ALABAMA'S TREASURED FORESTS

A Publication of the Alabama Forestry Commission

Summer 2016

Message from the *STATE FORESTER*

Dan Jackson, Acting State Forester

Change. We all encounter it in some form or fashion in our lives. As forest landowners you know all too well what change is about. Whether it's a planned change regarding your forest makeup or an unplanned occurrence such as a weather disaster, change inevitably comes to all of us at some point.

As summer winds down, fall approaches and we make preparations across our forestland. Conducting site prep burns, constructing firebreaks, applying herbicide applications, planting winter wildlife food plots, performing timber harvesting operations, completing boundary line maintenance, or hosting fall landowner tours and school field days . . . the list goes on and on. There is always work to be done for the Alabama forest landowner.

I am constantly amazed at how Alabama landowners manage natural resources and their ingenuity in doing so. These folks are a smart and resourceful bunch! I always learn something from them when visiting their properties.

We here at the Alabama Forestry Commission contend with change as well. As a dynamic, flexible government agency we encounter change, whatever it may be, deal with it and move forward. The associates of the AFC stand ready to assist you in your forestland needs.

We also encourage you to take advantage of the upcoming forestry events, field days, and tours that will be occurring across the state over the next couple of months (see pages 7 and 32) as they are sure to benefit you, the forest landowner.

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***Cover**: Busy bees visit late blooming summer flowers at Fern Valley, TREASURE Forest of Barnett and Edna King in Crenshaw County.*

Photo by Elishia Ballentine

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RIVERWOOD
A Dream Comes True

The Wood family enjoys sharing time together at Riverwood: Andrew and his wife Stephanie, Luke, Suzanne, and Stan, along with faithful companion, Jack.

By Allen Varner, Stewardship Forester, Alabama Forestry Commission

Nestled along the Mulberry River in south Cullman County is Riverwood, the TREASURE Forest of Stan and Suzanne Wood. 'Riverwood' began as a dream, as Stan always wanted to own land on the river. Having a dream is good, but it takes time – as do most things worth having – and it takes hard work. Time spent at Riverwood is truly a labor of love for Stan as he has been able to realize his dream and live his passion.

Following his graduation from the University of Alabama in the early 1980s with a business degree, Stan and Suzanne married. They moved to Lake Charles, Louisiana, where he worked as a trucker in the oil field industry, while she finished college and taught school. Returning to Alabama in 1988, he worked for Alabama Proteins in Hanceville and purchased his first tract of land, 83 acres in the Black Bottom area of Cullman County. In 1995, the Woods started a trucking company in the area. Suzanne split her time between teaching preschool and helping Stan with the business. As Stan says, "the timing was pretty good," so they sold the company in 2006. They then bought the tract along the Mulberry River and have since accumulated timberland in Blount, Cullman, Greene, and Mobile counties. Detailed forest management plans are followed for each of these properties.

The primary tract, Riverwood Outdoors, is managed as a hunting lodge and licensed quail preserve. Hunting operations begin with opening day of dove season in early September and continue through turkey season at the end of April. The rest of the year is busy with farming, logging, prescribed burning, and other activities to promote the hunting operation. All logging, hauling, road building, and construction are done in-house with company-owned equipment and crews employed by Riverwood. Stan wears lots of hats . . . in addition to holding a commercial driver's license (CDL) and being a professional logging manager, he is also well-qualified as a certified prescribed burn manager and certified pesticide applicator.

Riverwood's forests are intensely managed for both wildlife habitat and long-rotation timber production. Most of the property was formerly owned by major timber companies and was managed as loblolly pine plantations. Trees were grown at a very tight spacing to maximize fiber production. This outcome resulted in a completely closed canopy forest with very little wildlife value because minimal sunlight reached the forest floor. These plantations were opened up by thinning crowded stands to more park-like densities which are now thinned early and often. Old logging decks were cleared, expanded, and planted with clovers and small grains. Some fields were left fallow to provide cover and bedding areas. The outcome is an open forest with a lush herbaceous ground cover providing excellent habitat for ground-nesting birds such as quail and turkey, as well as other game and non-game species.

While first developing the property, Stan relied on advice from consulting foresters and wildlife biologists, as well as the Blount and Cullman County offices of the Natural Resources Conservation Service, Soil and Water Conservation District, and the Alabama Forestry Commission. He also enrolled properties in several cost-share programs that helped him get started with developing fire lanes, site prep, tree planting, and controlling invasive species.

In the beginning, Stan's idea of wildlife management was installing a green field. By working with these various professional agencies, he began to realize that wildlife habitat is much more than a green field. It is managing the entire property through thinning, spraying, and burning. Methods include planting or encouraging wildlife-friendly trees to grow (such as Chickasaw plum, southern crabapple, and various oak species), as well as manipulating the habitat to allow sunlight to reach the ground to produce a lush and dense herbaceous layer. Approximately 10 percent or 400 acres of the property are held in some type of food crop, depending on the season. In summer, he plants corn, sunflowers, or soybeans. Crops are left standing throughout the year to feed wildlife. In winter, grass crops such as clover and wheat are planted. Since taking this holistic approach, Stan has noticed an increase in the number of quail. Now, most evenings, when Stan and Suzanne sit on the front porch, it's a common occurrence to hear the bobwhite call.

Realizing the value of working with organizations that share the same conservation ethic, Stan has joined the National Wild Turkey Federation, Quality Deer Management Association, and Quail Unlimited.

Although wildlife management is Riverwood's primary objective, Stan does not neglect his timber management. Inferior trees that are crooked, forked, or damaged are removed from the forest, leaving the best trees to grow into saw logs. When harvesting operations are performed, the pulpwood is hauled to Louisiana Pacific in Hanceville and saw logs are hauled to Jasper Lumber. Clear cutting is used as needed when trees reach maturity, in excessive wind-damaged areas, and in pine beetle-damaged areas. After a clear cut, the site is chemically treated and either replanted with genetically-improved loblolly seedlings or converted to longleaf pine. Since 2010, about 200 acres have been converted from loblolly to longleaf.

During thinning operations, quality hard- and soft-mast producing trees are marked and left as a wildlife food source. Openings are created to provide food plots and fallow openings are left throughout the forest. Fruit trees have been planted along roadsides to provide additional food and establish wildlife viewing opportunities. Nesting boxes are installed for blue birds, martins, woodpeckers, and wood ducks. Bushes are selected based on their wildlife benefits and are protected during logging operations.

After thinning, stands are treated with herbicide to control woody competition. A regular prescribed burning program is used to provide additional control of mid-story hardwoods. An aggressive herbicide treatment program is used to control non-native invasive species such as Chinese privet, kudzu, and mimosa.

Another priority at Riverwood is providing good access throughout the property. Daylighting roads, then planting road edges with clovers and wildflowers not only helps with road maintenance but also doubles as linear wildlife openings. Where necessary, roads are graveled and culvert pipes installed to help control erosion.

In total, pine stands are separated by about 50 miles of graveled roads. The roads serve a dual purpose, not only offering

(Continued on page 6)

Riverwood

(Continued from page 5)

access, but also acting as a fire break for an intensive prescribed burn program and to keep fire out of hardwood areas. Much like a checker board, the roads divide tracts into approximately 40-acre blocks that are burned on a rotating basis. Using this checker board analogy, one year Stan burns the red squares and the next year he burns the black squares, so that every two years the entire property is burned.

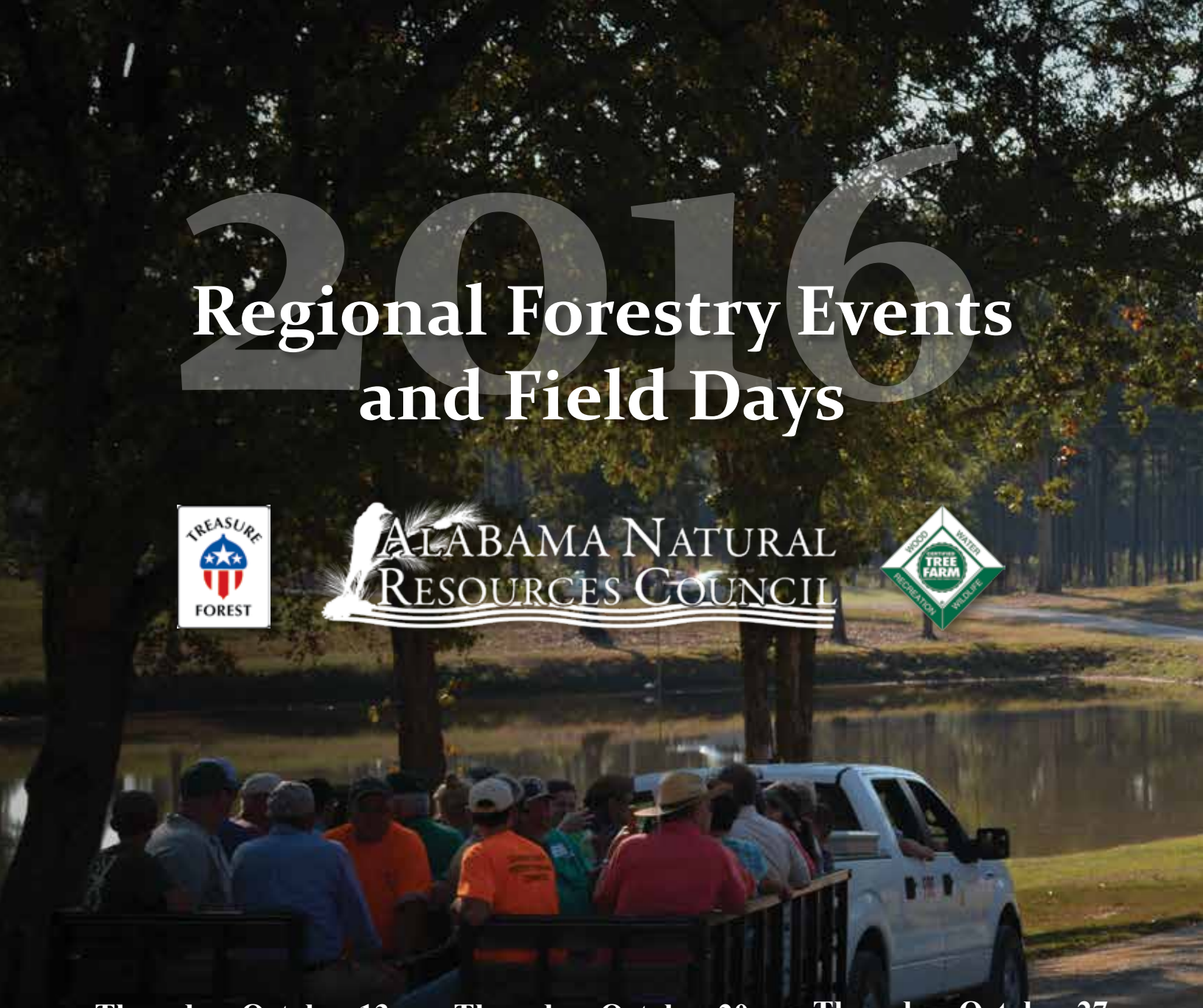
Riverwood is truly an interesting place. To help record its colorful history – which includes bootlegging operations, grist mills next to the river, and a Methodist Church that had to go underground during the Civil War – local residents have been interviewed and their conversations documented. Another historical and educational item of interest on the property is old Shiloh Cemetery, which has been restored and contains about 87 markers. The names, along with birth and death dates have been documented.

The Woods have hosted several agencies' educational events at Riverwood over the past few years. The Cullman County Forestry Planning Committee held a TREASURE Forest Landowner tour here in 2010. The Natural Resources Conservation Service held tree identification, as well as wildlife and timber stand improvement classes in 2010 and 2011. In 2013, the Alabama Forestry Commission held a two-day training session on tree identification on the property. The Cullman County Future Farmers of America 'Forestry Judging' contest, sponsored by the Cullman County Soil and Water Conservation District, was held at Riverwood in October 2013. The local Boy Scouts conducted their 'Camporees' in 2013 with over 100 scouts attending, and have also held two campouts this past year. Finally, the Alabama Natural Resources Council's 2015 Forestry Field Day Event for the North Region was hosted here.

