selection committees for over 20 years, I learned early on when evaluating a property for certification or award you must look at the landowner and the property. The first time I met Jerry Brown, I knew I had found a real gem in both categories; however, I didn't know the half of it.

As I got to know Jerry and his wonderful wife, Genelle, I quickly learned this was a couple whose land ethic and steward-

ship mindset warmed my heart. They were an efficient and effective team, no matter the endeavor.

When I try to define Jerry Brown, so many descriptions come to my mind. When I think of Jerry, I think educator. Jerry was all about education. Whether it was training thousands of young hunters, teaching an outdoor skills class, or speaking to landowners on a tour of his property, Jerry was an educator. Jerry headed the Tallapoosa County Hunter Education group for many years. He was a charter member of the Alabama Hunter Education Association. He received the Governor's Conservation Achievement Award as Hunter Education Instructor of the Year and was inducted into the National Hunter Education Hall of Fame.

Photo above: Jerry Brown was always busy teaching others about stewardship. His influence will live on in those he taught.

When I think of Jerry, I think mentor. Although I received two degrees and have 30 years of field experience, Jerry mentored me on most every visit to his property. He possessed a vast knowledge of the outdoors and an intense desire to know even more. One of our last outings prior to his sickness was digging up medicinal plants and transferring them to his property. He never quit learning or teaching.



When I think of Jerry, I think stewardship. What a tremendous steward of the land . . . he and Genelle worked tirelessly making their property the best it could be. Certified as a TREASURE Forest, the Browns were recipients of both the Helene Mosley Memorial Award and a W. Kelly Mosley Environmental Award. Their property is at once a showplace, yet a work in progress. Jerry was very open to trying something new, and the diverse landscape they developed provides habitat for a wide array of wildlife species. Jerry was the only landowner I know who deadened pine trees to provide woodpecker habitat. The property is home to many rare plants, and is adorned with beautiful wild flowers. It has been my privilege to take literally thousands of photographs of wild flowers, birds, fields, plants, and moths on their property. Jerry's love and respect for the Lord's creation was evident to everyone. I once had a prominent TREASURE Forest landowner and Helene Mosley winner tell me no one would ever be able to compete with Jerry Brown for having the best property. I had to agree.

As I already mentioned, I have been on many great properties and have met numerous outstanding landowners; however, none were more willing to share their property than Jerry and Genelle. Any project I ever suggested to Jerry was met with open arms. His time, talents, and assets were always available. I don't know how many times he served with me on Helene Mosley selection committees, landowner tour committees, or just acted as a sounding board when I needed to vent. What a tremendous resource he was.

As a law enforcement officer, I always had to be careful about accepting invitations to hunt. However, Jerry Brown was all about law and order and doing things by the book, so I knew I never had to worry about anything illegal taking place on his property. It was my privilege to take both of my sons hunting there. Jerry filmed my youngest son killing his first turkey, and my oldest son completed his Eagle Scout project at Jerry's shooting range. When I thanked Jerry for his help, his reply was, "It

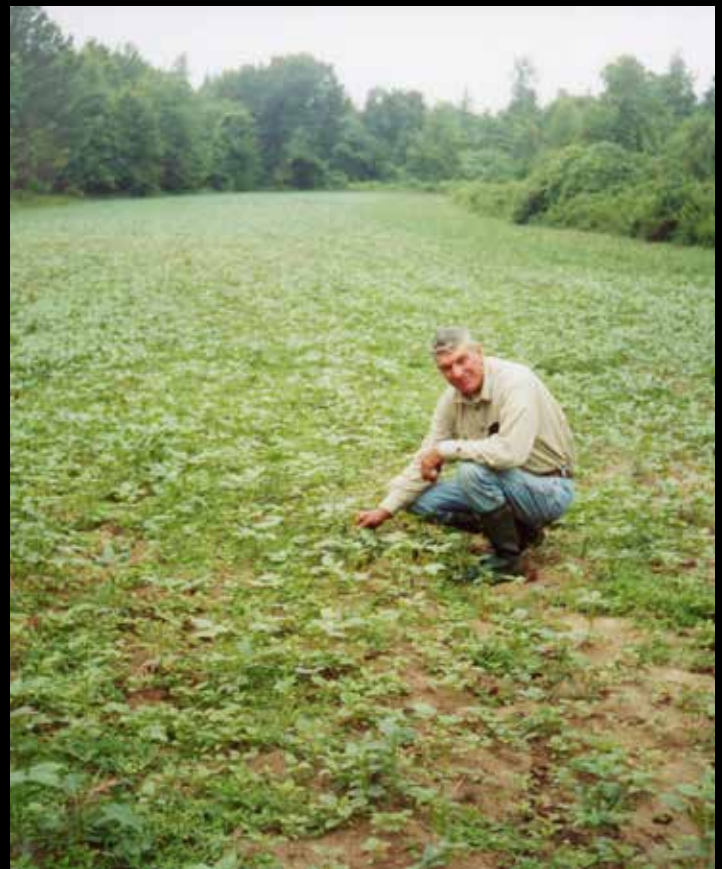
was just one Eagle Scout helping another." 'Be Prepared' was a motto Jerry lived by.