Stan's time and labor have been rewarding, with Riverwood receiving certification as a Stewardship Forest, a TREASURE Forest, and a Certified Family Tree Farm. Additionally, it was also the first privately-owned property in North Alabama to be certified FSC compliant. There has been other recognition. Because of his dedication to conservation, Stan was named Wildlife Conservationist of the Year by the Cullman County Soil & Water Conservation District in 2012. Because of their commitment to good land stewardship and education, Stan and Suzanne were winners of the Helene Mosley Memorial TREASURE Forest Award in 2014.

Riverwood Outdoors, while certainly a dream come true, is also an excellent example of a TREASURE Forest. The goal of the Wood family is to continue to enhance the property for multiple uses, providing opportunities for both present and future generations to enjoy. Stan says it very well, "As a steward of the land, as a Christian and responsible owner, it is our right and a great honor to be able to do what we do!"

2016 Regional Forestry Events and Field Days



Thursday, October 13
South Region

*Cedar Creek Plantation**
Butler County

RSVP: Daria Scott or Rose Mary Smith
Phone: (334) 382-3151 ext. 2

Topics include:

- *The Red Hills of South Alabama*
- *Water Quality*
- *Native American Culture in 18th Century Alabama*
- *Water Quality and the Private Landowner*
- *History of Manningham*

Thursday, October 20
Central Region

*Rolling Mountain Plantation**
Coosa County

RSVP: Jennifer or Lori
Phone: (256) 377-4713
or (256) 377-4750

Topics include:

- *Burn or No Burn, There is a Difference!*
- *Change your Forest Fast! Understory Removal by Mulching*
- *The Importance of Road Signs and Boundary Lines*
- *Wild Turkey Research in Alabama*

Thursday, October 27
North Region

*Jimmerson TREASURE Forest**
Cleburne County

RSVP: Cindy Beam
Phone: (256) 463-2620

Topics include:

- *Prescribed Burning in Hardwoods and Natural Pine*
- *Conservation Easements*
- *Managing Your Timber*
- *Stream Crossings and Water Quality*
- *Unique Archeological Sites*

***Registration begins at 8:00 am for all events, and lunch is provided.**

Good Fires, Bad Fires, and Fire Ants

By Ronnie Grider, Forestry Specialist Mobile County, Alabama Forestry Commission

Photos by Jason Barrett

Cayden, my 4-year-old grandson, got into some fire ants recently and after I brushed them off and dried his tears, we came to the mutual agreement that we don't like those particular bugs. There are a lot of things in nature that we don't care for. Things like horse flies and mosquitos. Cogongrass and kudzu. Hurricanes and wildfires. The list goes on and on. We can't do much about bugs. We can poison ant mounds and fog mosquitos, but does it really do any good? I've sprayed herbicide on cogongrass and kudzu which knocks them back, but to eradicate them is so expensive. Hurricanes and tornados are forces of nature, so dream on about slowing these down. And wildfires? Well, some wildfires *are* preventable.

Preventable . . . I like that word. 'Prevent' means to keep something bad from happening. And we all know what Smokey Bear says . . . "Only YOU can prevent wildfires." At the Alabama Forestry Commission, we *do* prevent wildfires. We accomplish this through education, from school programs and forestry tours, to public service announcements. We also prevent wildfires by doing mitigation burns. This is when you conduct a prescribed burn on a piece of property before a wildfire has the chance to destroy it.

One such wildfire mitigation burn was recently performed at the Audubon Bird Sanctuary on Dauphin Island. The bird sanctuary is located in what we call the Wildland/Urban Interface. This is where people's homes and nature converge, or sometimes collide, with each other. With approximately 100 acres of pristine timber, hiking trails, boardwalks, beach, and a beautiful freshwater lake, it is visited by tourists, nature lovers, and bird watchers

from across the country. This birding refuge borders the sugar white dunes of the Gulf of Mexico to the south; an RV campground with hundreds of campsites, most of them full, to the east; and to the north and west are homes of varying values . . . varying from expensive to you've-got-to-be-kidding-me expensive. In other words, you don't want to burn that baby down.

Prescribed burning should never be taken lightly, but prescribed fire lit in close proximity to neighborhoods requires even more detailed planning, preparation, patience, and skillful execution than usual. And when you add in the extremely heavy fuel loading of this tract, well, the intensity goes through the roof. Burn managers who put their name on burn plans and burn permits are responsible not only for the fire they light, but also for the smoke it creates.

Planning included a meeting between all parties with a vested interest in the sanctuary and its surrounding property. The Audubon Bird Sanctuary is owned and maintained by Dauphin Island Park and Beach Board, who requested a visit by the Alabama Forestry Commission to look over the property and discuss ways to limit the potential severity of a future wildfire . . . a wildfire such as the one that occurred in 2011. The standing, dead timber is a reminder of the devastation that this wildfire caused four years ago. Boardwalks that meander through the forest were turned to white ash and the local volunteer fire department lost a firefighting vehicle to the blaze. Luckily, no homes were destroyed and no one was injured. Both the homeowners association and the Dauphin Island Fire and Rescue welcomed the idea of a safer forest. Representatives of the Audubon birding community were also present at the planning meeting to voice their opinion on the burn. We didn't want to ruffle any feathers, so to speak, and none were. The planning is in the details and we had a lot of details.

The heavy fuels on this property include Chinese privet and tallow (both invasive species), smilax vines and saw briers (both considered what we call 'ladder' fuels), gallberry and palmetto, with some highly volatile cogongrass (also invasive) thrown in for good measure. These fuels are all draped in longleaf pine straw, straw that has been falling and accumulating for decades. And to top it all off, the soil has a component of peat mixed in it. Dry peat will burn and smolder for days. Fuels that are this challenging affect the planning in many ways.

Things to consider include width of the control lines, size of the blocks to be burned, techniques used in the firing operation, and the amount of personnel and equipment on site during the burn. Weather forecasts are studied, long-range and local. Wind speed, direction, fuel moisture, and days since significant rainfall are all considered. Also, on-site visits are made prior to the day of the burn to confirm actual conditions forecasted.

The morning of the prescribed burn was cold, which was good. The cooler temperatures helped keep the big timber from scorching. According to our test fire, the wind direction would be close to perfect, blowing the smoke out over the Gulf and away from the town, and not allowing the flames to race towards any homes. The firing technique was simple; a backing fire all day. We kept the flames as low and slow as possible. We didn't want the fire gathering steam and freight-training through the tops of trees. The guys patrolling the fire lines stayed vigilant and ate a lot of smoke. The debris being blown around from burning palmettos and vines can be alarmingly heavy, but the humidity was still high enough to prevent ignition when embers floated across our lines. The guys kept hand tools and pumpers at the ready. The local volunteer fire department staged their equipment close to the houses and were used in support. We ate lunch on the fire line. Hard work turns a good snack into a great meal. Sardines taste like grilled grouper and viennas taste like filet mignon. Comradery and teamwork always help to improve the flavor of any meal.

The goal was to burn three small tracts on the property; we finished two. Although we started early, time and weather conditions caught up with us by late in the afternoon. The burn went well. I'm not saying it was flawless, but it went as well as could be expected for the conditions that we were dealing with. We had a few spot-overs. Anyone who says they have never had any jumps on their burn hasn't done much burning. The real test is whether you're prepared for that spot-over, or if you can handle a wind shift or a piece of equipment breaking down. Thorough preparation, careful planning, and thoughtful execution can and most likely *will* be the difference between success and failure.

I recently went back to the bird sanctuary to see what it looked like after the green-up. It was beautiful. I know we did a good job, and I know the burn was a success. I'm not saying it was a success because of what I saw on my return visit. I'm saying it was a success because when I received payment for our services, I also received praises from the landowner for the job our guys did. They reported the overall approval by guests visiting the sanctuary. The adjacent landowners have also expressed their gratitude for the hazard of a potential wildfire being reduced. And they all are hoping we do more burning for them this upcoming year.

Now, if we could just do something about those fire ants . . .

On the Ground and in the Air . . . the AFC Keeps Watch for

PINE BARK BEETLES

By Bayne Moore, Forester/Clarke-Marengo Work Unit Manager, Alabama Forestry Commission

Most timberland owners and timber managers have heard of pine bark beetles, but for those who may not have yet encountered them, here is an overview, along with an update of last year's bark beetle activity in Alabama, and an update on 2016 activity.

There are several species of pine bark beetle, but this discussion will focus on the Ips engraver beetle, which has three primary species (*Ips calligraphus, Ips grandicollis*, and I*ps avulsus*), and the infamous southern pine beetle (*Dendroctonus frontalis Zimmermann*), which is the most destructive forest pest.

The Ips beetle infests and kills pines in small groups, normally from one to five or ten trees, by boring through the bark and leaving 'Y'- or 'H'-shaped galleries/tunnels in the cambium under the bark. They will then lay eggs in side galleries, and the larvae from the hatched eggs will bore to the outside of the bark. Upon reaching the outside, a larva will reach adulthood and fly or catch the wind to its next target. The Ips life cycle is brief, roughly 15 to 60 days, being shorter during warmer months and longer during colder months.

The southern pine beetle (SPB), unlike the Ips beetle, infests from one to potentially hundreds of trees in an area. It also bores into the bark to the cambium, but leaves 'S'-shaped galleries and lays eggs along the sides of the main galleries. After hatching, the SPB larva bores to the outside of the bark, becomes an adult, and flies to the next tree. The SPB life cycle is also brief – roughly 18 to 60 days – and is shorter during warmer months and longer during colder months.

Infested areas can be solely Ips engraver beetle, southern pine beetle, or a combination of each. Infestation signs to look for on pine trees are pitch tubes extending from the bark where the beetle bored in; white dust at the base of the tree; and needles turning from lush green, to pale green, to red.

The Alabama Forestry Commission (AFC), in conjunction with the US Forest Service, annually conducts aerial checks for bark beetle activity in late spring and, if deemed necessary, again in late fall. AFC personnel will also ground check some of the spots to determine which culprit is present. Although 2015 was not a bad infestation year for the state as a whole, there was considerable infestation for portions of Marengo, Clarke, and Choctaw Counties in southwest Alabama. In the June 2015 flight, the AFC reported 40, 37, and 66 infestations in these counties, respectively. After individual infestations are located in such instances, AFC personnel in each county determine ownership and notify affected landowners by letter and map. Since these three counties experienced such high infestation numbers in the spring, another check flight was flown in September 2015. Again, high infestations were found, with Marengo having 26, Clarke having 38, and Choctaw having 60.

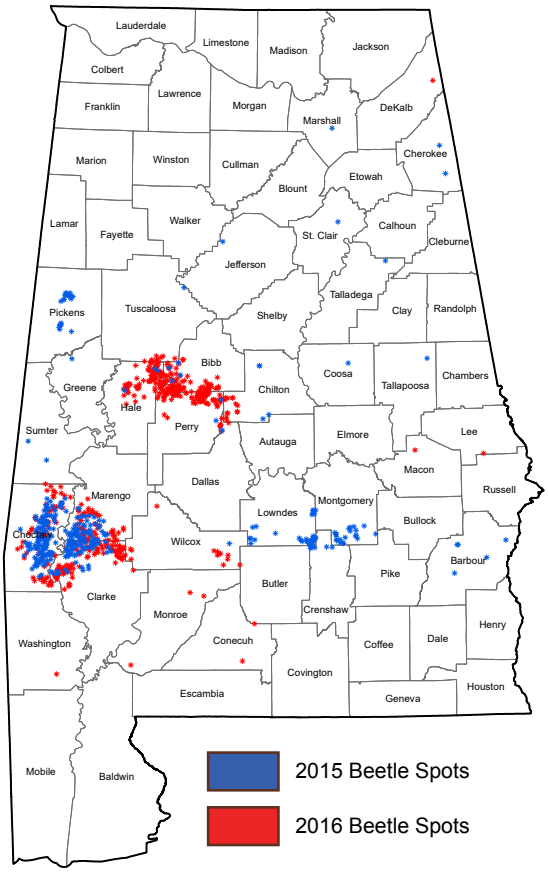
Because of these consistent high infestation numbers in southwest Alabama, Roger Menard with the US Forest Service scheduled a meeting with AFC personnel in December 2015 to

determine which beetles were present and how active they were. Infestations in Clarke and Marengo counties were checked, with each site found to be Ips, SPB, or a combination of the two. At that time, the spots were mostly inactive, which would be expected in December. However, 'brood,' or young beetles, were still found alive surprisingly in a few infested spots, even with the cooler weather.

The best defense against bark beetles is a very cold, very wet winter. During this past winter, Alabama experienced the wet, but not the cold. Therefore, landowners and timber managers could have expected a potentially high population of beetles this summer and fall. Little bark beetle activity was observed by late spring, so the AFC did not conduct the usual late spring/early summer aerial detection flight. Then in June, the 'Southwide Southern Pine Beetle Trend Predictions for 2016' were released, indicating that SPB levels in Alabama were low but would likely be increasing. Partly because of this report and also due to increasing activity observed from the ground, the AFC began aerial detection flights in July.

With the exception of two areas, zero-to-scattered activity has been observed across the state (see map). Aerial-detected infestations of 9, 88, 117, 64, 14, and 6, were found in southeast Tuscaloosa, north Hale, north Perry, south/southwest Bibb, southwest Chilton, and extreme north Dallas respectively. Flights also indicated infestations of 70, 53, and 98 for the eastern two-thirds of Choctaw, southwest Marengo, and north Clarke respectively. County personnel are currently in the process of ground checking some of these infestations to determine which culprit(s) are responsible. Affected landowners will be notified with a letter and a map of the infestations.

The northern-most location showed increasing beetle activity from last year, while the southern-most location continued high activity from last year. Landowners should be diligent for the rest of 2016 and into 2017 to monitor these areas for persistent or increasing activity. The AFC will continue to serve the public by conducting aerial detections, performing ground checks by county personnel, and notifying landowners when infestations are found. If you have concerns or questions, or if a site visit might be needed to determine if bark beetles are present on your timberland, please call your local county office of the Alabama Forestry Commission. Additional information may be found on the AFC's website at **www.forestry.alabama.gov**.



Guidelines for Producing Quality Longleaf Pine Seeds

By Zoë Hoyle, SRS Science Communications, U.S. Forest Service/Southern Research Station

High-quality longleaf pine seeds are essential for producing nursery seedlings that perform well in the field, but producing them is not as easy as it might seem. Longleaf pine seeds are unusually sensitive to damage during collection, processing, treatment, and storage.

In 2002, Jim Barnett, then project leader for the U.S. Forest Service Southern Research Station (SRS) longleaf pine unit in Pineville, Louisiana, and John McGilvray, retired biological technician from the same unit, published a general technical report that provides comprehensive and specific guidelines intended to help seed dealers, orchard managers, and nursery operators produce high-quality longleaf pines seeds and improve the efficiency of nursery production.

Photo by David J. Moorhead, Univ of Georgia, Bugwood.org

The seeds of loblolly and slash pines are relatively easy to collect, process, and maintain. Why would longleaf pine be different? The authors offer three reasons:

- First, seed production in longleaf pine is extremely variable from year to year and from place to place.
- Second, longleaf seeds do not germinate well until the cones are mature enough to be opened easily.
- Third, unlike slash and loblolly pine, longleaf pine seeds have an extremely short period of seed dormancy, often germinating immediately after separating from the cone. This makes proper handling before storage critical.

"Longleaf pine seeds are large and fragile with permanently attached wings, have thin, easily cracked seed coats, and are unusually moist when extracted from cones," state the authors. "They are the most difficult of southern pines to successfully collect, process, store, and treat without adversely affecting quality."

The guidelines are drawn from decades of research by SRS scientists and provide information on selecting seed lots, collecting and processing cones, processing and handling seeds, sowing seeds, and caring for seedlings. Each section includes references to research as well as illustrations, figures, and graphs. For the full publication, visit **http://www.srs.fs.usda.gov/pubs/4538.**

Longleaf Pine Cone Prospects for 2016 and 2017

Regional cone crop forecast: failed for 2016, fair for 2017

By Zoë Hoyle, SRS Science Communications, U.S. Forest Service/Southern Research Station

Dale Brockway, research ecologist for the U.S. Forest Service Southern Research Station (SRS), recently published his annual summary of projected longleaf pine cone production for 2016 and 2017. The report shows an overall failure of the crop for 2016, and a fair outlook for 2017.

"Our estimates show the 2016 crop averaging only 3.4 cones per tree," says Brockway, who is stationed at the SRS Restoring and Managing Longleaf Pine Ecosystems unit in Auburn, Alabama. "The natural variation that we usually see throughout the longleaf pine range is less evident this year, with all sites being fairly low in production."

Only one site in Bladen County, North Carolina, produced more than 10 cones per tree. All other sites were below that level of output.

"Longleaf pine cone production was very high in 2014, and it's not unusual for a year of high cone yield to be followed by a couple of years with much smaller crops," says Brockway. "More productive years will follow, as trees recover their internal resources."

To calculate the cone crop for the current year, data collectors use binoculars to count the number of green cones present in the crowns of mature longleaf pine trees growing on monitoring sites established in low-density longleaf pine stands across the region. Monitors also count the number of small unfertilized conelets (previously referred to as flowers) in the crowns of the same trees, to estimate the cone crop outlook for the following year.

"Based on counts of unfertilized conelets, we estimate the regional cone crop in October 2017 as fair, at 47.8 cones per tree," says Brockway. "The cone crop forecast for 2017 varies from a bumper crop at one site to a failed crop at another, reflecting a good deal of natural variability. Keep in mind that estimates based on counts of unfertilized conelets are less reliable than those based on counts of green cones, because unfertilized conelets often do not survive into the second year to become green cones."

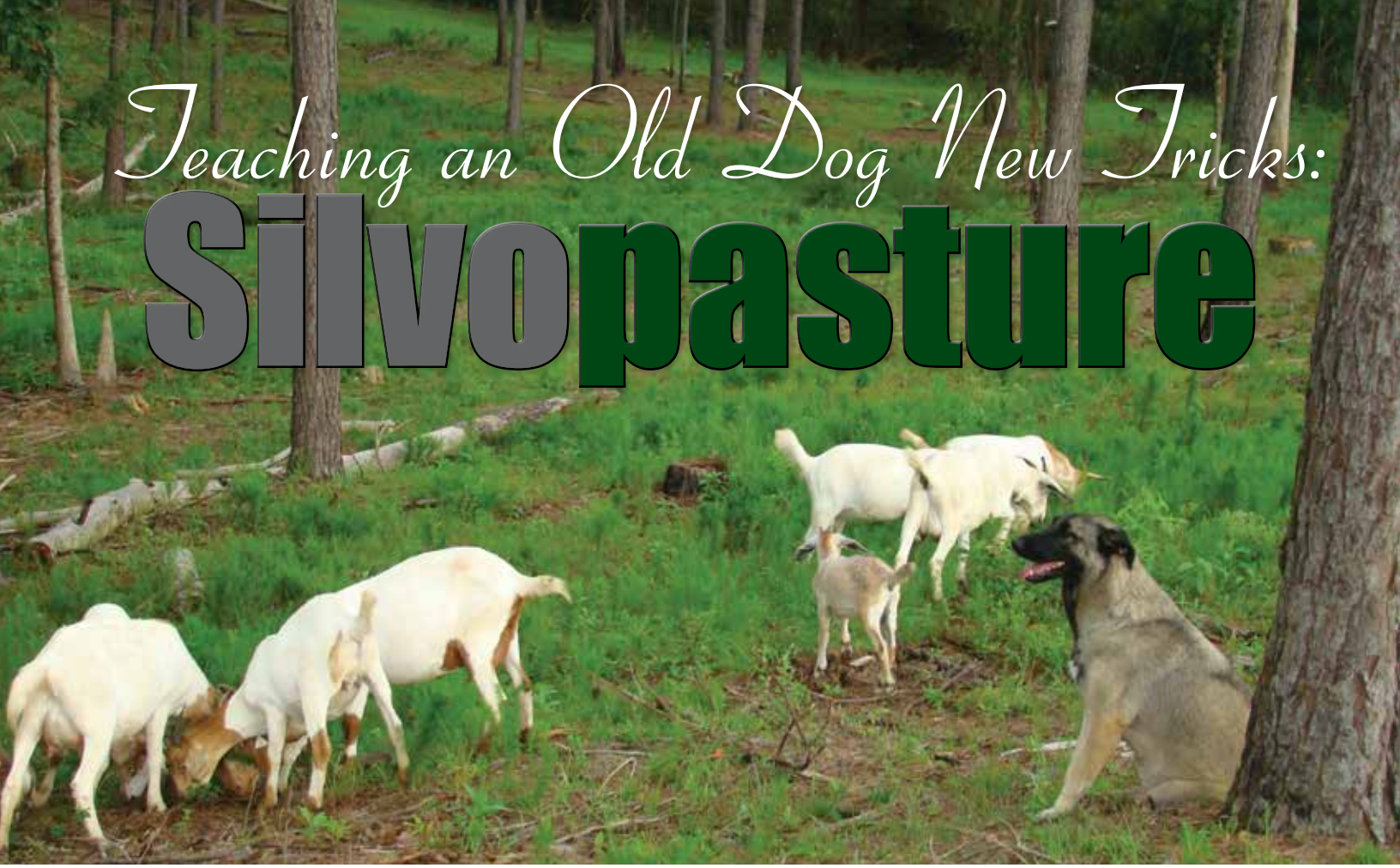
Under even-aged forest management, the minimum cone crop needed for successful natural regeneration is 750 green cones per acre, or 30 cones per tree assuming 25 seed-bearing trees per acre. Reports of cone crops classified as "fair or better" signal land managers to take advantage of the regeneration opportunity by applying prescribed fire to prepare receptive seedbeds before seed fall in October.

Longleaf pine seedling with seed wing still attached

Managers using uneven-aged management methods, such as single-tree selection and group selection, are not as dependent on good cone crops, since even a small amount of seed falling each year is adequate to regenerate forests with a continuous canopy through time. But, they should still be aware of cone crop quality from year to year when making decisions. Either way, landowners and managers can access the full report to find more detailed information about sites near their own locations, since natural variation does cause cone production to differ from site to site. Visit **http://srs.fs.usda.gov/longleaf/subunit/longleaf-pine-2016-report.pdf**

Longleaf pine cone production has been monitored now for 51 years, with yearly production averaging 28 green cones per tree during that period. The single best crop, averaging 115 cones per tree, occurred during 1996. Fair or better cone crops have occurred during 49 percent of all years since 1966, with an increased frequency since the mid-1980s. Reasons for this increasing frequency may be related to genetic, environmental or management factors, or a combination of these.

Brockway and fellow SRS researchers Qinfeng Guo and Stan Zarnoch, along with Xiongwen Chen of Alabama A&M University, recently published findings based on analysis of long-term cone crop data that provide new insights into the reproductive pattern of longleaf pine in an environment with increasingly variable climatic conditions. An article published in the *Journal of Sustainable Forestry* explores the complexity of cone production in longleaf pine (visit **http://www.srs.fs.usda.gov/compass/2016/04/19/the-complexities-of-longleaf-pine-cone-production/**), while a more recently published article in the journal Ecosystem Health and Sustainability analyzes the life cycle and masting of longleaf pine under climate fluctuation (visit **http://www.srs.fs.fed.us/pubs/52078**).



Teaching an Old Dog New Tricks: Silvopasture

By Robert Clement, Marion County Forester, Alabama Forestry Commission

Although owning and managing timberland is not for everyone, it can be a great investment if you enjoy being outdoors and working with the land. I have been fortunate to be a timber landowner for most of my adult life. It has been hard work, but I take great satisfaction in watching trees I have planted grow to maturity. For most forest landowners, growing trees is a secondary income source and a wise investment, because only minimal finances and little day-to-day work are needed for growing a successful pine plantation.

While it is a profitable investment, the return is not immediate. When I was younger, timber was an attractive investment: it was long term, it was tangible, its value seemed to have a good growth potential, and it had aesthetic value. However, as I approach retirement, I have begun to consider other uses for my land along with growing timber.