One of my favorite quotes is from legendary coach Vince Lombardi which says in part, "The will to win and the will to excel, these are the traits that last." Jerry excelled at every endeavor, yet he was a humble man. With all of his accomplishments and the many accolades received, Jerry understood the admonition from Romans 12:3 which reads, "For I say, through the grace given unto me, to every man that is among you, not to think of himself more highly than he ought to think; but to think soberly, according as God hath dealt to every man the measure of faith." Although Jerry carried the titles of Colonel, President, Chairman, Charter Member, and many others, he rarely thought of himself but always thought of others.

The morning after Jerry died found me in a familiar place. As I listened to the world come to life, I reflected on the many times we had shared sacred moments such as this. As the whippoorwills, owls, and gobblers did what they do, I knew from this day forward they would remind me just how blessed I am to have had Jerry as my friend. As I knelt and prayed over a fine gobbler that morning, the emotion was almost overwhelming. Although my heart was broken and tears streamed down my face, I found solace knowing my dear friend was in a better place.

While I feel such profound loss, I know my cherished friend's influence will live on in the thousands he taught and all those he had known.

I don't know for sure just what heaven will be like, but if there is a break in the praise, I'm certain Jerry will be checking out the countryside. Maybe he will find us a turkey to chase. Go rest high, my dear friend; I look forward to when we meet again. And once again, thank you. 🙏





New TREASURE Forest Certifications

Congratulations to the 46 landowners and properties who were awarded TREASURE Forest certification at the first two TREASURE Forest sub-committee meetings for the year 2017. With these landowners, 9,557 acres were added to the TREASURE Forest program in Alabama. Also at these meetings, 23 landowners received re-certification.

Currently, Alabama has 2,112 TREASURE Forests with a total of 1,919,576 acres of forestland being managed under the guidelines of the TREASURE Forest program. ♣

Name	County
Geraldine Atmore	Greene
Derek Brewer <i>Brewer Farm</i>	Dale
Richard Burge <i>BDL Farms</i>	Dallas
Brian Burgess	Lauderdale
James Chamblee	Cullman
Cheryl Cochran	Morgan
Faye & Willard Corley	Hale
Carl S. Coxe	Chilton
Dorothy Craven <i>Songbird Arbor</i>	Lauderdale
Donny Daugherty	Clay
Jimmy Davis	Conecuh
Dale Dodd	Marion/Fayette
Jim & Becky Ellis	Coffee
Steuart Evans, Jr. <i>Airport Properties</i>	Limestone
Gordon Fennel	Colbert
Louis Finlay, Jr.	Clarke
James Golden	Elmore
Bill & Aimee Gray	Houston
R. B. Griffin	Clay
Shannon Haggard	Lauderdale
Hoyt Harbin <i>Harbin Family Partnership</i>	Jackson
Jacob W. Hill	DeKalb

Name	County
John & Leigh Ann Hixon <i>5th Generation Timber Farm</i>	Pike
Andy Ray Hughes	Coosa
Roger Ingram	Elmore
Wilton 'Bud' Johnson	Coffee
David M. Johnson, Sr.	Monroe
Dr. Frazier Jones <i>LBG Farms</i>	Macon
Jeffrey, Sr. & Karen Knotts	Pike
Baron Litaker	Autauga
Walter G. Mills <i>Blue Springs Farm, LLC</i>	Barbour/Geneva
Darlene Morr	Henry
Susan Morrow	Lee
John Frank Morrow	Tallapoosa
Drew & Ericha Nix	Macon
Mike Onderdonk	Washington
Donnie Pinion	Walker
Kyle & Margaret Redden	Baldwin
Michael Spivey	Calhoun
Buddy Thomas	Escambia
Wayne Tumlin	Etowah
William Turk	Mobile
Richard Vining	Marion
Wayne Whitaker	Marshall
Greg & Karen Whitis	Hale
Pat Williams	Cleburne

Correction

In the Fall 2016 issue of *Alabama's TREASURED Forests*, the article on page 22 entitled "Prescribed Fire Improves Quail and Red-cockaded Woodpecker Habitat at Enon-Sehoy Plantation" should have been attributed to Holly Campbell, Extension Associate, Southern Regional Extension Forestry as a success story of the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy). We apologize for the error and any confusion it may have caused.