On April 27, 2011, a tornado blew down and damaged 30 acres of my trees. I arranged to have a salvage cut prior to a deployment to Afghanistan. Upon my return, it was like a jungle underneath the pines that remained. This event was the spark I needed to try something new with my property that provided a quicker return. Even though I had not yet retired, I was looking for something that would supplement my retirement years and keep me occupied as well. I had been aware of the practice for decades, but only now did I implement it personally, and I asked my sister if she would be willing to be a partner in the operation . . . silvopasture, the deliberate integration of trees and grazing livestock on the same land.

To establish silvopasture, you need to either plant trees in an existing pasture, or establish grass under existing trees. If you choose to plant trees in an existing pasture, slash pine seems to be the preferred species for farms in the Southern part of the state, but loblolly and longleaf are also well suited, along with hardwoods such as nut or fruit trees. Livestock can damage young trees, but once established to a point they cannot push them down, damage is very minimal.

It is much easier to plant trees in a pasture, but most of you are probably already growing timber now, perhaps seeking to diversify your farm, as we were. In the winter of 2013-14, I began getting my place ready for livestock. I chose to fence in a ten-acre spot of land that had been thinned to a 70 basal area. It didn't take long to realize that I should have cut even more trees to begin this process. The plot had too much shading, and it provided poor access for farm equipment. Nevertheless, I proceeded to plant shade-tolerant orchard grass.

Numerous planting schemes are suggested online, but you need to consider the type and size of equipment you have. I am planning to thin my timber more by cutting corridors so my tractor and other equipment can pass through with ease. The width of rows needs to be narrow enough so that fertilizer spreaders and sprayers will give adequate coverage. Plan so that your spreaders/sprayers will not only cover the grassy area, but also penetrate half the area left in trees with a slight area to overlap. That way, herbicides and fertilizer get good coverage. Be sure to leave plenty of room at the end of each row to allow for turning larger equipment. Lime is probably the most important thing you

will dispense, and often soil tests call for as much as 2-3 tons per acre! This spreader equipment is very large and heavy, and needs plenty of clearance.

In the spring of 2014, I bought nine goats. I was amazed at how quickly they went to work. Goats tend to have a reputation for being nasty, cantankerous, and tough, all of which are not true in my opinion. I have discovered that they do not always live up to that reputation, except for maybe the cantankerous part, and male goats do have an odor. A few months later we bought three calves that we had to bottle feed. I discovered that cows not only presented a fly problem, they are also more difficult to clean up after in the barn.

Goats also have a reputation of eating anything, which is also not totally true. Their preferred diet makes them well suited to silvopasture. Goats eat weeds and leaves, while cows prefer grass. Although there are herbicides that are safe for grazing animals, the goats eat many of the weeds, minimizing the need for herbicides and helping keep the land ready for grazing cattle. Allowing the goats and cows to graze together in the same field seems to work out well, except for the occasional pushing and shoving at feeding time. It is best to try and keep them separate then.

The goats seem to have been a wise investment. We are even contemplating selling the cows and having goats as our only livestock. When we bought the goats, their price per pound was actually higher than the cost per pound for the cattle. However, goats do require more maintenance than cows. Experience has shown that goats are much more susceptible to the weather, disease, intestinal worms, and predators.

People warned me about how difficult it was to keep goats in the pen. While that has not been a problem, we have had a problem with keeping predators out. One day while my sister and I were at work, dogs got into the pasture killing five and injuring two of our goats. Immediate efforts were made to beef up security. Discovering a small dip underneath the fence where the dogs had entered the pen, I plowed a small dirt berm along the entire perimeter. We also added an electric fence and guard dogs. Serving only to keep the animals from pushing on the fence, I don't think the electric fence has been cost-effective as a whole, but it does make me feel better.

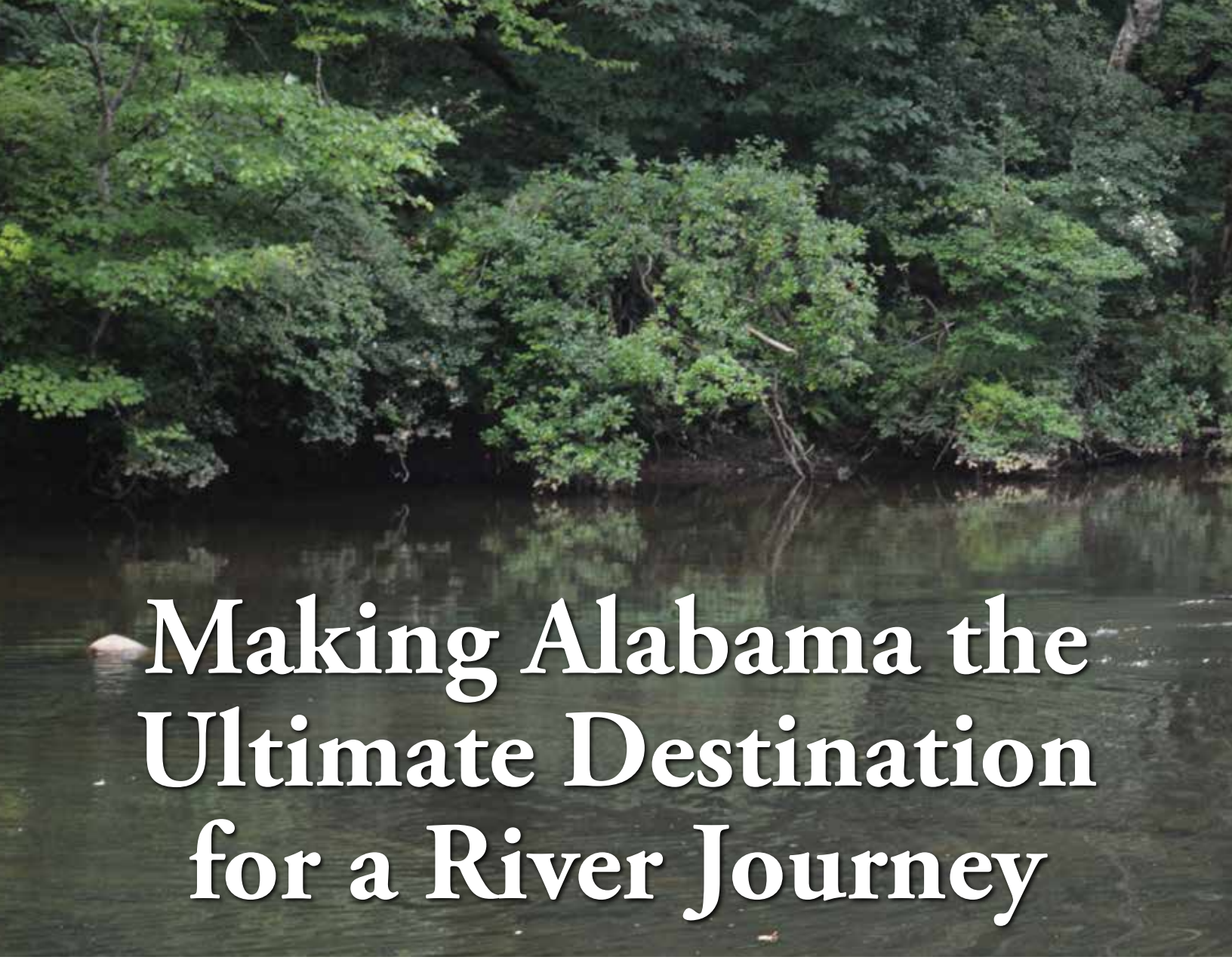
TOP: Mazie, one of the Anatolian Shepherds, keeps a close eye on the cows.
BOTTOM and OPPOSITE: Roxy, the other Anatolian Shepherd, busy guarding the goats.

The guard dogs, however, are another matter altogether. I read articles and talked to other farmers about guard animals. While donkeys are effective, they can be aggressive towards livestock, as well as the farmer. They are great if you only have cattle, but few farmers recommended them for small animals. We settled on dogs and acquired two Anatolian Shepherds. Research stated they may be more aggressive than Great Pyrenees and can even be aggressive toward the livestock, especially newborn animals. However, these dogs have a purpose and that is to protect the animals in the pasture. It is part of their DNA to do so. We got them as puppies and put them in the pen immediately, as they needed to bond with the animals and not be treated as pets. They also needed to be introduced to the people who would be taking care of the animals as well.

My sister and I were surprised at how fast the pups adapted to their job. The dogs followed behind the animals from day one. They were so small that they could squeeze through the woven wire fence. I have game cameras surveying the pen for any possible predators or other problems. One day I noticed that the puppies were out of the pen, but amazingly, they snuck back into the fence before we got home. We were afraid this might become a problem, but it never happened again. They just never seemed to be interested in getting out. One day, I left the gate open by accident and although the dogs were curious, it was no problem getting them to go back into the pen.

Thankfully we have not had any more problems with predators. Our two shepherds are nearly full-grown now, even though they still act like puppies at times. They seem to be very protective, and I am almost certain they will defend our livestock if a predator should encroach on their territory. These dogs really consider themselves part of the herd, always by their side, even sleeping and eating with them! If you decide to raise goats, I recommend getting a guard dog.

(Continued on page 31)



Making Alabama the Ultimate Destination for a River Journey

Alabama Scenic River Trail

Canoeists and kayakers are paddling the state's waterways and do not wish to trespass, but they must stop somewhere for the night. As you, your friend, or your child embark on a waterway trip in Alabama, the Alabama Scenic River Trail (ASRT) sign provides a welcoming beacon for you. It has been placed at over 150 campsites across the state – mostly free locations where gracious landowners allow camping on their land. Some are fee-based campgrounds, some are 'bed and breakfasts,' although all are legitimate, legal camping sites for the weary paddler to spend a restful evening.

"The Alabama Scenic River Trail is the longest river trail in a single state. It passes through the heart of Alabama from northeast to southwest and in doing so, takes boaters through a wide variety of terrain, flora, and fauna."

— National Water Trails System of the National Park Service

A non-profit association, the Alabama Scenic River Trail was established to maintain Alabama's trail and coordinate community, private, and public partnerships and riverside events for outdoor enthusiasts. The original 'core' trail of the ASRT is a 631-mile scenic route that begins in the mountainous terrain of the northeast corner of the state, stretching all the way to Fort Morgan on Mobile Bay in the Gulf of Mexico. Since its inception in 2008, ASRT officials have broadened the overall trail to include 3,000 miles of creeks and other water sources in Alabama, flowing through some of the state's most beautiful forests, interesting wildlife, and places of historical significance.

How do you find these camping locations?

The Alabama Scenic River Trail website (**www.ASRT.me**) lists all the sites under the Campsite icon, with latitude and longitude for each, and mileage location for many. Choose a waterway, check the list – clicking on each to see its amenities – plan your trip, and away you go!

ASRT also provides emergency personnel lists for safe travel checkups as needed. Having such information prior to a river trip not only creates happiness at home, but also good distance planning for the traveler. In many locales, 'Trail Angels' come in handy as well (scroll down under the Contact tab). They are volunteers who can help with arrangements, saving the novice from miserable experiences.

How does a campsite come about?

"Alabamians have been wonderful in providing so many nice places," says ASRT Executive Director Jim Felder. For the past several years, he – along with Trail Founder and President Fred Couch and others – have visited county commissions and a variety of other organizations across the state, outlining the required steps to become a campsite and reasons why someone would want to do so.

The process is simple, reflecting the welcoming hospitality offered by Alabama Scenic River Trail members. According to Felder, "Alabama has the best indemnity laws protecting landowners that allow free use of their land for camping, such that 100 percent of those that have checked with their lawyers have agreed to participate."

For waterway property to be listed as a campsite, only a few things are required. The site must have limited access by land – only the landowner can drive to it. The campsite needs only be big enough for two tents for no more than six people, with a two-night stay limit. A few landowners already welcome scout troops, thus providing larger spaces. A fire ring should be created so that campfires are confined. As a rule, travelers are very mindful of safety and the environment, thus campsites stay clean. Finally, ASRT will need the following from the landowner: (a) the property's latitude and longitude; (b) a photo of the site; (c) permission to list it on the ASRT website; and (d) permission to place an ASRT steel-post sign.

(Continued on page 18)

River Journey

(Continued from page 17)

At this sign, you are welcome to camp for the night! The luminescent Alabama Scenic River Trail (ASRT) signs show up for hundreds of feet by mere flashlight.

What about other waterways in the state?

Desiring to ultimately establish a campsite every 8 to 10 miles along the trail, the goal is to have 500 listed by 2017. However, contacting every landowner individually along over 5,000 miles of 50 waterways is a monumental task, and there are not enough volunteers to cover the vast amount of remaining mileage. If you or someone you know owns land along a river or stream, landowners can easily volunteer a space.

For questions regarding Alabama's indemnity laws or any other information about campsites, contact *Jim.Felder@gmail.com* or *Fredcanoes@aol.com*. If you are interested in becoming a member or volunteering your time, visit the website. Additional 'Trail Angels' are always welcome.

An Economic Development and Tourism Opportunity

"We have accomplished incredible feats of which I never dreamed," said Fred Couch. "It's a culmination of all my years of paddling experiences and civic involvement going forward. I love sharing our ideas with communities all over the state so they too can be impacted with more tourism, and people like me who love the outdoors will think of Alabama first when planning to go outdoors."

Thanks to Fred Couch and Jim Felder for their contributions to this article.

From Idea to Reality

Fred Couch, Jr., Founder and President of the Alabama Scenic River Trail, said he had dreamed of an Alabama water trail for four or five years before starting to work on it in earnest in July of 2006. By September, he persuaded the Alabama Tourism & Travel Bureau to produce 25,000 brochures at no charge. In November of that year, he convinced Alabama Power to allow portage trails (bypasses) that would provide for canoers or kayakers walking their boats around dams and continuing their river journey.

The real toil and fundraising challenges began in January of 2007, when an organizational meeting was held in the offices of the Birmingham RC&D Council. Donations started coming in. "Within 18 months, the organization went from 0 to 9,000 mph!" commented Couch. "Fortunately, a cacophony of friends around the state thought my idea had merit and they were volunteering like bees after honey and doing all sorts of tasks," he continued. "Never could I have accomplished them alone. They were meeting every month, creating portage trails, and mapping the nearly 650 miles."

Another friend designed a media blitz for the Trail, resulting in an unprecedented week-long visit to the state in the spring of 2008 by a *New York Times* senior editor and two photographers. Their experience evolved into a page and a half article in the *Times* and a video, plus a front cover on the 'Travel Section' of *USA Today*. All of this generated over $10 million dollars of free publicity in three years.

The grand opening ceremony for the Alabama Scenic River Trail took place in Montgomery in June of 2008, along with being awarded '**National Recreational Trail**' status by the US Secretary of Interior and National Park Service. In 2013, President Obama bestowed the designation of '**National Water Trail**.' The honors have continued with the Trail receiving a 'Governor's Award' from the Alabama Tourism & Travel Bureau, as well as a proclamation from the Alabama Senate and House of Representatives.

Recognizing the significant achievement of bringing his idea to life in such a short time and its benefits to the citizens across the state, Couch was named a recipient of the 'W. Kelly Mosley Environmental Award' in 2015 by the Alabama Natural Resources Council.

Our 'Green . . . and Blue' State

By Thomas Kaufmann, Architectural Historian and Preservationist

One of the great joys of researching and documenting Alabama's lookout towers is discovering the beauty of our great state, as many lookouts are located in rural forested areas on the highest elevations in their locality.

When I have had the opportunity to climb a tower and take in the 360-view, I've never been disappointed – ever. Ours is a land of green and blue; green expanses of grass, depending on where you are, but more often than not, an ocean of forest green timberland, which provides us with beautiful colorations during fall and gray hues in winter. And then there are the blue wetlands, creeks, rivers, and lakes which grace our scenic mountains, valleys, fields and pasturelands, and flow into the Gulf – not to mention our beautiful blue skies.

Years ago after completing post-graduate studies in New York City, I had an opportunity, it seemed, to work there. But the time in New York, and the city itself, as much as I enjoyed it, wasn't enough to keep me there . . . I longed for Alabama's natural 'green and blue.' On my return flight back to Montgomery, looking out the window of the plane, I can still remember what a beautiful day it was . . . everything was green and blue, set against a beautiful cerulean-blue July sky, with epic cumulonimbus clouds in abundance on the horizon. That was in 1992.

Today, the state of Alabama still retains much of its beauty, but the vast expanses of uninterrupted green, living earth are beginning to recede away. Through the years, I have had opportunity to travel extensively throughout the state, and I must say that some scenic highways from 25-30 years ago are shockingly different now – significant sections of green are gone, replaced by strip malls, fast-food franchises, and new housing. I fear that in the pursuit of economic growth, our natural resources are being unnecessarily sacrificed to accommodate new industry.

In 2004, I had an opportunity to travel to Seattle, Washington, and Missoula, Montana. While I was in that region of the country, I took note of a number of things, especially pertaining to how the environment/natural resources were being conserved, and which issues seemed to be most important to the populace. Upon returning home, it seemed that my thoughts crystallized more clearly on what the difference was between that region and ours: in the Pacific Northwest, 'quality of life' appears to have more priority than 'economic development.' By contrast, 'economic development' generally appears to have more priority than 'quality of life' in the Southeast and Alabama. Making an assertion or observation such as this usually has the consequence of creating hostile fallout among those who are in the related fields which design, plan, and create the built environment, as though the idea of development is always and forever a bad thing. It is not, and definitely not always the case, and it doesn't ever have to be the case. The great success will indeed be when the 'development paradigm' shifts more fully and completely toward a 'best practices' approach with respect to the environment.

Trees indeed make a difference; indeed, forests make the difference. Trees mean green earth under their driplines at a minimum. They just do so much for us. If it is possible to begin thinking of reversing unnecessary hardscape back to 'green,' that would be a tremendous boon toward realizing a 'greener and bluer' Alabama. Concerned citizens and groups are already at work in this realm, including the wonderful riparian initiatives, and are to be congratulated for their significant contributions already in restoring the environment back to us. The keys to success in any effort largely depends on a high degree of collaborative 'civitas,' education, and awareness of the issues in order to problem-solve on the side of conserving our natural environment, with the end goal being one of our citizens and visitors enjoying more green and more blue than ever before. And believe me when I say that the best views from the lookouts are always 'green and blue.'

Thomas Kaufmann teaches design studio, architectural history, and historic preservation at the Robert R. Taylor School of Architecture and Construction Science at Tuskegee University, and was formerly the Designer of the Alabama Main Street Program at the Alabama Historical Commission. Tom may be contacted at artisthistorian@gmail.com.

Living with Black Bears in Alabama

By David Rainer, Alabama Department of Conservation and Natural Resources

"The black bear represents an important wildlife resource in Alabama woodlands. If you have an unexpected encounter with a black bear, do not panic," say wildlife professionals. "Consider yourself lucky because you are one of the few people in Alabama to have experienced such a sight."

Don't be surprised if a sighting that occurred recently in Oxford, Alabama, becomes more commonplace. A young, male black bear strolled through several neighborhoods in the area, creating somewhat of a stir.

According to Thomas Harms, Wildlife Biologist and Large Carnivore Coordinator with the Alabama Division of Wildlife and Freshwater Fisheries (WFF), the state's black bear population is expanding and sightings will likely increase. That is not a cause for alarm, as long as you give the bear plenty of room. "It's not uncommon to see one this time of year," Harms said. "Usually when you see one in a populated area, it's a young male that has been pushed out by his mother and is looking for a new home range."

Wildlife and law enforcement officials looked for the bear in the Oxford area but never saw it again. Harms stated that is because a young male may travel a great distance before he finds suitable habitat to call home; he will keep pushing out until he comes to a place that meets his needs. "We had one that went from Georgia, across Alabama, and into Mississippi," he said. "We had sightings of that bear all the way across, so there's no telling where the bear that was seen in Oxford will end up."

When the public spots a black bear near a residential area, Harms says to stay out of its way and report the sighting to the district WFF office. "Just give the bear its space and let it move through," he said. "I know people want to take pictures, but keep your distance . . . let it be a bear and let it move on. Usually in those situations, by the next day, you're not going to see it again."

Other areas of Alabama have bears, but there are only a few breeding populations. The main concentration of Alabama's black bears is in Mobile, Baldwin, and Washington counties and the Mobile-Tensaw Delta. A small group living in Conecuh National Forest, like those bears in southwest Alabama, are the Florida subspecies (*Ursus americanus floridanus*). Migrating from north Georgia, the bears in the Little River area in northeast

Alabama are a different subspecies (*Ursus americanus americanus*). Mature female bears average about 200 pounds. Males average about 300 pounds.

Alabama is not alone in an expanding population of black bears; the trend extends to the entire Southeast. The WFF is currently working with Auburn University researchers and other state and federal agencies to collect data on the state's black bear population and movements. There are eight collared bears in south Alabama and two in north Alabama, with plans to trap and collar several more this summer. The collars are designed to stay on the bears for 14-15 months and then drop off. Biologists then recover the collars to download a full year of data.

"We're still working on the data to try to determine the number," Harms commented. "We're processing hair samples and we have a few bears collared. We're probably talking around 450 bears statewide. It could be a little more or a little less. We don't count transient males passing through; they're not part of the population. Once they mature and find a breeding female, they become part of an actual breeding population."

Photos courtesy of USFWS

From the data on hand, it appears female bears in south Alabama have a home range of 7 to 8 square miles. In north Alabama, the female home range is about 12 square miles. "It's two completely different habitats," Harms stated. "Up north, it's more of a mountainous range and the bears have to cover more ground to find food. In south Alabama, just about everything grows year-round and the bears don't have to travel as far to forage. Plus, there is a denser population in south Alabama, so that may have something to do with it."

As for males, they have a home range of about 20 square miles. "It's just like a buck covers more area," continued Harms, "trying to cover more than one female at one time. And the males do protect their home range, their breeding area. They prefer not to fight, but they will. Most of the time the smaller bear will just run off."

In Alabama, black bear is a game species but there is no open season. "There's a pretty good fine for killing one," says Harms, "so whatever you do, don't shoot one."

Because they haven't been hunted in decades, the population is slowly expanding. "Being a predatory species, their growth is a lot slower than deer or anything like that," he continued, "so it's going to take them a lot longer to rebound. We're seeing sows with three cubs pretty often and sometimes even four, which means they're eating better and reproducing more. If you're seeing multiple young, it usually means that the population is in good health."

Outreach and educational meetings for the public such as those recently held by the WFF in southwest Alabama will eventually be hosted on a statewide basis according to Harms. "We talk about bear reproduction, how to understand the bears and how to live with them," he continued. "What most people know about bears is what they see in stories or on TV or in the movies, and they can draw the wrong conclusions. We want to give them the latest information on black bears and what to expect when they live in areas with bear populations."

Conservation groups such as the Alabama Black Bear Alliance (ABBA) are also working to determine the abundance, ecology, and conservation strategies necessary to protect and maintain black bears in the state. ABBA is a non-profit conservation consortium formed in 1997 by conservation organizations including the Alabama Wildlife Federation, the Alabama chapter of the Nature Conservancy, and state and federal agencies, the forest industry, agricultural organizations, the academic community, and a broad coalition of landowners.

The public is encouraged to report black bear sightings online at **www.alabamablackbearalliance.org** or **https://game.dcnr.alabama.gov/BlackBear**. They can also contact any of the WFF district offices (visit **www.outdooralabama.com/wildlife-section** for information) or email Thomas Harms at Thomas.Harms@dcnr.alabama.gov. "If they have photos, we would like to see them," Harms said. "If they give permission, we want to post them on Wildlife and Freshwater Fisheries' Facebook page."

(Continued on page 22)

Alabama's black bear population appears to be on the rise. A small population has existed in the southwest corner of the state, but bears migrating from Georgia have now established a viable population in northeast Alabama as well. Most recently, numerous sightings of a black bear were reported in both Oxford and Tallapoosa County, where the bear was observed eating from trash cans.

USFWS

Black Bears

(Continued from page 21)

Black bears are typically secretive, timid animals that avoid human interaction. What should you do if you are lucky enough to encounter/observe a black bear? The WFF offers these suggestions:

- Do not be frightened.
- Do not approach the animal.
- Do not run from the bear; back away slowly.
- Stand tall and upright and make loud noises.
- Avoid direct eye contact with the bear.
- Make sure the bear has an unobstructed direction to escape.
- Never purposely feed a bear.
- Never approach a bear with cubs; this will provoke an attack.

How well do you know your new neighbors?