The National Cohesive Wildland Fire Management Strategy (Cohesive Strategy) is a national collaborative effort to bring a broad cross-section of stakeholders together to address wildland fire management challenges. The Cohesive Strategy directs wildland fire planning activities and has three primary goals: restore and maintain

landscapes, develop Fire-Adapted Communities, and improve wildfire response. The Southeastern Regional Coordinator of the Cohesive Strategy, in partnership with the Southern Regional Extension Forestry, has been collecting success stories that highlight regional wildland fire accomplishments that support implementation of the Cohesive Strategy in the Southeast. The stories demonstrate how the Southeast is improving its 'fire resiliency' through technology, education and outreach, forest management, collaboration, and more. Success stories also serve as a model for other communities to follow. Learn more at www.southernwildfire.net. ☞



Cover Photo

(Continued from page 3)

Yellow poplar (*Liriodendron tulipifera*) is the tallest hardwood in eastern North America, with the largest specimens reaching over 160 feet in height. These trees are valuable to the lumber industry as the wood is desired for furniture, pulp and paper, as well as musical instruments (especially organs).

A favorite of honey bees, yellow poplar flowers typically grow high in the canopy facing upward. Since they grow so high up, binoculars are often required to see a flower still attached to the tree. In the southern United States, the flowers usually bloom between April and June. ☞

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2016 TAX Tips for Forest Landowners

(Continued from page 19)

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 the fair market value caused by the casualty or your basis in the timber block (the area you use to keep track of your basis). A competent appraisal usually is required. Similarly, a theft loss deduction is limited to the lesser of the decrease in fair market value or your basis in the stolen timber.

Conservation Easement

Donors of qualified conservation easement can take a tax deduction. The deduction is up to 50 percent (or 100 percent for qualified farmers and ranchers including forest landowners) of the taxpayer's AGI in a year. Any excess donation over the 50 or 100 percent limit may be carried forward to 15 years.

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, if you only have occasional timber sales (one or two sales every three or four years), you are not required to file. ☞

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CINNAMON FERN (*Osmundastrum cinnamomeum*)

By Fred Nation, Environmental Services, Baldwin County

Little changed from its present form for more than a hundred million years, the fossil record suggests that cinnamon fern is a 'living fossil.' Recent genetic research has established that cinnamon fern is sufficiently different from other *Osmunda* species, so that it has been renamed and moved into a new genus, *Osmundastrum*, which means 'similar to *Osmunda*.'

Cinnamon fern is one of the largest native sporophytes in the eastern United States, with individual plants growing to 5 feet tall and 10 feet across. It is 'dimorphic,' which means that plants produce separate fertile and sterile fronds (fern leaves are called fronds). The stiff, vertical fertile fronds appear first, in early spring. As they develop and release their reproductive spores they develop a rich orange-brown color which gives cinnamon fern its common name.

Early in the growing season the spiral, curled fiddleheads develop into large, pinnately compound, sterile green fronds which conduct photosynthesis. Cinnamon fern is deciduous; the plants die back with cold weather, but they are perennial, with regrowth from the same rootstock the following spring. The stiff, wiry roots often persist over many years, and they can become quite large. This root mass is a good medium for growing orchids and other epiphytic plants. Harvesting of these marketable roots has caused cinnamon fern numbers to decline in some areas, but Alabama populations appear to be substantial and healthy.

Many herbal, medicinal and culinary uses have been attributed to cinnamon fern. The fiddle heads have been eaten as fresh

and cooked vegetables. Root preparations have been used topically as a treatment for rheumatism, and it has been taken internally as a treatment for snakebite. It should be noted that individual sensitivities and mis-identifications can make the medicinal and culinary uses of ferns and other wild plants a com-

licated, perilous business, which is not recommended without advice from a bonafide expert.

Cinnamon fern has a huge native range on three continents. In North America it occurs from Labrador to Ontario, south through the eastern United States, to Mexico and the West Indies. In South America it occurs in Peru, south to Paraguay, and in Asia it is native to Siberia, Japan, China, and Viet Nam. These beautiful ferns can be found throughout Alabama, in moist-to-wet sites, usually in part or full shade.

Cinnamon ferns are sometimes available from nurseries, and they are easy to grow as bedding plants or as eye-catching specimens in the landscape.

The orange-brown fertile fronds, spiral fiddleheads, and the long, green sterile fronds are all dramatic shapes that will add interest to any garden with good moisture and a bit of mid-day or afternoon shade.☘



Photo by Fred Nation