- Black bears are the most widespread bear species in the world and were formerly found throughout Alabama. Today, these 'old neighbors' are moving back into many of Alabama's neighborhoods. There are known populations in southwest and northeast Alabama, although newcomers have been spotted passing through many other parts of the state.
- Male black bears (boars) can range in size from 150-350 pounds, and females (sows) range from 100-250 pounds, with body lengths from 3 to 6 feet.
- Black bear coats range in color from the more common black to bluish-black and cinnamon. Some have a brown muzzle and an occasional white blaze on the chest.
- The average life span of a black bear is 18 years of age in the wild.
- Both boars and sows reach reproductive age at 3-5 years and are fully mature by age 5. Mating generally occurs in the summer months, and cubs are born in winter dens in January and February. Litter size can range from one to five, with twins being most common.
- In the Deep South, black bears do not tend to hibernate like those living in areas with extreme winter temperatures. Because food is more available and winters are not as harsh, the only black bears that may hibernate in the South are pregnant sows or those with young cubs.
- Black bear habitat preference is primarily dependent on diversity and accessibility of food. They can be found in mountainous, swampy, and bottomland hardwood habitats. In general, they prefer thick timber for shelter over more open habitats. Prime habitat consists of escape cover, dispersal corridors, abundant and diverse natural food sources, water, and sufficient denning sites.
- Moving more at dusk and dawn, black bears may also be seen during the day. Typically, they utilize some sort of drainage corridor, be it a creek or river bottom, ditch or drain. However, with loss of habitat in many areas of the state due to residential and commercial development, bears will utilize a wide array of habitats to move from place to place, which also increases their visibility to the public. They mark territory by rubbing their bodies on and clawing trees to leave scents and claw marks.
- The black bear's diet consists of approximately 85 percent plant material. During the spring and summer, they feed on new plant growth, fruits, and berries. They feed primarily on hard mast such as acorns and nuts in the fall and early winter. Black bears also will eat insects, fish, and meat, including small mammals and carrion. Occasionally, they will take advantage of agricultural crops such as corn, wheat, and sugarcane, and have been known to damage beehives in their quest for honey.

- Most problems with bears stem from their quest for food, particularly at times when natural food sources are in short supply. Their acute sense of smell sometimes directs them to areas that increase their likelihood for conflict with humans. Household garbage can be very attractive to bears and an effort should be made to either secure it to a degree where they cannot gain access to it, or keep it inside until the day of pickup if bears have been reported in your area. Only feed outdoor pets the amount of food that they will consume in a short time period leaving no residual items that might attract a bear. The feeding of birds and other wildlife also increases the possibility of attracting unwanted attention to your property, as wildlife feeders provide easy pickings for hungry young bears.
- Feeding bears is a bad idea that can lead to dangerous consequences. It attracts bears to places they normally would not go, possibly causing them to lose their natural wariness of humans, which is their most important survival mechanism. Bears that continue to get an easy meal near your home may keep coming back. If conditioned to associate a residence or people as a food source, they may then approach other people for food. While this may seem 'cute' at first, as the bears become bolder serious problems can occur. Bears are wild animals and therefore their behavior is unpredictable.
- Although black bears are not typically aggressive, that does not make them oversized teddy bears. Unprovoked attacks on humans are uncommon throughout the black bear's range and are extremely rare. When confronted by people or domestic dogs, they frequently display a "flight response" and run away. However, when pressed or threatened, they can and will turn, pursue, and be a potential threat. Most attacks occur when bears are surprised, cornered, or otherwise threatened. Interactions between bears and humans should be avoided because all bears are potentially dangerous and could inflict serious injury. Also, sows with cubs are just like any other mother – they can be very defensive and will aggressively protect their young if they perceive a threat.
- As a protected species in Alabama, it is illegal to shoot or harm a black bear. Shooting at one is a Class A misdemeanor, which carries a potential minimum fine of $2,000. Other penalties for firing at a black bear include the potential loss of hunting and fishing license privileges for three years and possible jail time. *In 2015, a Heflin man received a one-year suspended jail sentence and nine months supervised probation, in addition to being fined $2,000 plus court costs for shooting at a black bear, although the bear was unharmed.*
- As we learn more about our wild neighbors, we can present them with the same Southern hospitality we try to provide our human neighbors. The black bear is one of those neighbors who loves its space and privacy. We should respect them. For more information about black bears in Alabama, visit **www.outdooralabama.com** and **www.alabamablackbearalliance.org**.

"All bears sighted this year have been behaving normally and exhibiting a natural fear of humans," said Steve Bryant, District 2 Supervising Wildlife Biologist for the Alabama Division of Wildlife and Freshwater Fisheries. "So far there are no reports of bears presenting any problems or threats to anyone who has encountered them, or causing any property damage."

Garry Tucker, USFWS

Basic Tools for Forestry

By Perry Pritchett
Barbour County Forester, Alabama Forestry Commission

Trades of all different types have a basic set of tools that are needed to do the job correctly, and forestry is no different. Over the years, many new tools have been added to the tool kit and are very beneficial. Here are the basics.

Number one on my list of forestry tools would be a compass. A compass is essential because you must know where you are going and how to get back to the truck once you get there, especially if you are on an unfamiliar piece of property. There are several types of compasses available, varying greatly in price and options. My favorite compass is equipped with a mirror that can be used for sighting a line. I find it more accurate than a compass without a mirror. This is most useful when trying to identify property lines or when cruising timber. A compass should not be relied on to run survey lines. However, it can give a good idea where a property line is located, if you have a good starting point and know where you are going.

Also, don't forget about declination, the degree difference between magnetic north and true north. In Alabama declination uses ranges from 0 to 3 degrees west, depending on where you are. Declination is important if you are trying to locate a property line. If you do not account for it, you may be off by several feet at your end point. More information on declination can be found on the internet.

The next piece of equipment needed for forestry is the wedge prism. Many people that own timberland hear the term 'basal area' and may not understand what this really is. Basal area is simply the amount of cross-sectional area that a tree occupies on an acre of land, which can be measured by using a wedge prism. Each tree, depending on the diameter, takes up a different amount of space in the forest. This information is important to know as it correlates not only to the carrying capacity of the land but also to forest health.

The prism is very useful in managing timber as it can tell if there is sufficient stocking, or if it is time to thin a stand. The general rule for thinning pine stands is to have the basal area and the site index close together, usually around 80 square feet per acre in south Alabama. Pine stands with high basal area should either be thinned or clear cut, depending on the landowner's objectives. Thinning pine stands reduces the threat of southern pine beetles and gives the remaining trees room to grow.

Using this tool takes a little practice, but once mastered it is simple to use. There are several sizes of prisms available that are referred to as Basal Area Factor (BAF), the most common being the 10 BAF. The prism is an angular piece of glass that when used correctly, the refracted light will offset the trunk of the tree. Close one eye and sight through the prism at a comfortable distance from your other eye. Hold the prism directly over a sampling point, such as a staff, at the plot center. Rotate around the staff, focusing on each tree at breast height, and count whether it is 'in' or 'out' or 'borderline' (see photos 1, 2, and 3 opposite). Large trees can be further away from plot center than small trees, so care must be taken when the prism is used in forests that have large variations in tree diameter. If you are using a 10 factor prism, multiply the number of trees counted 'in' by 10 and that is your basal area. Several plots should be taken throughout the stand and averaged together to get a basal area estimate for the entire stand.

Diameter tape ('D-tape') is also a good tool to have on hand. Most people can guess when a tree is large enough to be harvested, but sometimes having an accurate measurement can be the difference between selling your timber for pulpwood or chip-n-saw. Your local timber buyer can tell you the different specifications for products such as pulpwood, chip-n-saw, saw logs, ply logs, and even poles.

Trees should be measured at 4.5 feet from the ground line, often called DBH (diameter at breast height). Poles are measured at 6 feet above the ground line. I prefer to use what is called a loggers tape, which comes in different lengths from 50 to 100 feet and has the diameter measurements on one side. Having this tool can be very useful if taking 1/10th acre plots or measuring tree diameter.

The clinometer is a device for measuring the height of a tree. Using this tool takes a bit of practice but can be helpful in giving you the full picture when it comes to managing your trees. Standing at a distance of 66 feet from the base of the tree, use one eye to look through the lens at the scales while the other eye sights alongside the clinometer housing. An optical illusion is created with the horizontal sighting line appearing to project on the side of the clinometer housing. Place this sighting line with the base of the tree, remembering the number. Then do the same looking at the top of the tree. Adding these two numbers together equals the tree height. When measuring tree height, try to stand so that you are fairly level with the base of the tree. Keeping both eyes open and focusing on two objects at the same time can be tricky at first, but this exercise can be practiced using a known height such as a telephone or power pole. Although somewhat expensive, clinometers are worth having if you want to know accurate heights of your trees.

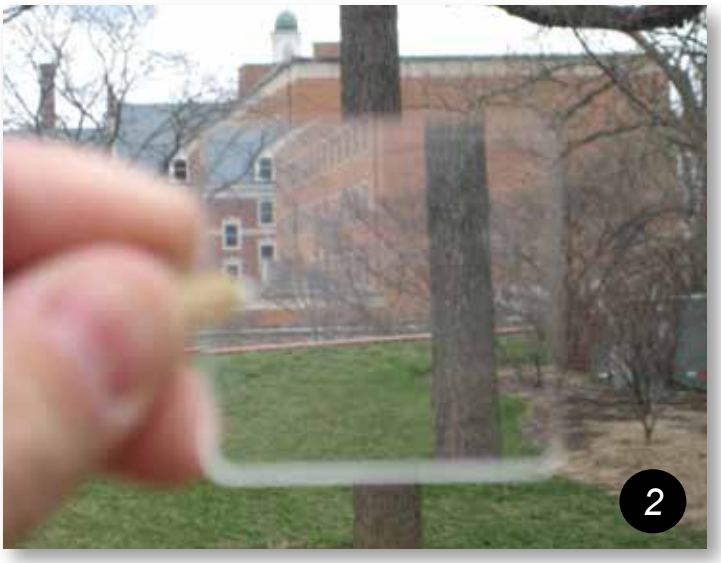
Other tools used in forestry today include a **hypsometer** for electronically measuring distance, and an **increment borer** for taking a core sample from a tree to count the age or look at growth rates. Most of these tools have been around for years and are utilized to varying degrees, depending on the forester.

One modern tool that I find myself using more each day is the smart phone. Several different useful apps are available, such as mapping that can be used to pinpoint your exact location in the forest. There are also 'soils' apps that can help identify soil types, tree identification apps, and wildlife apps. The list goes on and on.

Whether measuring your basal area, or using a diameter tape to monitor a logging operation in your forest, landowners would be wise in learning to use some of these tools as they can help manage their property to its fullest extent. Forestry Suppliers* and Ben Meadows*, as well as other providers, are good sources for the instruments mentioned and others. If you need assistance using any of these forestry tools, your local Alabama Forestry Commission personnel can help, and there is helpful information on the web.

** This article does not constitute the AFC's endorsement of these companies.*

A tree is considered 'in' if the offset section of the tree overlaps the bole as viewed with the prism.



A tree where the offset section of the tree does not overlap or touch the original bole is an 'out' tree and is not counted.

A tree where the offset section of the trunk is perfectly aligned with the original bole is a borderline tree and DBH must be measured to determine if it should be counted. More commonly in practice, every other borderline tree is counted.

Karan A. Rawlins, Univ of Georgia, Bugwood.org

Franklin Bonner, USFS (retired), Bugwood.org

Rebekah D. Wallace, Univ of Georgia, Bugwood.org

Eastern Baccharis

Native Invasive Moving Inland

By Walter E. Cartwright, Registered Forester
Forest Management Division Director, Alabama Forestry Commission

Eastern baccharis (*Baccharis halimifolia*), also known as saltbush, groundsel tree, or groundsel bush, was once confined to coastal areas of Alabama and neighboring states. Some believe that Hurricanes Ivan and Katrina may have played a role in dispersing it northward as far north as Walker County, Alabama. As with other invasive species, hunters from South Alabama and Florida may have transported it on their trucks, tractors, and implements. I have personally observed it as far north as near Columbiana in 2-3 year old plantations, edges of woods and fields, and at Wal Mart of all places. Next door to our office in Montgomery, Burger King is pruning theirs like an ornamental!

This bush or small shrub can grow from 5-12 feet tall, with one to several stems, and is generally not noticed until fall when flowers appear. At that time, the shrub is a white showy bloom with many flowers producing seeds that are white and hairy, much like dandelion or thistle. Seeds are easily dispersed by the wind and grow anywhere they can get direct sunlight. The leaves are alternate and somewhat leathery, semi-evergreen, bright green to grayish, 1-3 inches long, and one-quarter to one-half inch wide, variable in shape from diamond to oval or egg. Large leaves are coarsely toothed on the upper half; smaller leaves near tips of male and female trees appear together and are easily cut with a saw or machete, but sprouts must be controlled.

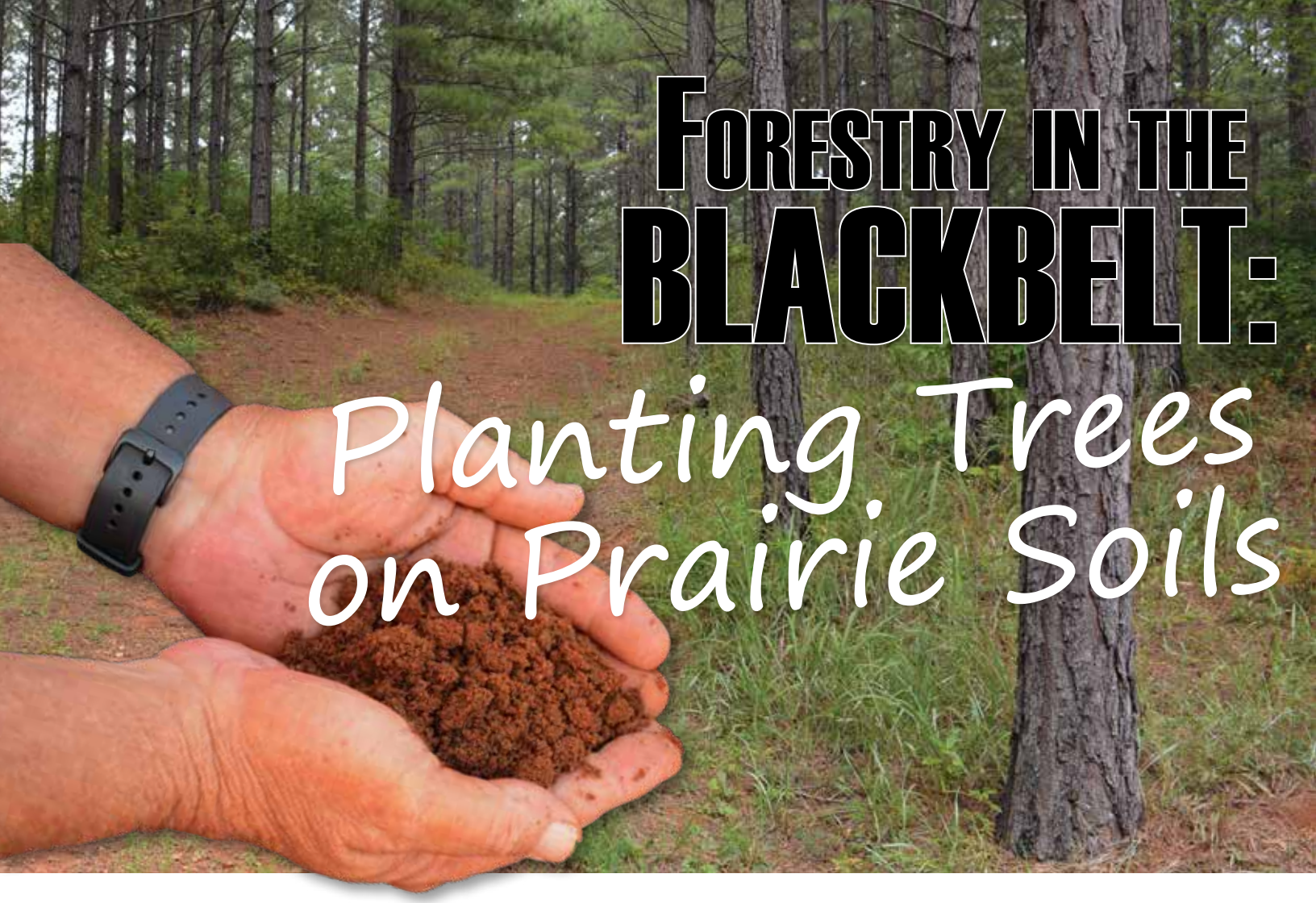
It is important to know that eastern baccharis is poisonous to cattle. They generally find it unpalatable, although it may be attractive to them when other foliage is not available during winter months and drought periods. It provides a poor-to-moderate browse for white-tail deer. While I have seen them eat privet and wax myrtle when they do not have other foliage, I have not seen them browse these plants on our property.

This invasive first came to my attention on the 60-acre property in southwest Butler County that my wife and I purchased a few years ago and have worked to improve. Coming across an unfamiliar rather rugged-looking shrub, I did some research and determined it was probably eastern baccharis. Cutting a piece of the bole, I brought it to the office where it was officially confirmed as such by other foresters. Then I began searching for a cure, but only Dr. Nancy Loewenstein, Extension Specialist at Auburn University School of Forestry and Wildlife Sciences, had one. "Burn it," she said.

Well, this presented a bit of a problem for us, as we had a stand of hardwood and pine that had been clearcut 15 years ago and was left to regenerate naturally. This stand was very open when hurricanes drove up through Alabama in 2004 and 2005, providing a perfect environment for the seed to germinate. Interesting to note – no baccharis was growing in a separate 25-acre pine plantation that has been burned in the last three years, proving Dr. Loewenstein's cure.

Although I asked several individuals about chemical control, no one has discovered a good solution. Dr. Loewenstein and other professionals recommend Triclopyr ester, which is found in several brand names. I tried spraying glyphosate on a small bush, which took three times before it died. I found that using a surfactant and dye will improve your chances of being successful in killing it. Apply to cut stems with oil on the stump and sides, basal cuts to the bole of plants, or foliar applications. Good luck!

Sources:
Alabama Cooperative Extension System Bulletin, "Eastern Baccharis (Baccharis halimifolia) Identification and Control" by Dr. Nancy J. Loewenstein, Research Fellow IV and Extension Specialist, School of Forestry and Wildlife Sciences, and Stephen F. Enloe, Extension Weed Specialist, Department of Crop Soil and Environmental Sciences, Auburn University. ***https://sites.aces.edu/group/timelyinfo/Documents/TIS%20eastern%20baccharis%20-%20final.pdf***
'Ponderosa II' field tests and eradication efforts by Walter and Annette Cartwright – Stewardship Forest, Tree Farm, and TREASURE Forest in Butler County, Alabama.



Forestry in the Blackbelt: Planting Trees on Prairie Soils

By Paul Stuckey, Forester/Lowndes County Management Specialist
and Dale Hurst, Forester/Montgomery Work Unit Manager
Alabama Forestry Commission

Occasionally someone calls the Montgomery/Lowndes office of the Alabama Forestry Commission and says, "I have this pasture or open land that I am not using. I want to plant trees on it . . . what do I need to do?"

The first step when planting trees on a large scale is to evaluate the soils. The easiest way to determine your soil type is to check a soil mapping site, such as the USDA Natural Resources Conservation Service 'soils' website. A 'web soil survey' can be found at **http://websoilsurvey.sc.egov.usda.gov**

Most forest soils in Alabama and the Southeast are acidic, which means they have a pH that is below 7. ['pH' is the symbol or numeric scale used to specify the acidity or alkalinity of a substance.] If the soil pH is above 7, the soil is basic [or alkaline], and pine trees will not live or will do very poorly.

The Blackbelt Region of Central Alabama is home to what are commonly called 'prairie' soils, many of which are basic and will not grow a pine tree. The most common prairie soils include Sumter, Oktibbeha, and Leeper. Other prairie soils can be found such as Hannon, Kipling, Vaiden, Minter, and Catalpa.

Prairie soils that *will* grow pines include Oktibbeha, Hannon, Kipling and Vaiden. Oktibbeha and Hannon are usually found on uplands, while Kipling and Vaiden are typically bottomland soils. Some prairie soils will grow hardwoods, such as Leeper, Catalpa, and Minter. Sumter soil is not suitable for any trees except eastern red cedar.

A quick and easy way to determine if pines will grow on an upland prairie site is to look at the ant beds. If the soil is red, it will grow a pine; if the soil is yellow or white, pines will not grow on it.

Some areas will be mapped as a complex. A Sumter/Oktibbeha complex means that about 55 percent is Sumter and the other 45 percent is Oktibbeha. This means that slightly less than half of the area will grow a pine tree. These soils should be avoided if your goal is timber production, since roughly half of the stand will not survive.

Another consideration is, what are your goals for the stand? If you are planting seedlings for future income, you will need a minimum of 25-30 acres of trees in order to harvest the stand in the future. If you are planting for wildlife or cover, any acreage will do.

Still trying to decide what to do? Call your Alabama Forestry Commission county forester or a consulting forester that is experienced in working in the Blackbelt.

Get the Dirt on Dirt: *Everything you ever wanted to know about **SOILS**, and then some, can be found at* **http://www.nrcs.usda.gov/wps/portal/nrcs/site/soils/home**.

MEMORIALS

Dr. Robert Parker 1940-2016

By Tim Albritton, Forester,
USDA Natural Resources Conservation Service

Doctor Robert Parker passed away in March of 2016. It is difficult to know where to begin in describing Dr. Parker; he was much more than one of Auburn University's gifted veterinarians. He wore many hats and had many titles and affiliations. He was a husband, father, grandfather, retired veterinarian, a veteran, a member of many boards and committees, a TREASURE Forest landowner, a wooden bowl artist, and what he considered most important – a devoted follower of Jesus Christ. But since these thoughts are being shared with readers of Alabama's TREASURED Forests magazine, I will focus on what I knew best about him – his love for God's creation and especially his TREASURE Forest.

Photo by Sarah Albritton

"Dr. Parker proudly displays his 25 years designation as a certified TREE Farm landowner with the author, Tim Albritton."

Dr. Parker did love his property in south Elmore County. The fact that his farm was a certified TREASURE Forest and a Tree Farm attest to his work ethic. His diligent care for God's creation was publicly recognized when his property was named as a Helene Mosley Memorial TREASURE Forest Award winner in 2005 and as the state Tree Farm of the Year in 2013.

The good doctor worked the land, wanting every acre to produce something worthwhile. He hated to see some invasive plant such as privet take up valuable space. He once wrote a paper for me to pass out at a forestry tour entitled 'Dr. Parker's Privet Control Notes.' In it he said, "Don't be overwhelmed with the task – start small and just be consistent." He practiced what he preached; he was consistent and a good steward of the land.

In many ways Dr. Parker was a modern-day Renaissance Man. He bought a portable sawmill to cut his own lumber. He tried his hand at making knives. He planted wildflowers. He built his own cabin and installed his own solar power electric system. He even made his own rustic furniture. Along the way, Dr. Parker decided to make bowls out of different kinds of wood. He did it the old fashioned way – chopping them by hand with a woodworking tool called an adze.

My home in Elmore County is between Dr. Parker's farm and his home in Coosada. I remember the time he called me on his way home from the farm, "Hey Tim, I have a log I want you to look at and see if you can tell me what it is." He was eager to start a new bowl and he wanted to show me the latest log he was working on. He would say, "There's a bowl in there and I need to get it out." And soon that log would turn into a beautiful bowl.

Photo by Sam Duvall, Alabama Forestry Association

Dr. Parker loved the Lord. Out of a desire to leave a legacy of faith, he recorded a message and asked that it be played at his funeral. I was deeply moved listening to his voice at his own funeral. One statement he made I will never forget . . . "People are more important than things." He loved people and he showed it by his giving and kind spirit. I was the recipient of his kindness as were many other people. My wife and I cherish one of the bowls he gave us – even more now that he is gone.

I expect to see my friend in heaven someday, but I will sure miss him until then. In the meantime, I intend to love people and help others in need as he did, in the hope that I may leave a legacy half as good as that of a truly good man – Doctor Robert Parker.

Dr. Robert H. Parker was a member of the Class of 1958 at Sidney Lanier in Montgomery. He later served his country in the United States Air Force and the United States Marine Corps Reserve. Graduating from Auburn University with a Doctorate of Veterinary Medicine in 1969, he founded the Ark Animal Clinic in Millbrook in 1980. In retirement, Dr. Parker spent his time growing and managing trees at his tree farm.

In addition to his TREASURE Forest being featured in the Spring 2007 issue of Alabama's TREASURED Forests magazine, a couple more articles were written about Dr. Parker in the publication. 'Elmore County Landowner Uses Computer Technology to Manage Forestland' appeared in the Summer 2000 issue, and a story that included his bowl making talents, 'From the Stump to the Woodworking Shop,' appeared in the Fall 2013 issue.

Don C. East 1939-2016

Clay County TREASURE Forest landowner, Capt. Don C. East, U.S. Navy (Retired) of Lineville passed away on March 9, 2016, at the age of 77. Funeral services were held on March 15 at Lineville Baptist Church, and burial with full military honors followed in the Rock Springs Baptist Church Cemetery.

Born in Clay County and a 1957 graduate of Bibb Graves High School, East enlisted in the U.S. Navy reaching the grade of Chief Petty Officer. During his enlisted service, he served as a specialist in electronic warfare and as a cryptologic technician, as well as attaining proficiency in Russian and other European languages. During the Vietnam War, he received a commission as an Ensign and was assigned to flight training, eventually receiving his wings as a Naval Flight Officer amassing nearly 10,000 flight hours. During the remainder of his naval career, Captain East served tours of duty involved in electronic and photographic reconnaissance and in naval intelligence as a specialist in Russia and Communist Bloc countries. His tours of duty included numerous overseas assignments as well as the National Security Agency, the Naval Technical Intelligence Center, and the U.S. Navy and U.S. Air Force War Colleges where he was assigned as a Professor of Naval Science. In addition, Captain East earned masters' degrees in National Security Studies from the Naval Postgraduate School and in International Relations from Salve Regina College in Newport, Rhode Island.

Following his retirement from active duty in 1992, the 36-year Navy veteran returned to his native Alabama where he was owner and manager of 'The Creeks Tree Farms.' As a very active landowner, East was a member of both the Clay County and Randolph County Forestry Planning Committees, as well as the Clay County Chapter of the Alabama TREASURE Forest Association.

Capt. East leaves a legacy of forest stewardship as evidenced by his property not only being certified as a TREASURE Forest (#1187 in 1996) and Tree Farm, but also receiving the Helene Mosley Memorial TREASURE Forest Award for the Northeast Region in 1999. The Creeks Tree Farms was a past winner of several other environmental, forestry, and wildlife management awards including the Alabama Tree Farmer of the Year, runner-up for the American Tree Farm System Southern Region (16 states) Tree Farmer of the Year, and the National Forest Landowner of the Year from the Forest Landowner Association.

East will also be remembered for his writing. In addition to his TREASURE Forest being featured in the Winter 2000 issue of *Alabama's TREASURED Forests* magazine, he often contributed articles for the publication including a story about "Wilderness Survival Training on a TREASURE Forest" (Fall 2000), "The Browns' TREASURE Forest: A Piece of Alabama History" (Fall 2002), "Alabama's Champion Catalpa Tree" (Fall 2008), and "Veterans Take a 'Walk in the Forest' at a Clay County TREASURE Forest" (Fall/Winter 2011). In 2008, he published *A Historical Analysis of the Creek Indian Hillabee Towns*, a book taking an extensive historical look at the rise and fall of the Hillabee faction of the Creek Indian tribe and its existence in Clay County, Alabama.

John William Sudduth 1943-2016

Winston County TREASURE Forest landowner John William Sudduth passed away on March 19, 2016, at the age of 72 at his home in Double Springs, surrounded by his loving family. Funeral services were held at Double Springs First Baptist Church on March 22, with burial following in Double Springs Memorial Cemetery.

As a 1961 graduate of Addison High School, Sudduth later received his bachelor's degree from Auburn University and a master's degree from Alabama A&M in 1972. During his career as an Ag teacher, he taught five years at Spring Garden High School and 29 years at Winston County High School. A member of Double Springs First Baptist Church for 44 years, John served as deacon and Sunday School teacher.

Sudduth was a member of the following organizations: Northwest Alabama Livestock Auction Board of Directors, Traders and Farmers Bank Advisory Board, Winston County Farmers Federation Board, Winston County Natural Resources Council, Winston County Republican Party Vice-Chairman, State Alabama TREASURE Forest Committee, Grass Roots Advisory Council through the Winston County Cooperative Extension Office, Winston County Equalization Board, Winston County Soil and Water Conservation District Board, and Winston County High School FFA Advisory Committee.

In addition to raising cattle, Sudduth enjoyed managing timber on his farm, for which he earned TREASURE Forest certification (#1262). During his lifetime, he received numerous honors and awards including the W. Kelly Mosley Environmental Award, Winston County High School Honorary Chapter FFA Degree, Alabama FFA Honorary State Farmer, Double Springs Panorama Study Club Outstanding Service Award, and the Ronald Reagan Award from the Winston County Republicans.

A story about silvopasture practices on John and Mary Sudduth's TREASURE Forest appeared as a 'Hidden TREASURES' feature in the Summer 2004 issue of *Alabama's TREASURED Forests* magazine.

In Their Own Words ...
Letters to the AFC

29 February 2016

To Greg Pate
Montgomery, Alabama:

I have been receiving burn permits from AFC via phone for many years. I contract out prescribed burning services for several landowners in Southeast Alabama – I've been a certified PBM for 20 years.

Saturday I called to obtain a burn permit for my personal property and spoke with Ms. Toria Elias. I want to let you know she was the most helpful, efficient, and pleasant person I've ever talked to with AFC – in terms of getting a burn permit, that is. Not that I've ever had a bad experience but she really stood out. For what it's worth, it is my opinion that she should be in charge of training each and every employee that issues burn permits via phone. She was that good.

I would imagine that you, like me, usually only hear from folks that have something to complain about. I did not want to miss this opportunity to praise a really good job from what is obviously a really good employee.

Thanks for your time,
Bill Gray
Supervising Wildlife Biologist,
Wildlife District IV
Alabama Division Wildlife &
Freshwater Fisheries
Enterprise, Alabama

01 March 2016

To the Editor:

I have been receiving Treasured Forests for many years and have been sharing it with students. Your magazine is very interesting and highlights how well Alabama works with industry as well as the public, and highlights Alabama's commitment to the environment.

Thank you,
Ms. Shelly Roy
Instructional Leader
Agri-Science & Technology Dept.
Ledyard High School
Ledyard, Connecticut

3 March 2016

To Robert Brown
Etowah County AFC:

I can't thank you or your father enough for the tour you gave us. It was a big success and we had great feedback from the brand owners. You made a big impression on McDonalds. Please let us know if there's something we can do to highlight the work you did [for] the Alabama Forestry Commission. And thanks again – it was a great pleasure working with you!

Sincerely,
Nathan Truitt
Vice President of Development
American Forest Foundation
Washington, DC

10 March 2016

To Greg Pate
Montgomery, Alabama:

I want to make sure you are aware of the recent program we hosted connecting major customers with family landowners and the role AFC played in it. The American Forest Foundation is grateful to AFC, specifically Robert Brown, who took the lead in organizing [a] field day for major brands like McDonald's, 3M, Mars Candy, Staples, and Time Warner. These customers of forest products from Alabama have an interest in better understanding management practices and landowner's land ethic. Robert put together a great experience for these people who play a critical role in the market place. They were very happy with the program.

Personally, I can't share enough how grateful I am. Robert was asked at the last minute for help and without hesitation he obliged and did a fantastic job. We asked a lot of him and he didn't hesitate to help.

Chris Erwin
Director, Woodland Conservation
American Forest Foundation
Wetumpka, Alabama

11 March 2016

To Benji Elmore
Grove Hill, Alabama:

Recently there was a forest fire breakout just off of County Road 1 in the northern part of Choctaw County. My family owns an interest in a tract of land that was near the fire. Lemoral Coleman from our local office and Bayne Moore from Marengo County responded to this fire and their professional and prompt actions contained the fire and prevented it from causing major damage on our family's property. I wanted to drop you a line to let you know how much we appreciate the job these two men performed and the professionalism and dedication they showed.

I thank you and your department for the continued work that you provide in our area.

With kindest personal regards, I remain,
sincerely yours,
J. Lee McPhearson
Attorney at Law
Butler, Alabama

Teaching an Old Dog New Tricks: **Silvopasture**

(Continued from page 15)

Most people reading this article are timber growers as I was, knowing much more about trees than raising animals, so it is best to think long and hard before you make any decisions. It will not be easy, and it requires learning new things. We read a lot online, but you can't always trust what you read on the internet. I highly recommend attending classes offered by the Extension System, as we did. While it doesn't make you an expert, it provides valuable information and lets you meet other farmers that may have some good advice that they've learned the hard way. We are still novices, but we can share some of the problems we've encountered and offer some guidance. I highly recommend contacting your local extension office for available classes and references for large animal veterinarians.

Many of you may wonder, why even bother with silvopasture? However, statistics show that the combined profit of the products exceeds the profit of what each alone would generate on its own. The goal of silvopasture is to optimize, rather than maximize, production of timber, forage, and livestock. This is due to the fact shading from trees helps reduce heat stress on livestock, the cool season grasses can be lower in fiber and more digestible for livestock when grown in shade (Forage News, Mississippi State University/Extension), and there is more diversification in income sources. Timber production is also shown to increase due to the use of fertilizers. One USDA article indicated that pine production was 30 percent greater on properties where silvopasture was practiced.

Rotational grazing is imperative, more so than in traditional cattle farming. According to a Florida Extension article, regular timber harvests are also a must, thinning down to 40-60 basal area. USDA Forest Service research suggested a good rule to follow is to thin every five years, thinning down to 100 trees per acre at age 20, 50 trees per acre at age 25, 25 trees per acre at age 30, and final harvest at age 35. This is less than half the trees per acre than a traditional pine plantation, but harvested volumes were greater for silvopasture practices.

Another way to make money from the land that we are considering for the future is a pine straw harvesting operation. The pine straw must be removed anyway because it will suffocate your grass. It can be burned, but why not harvest it and make a little money? While longleaf and slash pine are better suited, loblolly pine can also be used. Most of the same equipment that is used for raking and bailing hay can be used to gather pine straw. This harvesting business is more prevalent in South Alabama than North Alabama because the southern part of the state grows more longleaf and slash pine trees. For this reason, landowners need to research potential customers for their area.

Investing in silvopasture is not like investing in stocks; it requires blood, sweat, and tears. There is a saying that people shouldn't retire from a job; they should retire to something else. When I retire, I need something that is meaningful and will keep me busy. While it may not be the answer for everyone, if you are interested in maximizing the potential profit from your property, silvopasture may be something you want to consider.

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Alabama TREASURE Forest Association Annual Conference and Tour

October 13-15, 2016

Wind Creek Casino & Hotel • Atmore, Alabama

Don't miss your chance to attend this year's ATFA annual meeting. The program includes two tours and some great educational sessions regarding timber management, as well as non-timber and wildlife topics. Registration is $75 per person for ATFA members and their families, $100 for non-members, and $38 for children (5-15 years old). Conference registration includes planned meals (as per agenda), seminars, programs, and Saturday's visit to Magnolia Branch Wildlife Preserve. We encourage you to join us for what promises to be an excellent educational conference with fellow stewardship-minded landowners.

Speakers & Topics Include:
Darryl Patton – The Southern Herbalist
Joel Glover – Pass It On
Jim Jeter – Managing Mixed Pine/Hardwoods
Eric Gee – Economic Outlook for the Forest Products Industry
Chuck Sykes & Joe Hamilton – Game Check and QDMA
Claude Jenkins – Quail Management

For hotel accommodations, please contact the Wind Creek Casino & Hotel directly at (251) 446-4290. 303 Poarch Road, Atmore, Alabama

Learn more about the agenda and speakers or register online at TREASUREForest.org. For more information, contact Casey Earnest at (334) 613-4080 or cearnest@alfafarmers.org.

Photo Courtesy of J.W. Hybatt III