

ALABAMA'S

TREASURED

FORESTS

A Publication of the Alabama Forestry Commission

Summer 2014

Message from the *STATE FORESTER*

As is usual, this edition of Alabama's TREASURED Forests is filled with informative and interesting articles that speak to the management of our natural resources. In relating some of the success stories of The Alabama Tree Recovery Campaign, one of these articles addresses a partnership the Alabama Forestry Commission entered with the Arbor Day Foundation as well as numerous private foundations and organizations to bring urban trees back to communities devastated by the April 2011 tornadoes. Such partnerships are important to the success of the Alabama Forestry Commission in our effort to protect, sustain, and promote the forest resources of our great state.



Greg Pate, State Forester

Partnerships are efficient ways to leverage more funding, equipment, and personnel resources than can be provided by any one agency or organization on its own. The Alabama Forestry Commission is blessed to have formed many partnerships over the years that have proven to be mutually beneficial to each partner, and allowed each to meet the needs of their constituents more effectively because of the partnership. Some of the strong partnerships we have enjoyed over the years include the nearly 1,000 volunteer fire departments across our state who aid the AFC tremendously in the suppression of wildfires; the Alabama Emergency Management Agency to whom we bring our expertise in the Incident Command System when organizing and supporting statewide efforts following any natural disaster; the other members of the Alabama Natural Resources Council through which we support natural resource management with local forestry planning committees and the TREASURE Forest program; the Alabama Forestry Association, the state's sponsor organization for the Tree Farm program; the Southern Group of State Foresters and the National Association of State Foresters who bring a regional and national voice to forestry issues that affect Alabama's forest landowners; the consulting foresters and private-sector forestry vendors to whom we make hundreds of referrals each year; and the US Forest Service who assists the AFC with funding, expertise, and resources in carrying out programs to protect our state's forests and assist private landowners and communities in the management of forest resources.

This list is only a small sample of the many and varied partnerships the AFC has formed. Through partnerships such as these, success stories as told in 'The Alabama Tree Recovery Campaign' article can be told many times over. Given the current shortage of resources in many agencies and organizations, we are working on several new partnerships that we feel will strengthen our ability to carry out our mission and better serve the citizens of Alabama. For the last 45 years, not only has the Alabama Forestry Commission provided professional forestry expertise for private forest landowners, but has also been the state agency that provided a voice for private forest landowners across the state. It's our ability to form these strong partnerships that provides even greater benefits to forest landowners, communities, forest industry, and forestry interests as a whole in our state. We look forward to working with all of our partners for many years to come.

A handwritten signature in black ink that reads "Greg Pate". The signature is fluid and cursive, written in a professional style.

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Bald cypress (*Taxodium distichum*) at Rice Creek Landing, near Stockton, Alabama, in the Mobile-Tensaw Delta of Baldwin County. Photo by Fred Nation



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A Call to Stewardship: McRae's Pond Grows More than Trees

*By Allen Varner, Stewardship Forester,
Alabama Forestry Commission*

Just outside of Eutaw is a TREASURE Forest that promotes family, wildlife, aesthetics and education. Known as McRae's Pond, this property certainly exemplifies multiple use management as on-the-ground activities range from managed stands of loblolly pine to garden beds of cultivated blackberries. Such a diverse range of activities keeps Dr. Finley McRae and his wife, Bette, very busy. They retired to life on the farm in 2005 and like many retirees, look back and muse, "I'm busier now than when I was working full time!"

The farm has been a family gathering place for nearly 30 years. During that time the family has grown from 10 to 27 members. Everyone still gathers for Thanksgiving festivities each year, which includes square dancing in the barn and a traditional Brunswick stew cooked over an open fire. And speaking of gathering, the five boys and one girl live all over the United States, so making it back to the farm is always a homecoming event!

The McRaes' youngest son, Colin, resides on the property with his family. Colin attended Mississippi State University and uses the knowledge he acquired at school to manage the property. The family also has an on-site steward who assists with all facets of managing the farm. They work as a team to make the property productive, and when they come across something new, they are quick to seek out assistance. In fact, Dr. McRae says he adheres to the scripture, "There is wisdom in many counselors."

(Proverbs 15:22) He noted that the McRae family owes a special debt of gratitude for the contributions of Harold Tucker, the contractor; Kenneth White, the carpenter; Dr. Richard Kaminski, "Pappa Duck;" Steve Brown, Southern Aquatech; Tim Washburne, former county forester with the Alabama Forestry Commission; and the late David Nelson, wildlife biologist with the Alabama Department of Conservation and Natural Resources, Wildlife and Freshwater Fisheries District III.

Wildlife Management

At just a little over 800 acres, the property had two small lakes when it was acquired. However, the lake dams were breached and in need of repair. One of the first decisions made was to construct a 9-acre pond. After much family deliberation, this pond construction project inspired the name of the property, "McRae's Pond."

One of the more interesting features of McRae's Pond is a 75-acre marsh. Named Senior



Marsh, it is managed to induce the growth of early succession plants. A water control structure was installed, and mid-succession willows were windrowed and burned to allow early succession plants such as wild millet and smart weed to grow for waterfowl consumption. Senior Marsh now fulfills the feeding, loafing, and resting needs of migratory waterfowl during fall, winter, and spring.

To further enhance wildlife habitat, three moist soil impoundments were developed to provide winter foraging and roosting for migrating waterfowl. Wild millet is propagated within the impoundments to provide waterfowl forage. Over 22 individually numbered wood duck boxes have been erected and are used to collect nesting and site-utilization data of the impoundment areas.

The McRaes have an active deer management program. Does are selectively taken annually and young bucks are allowed to walk. The buck policy is to take only mature bucks that are 8-points or better with antlers outside the ears, and the hunter must mount the buck if they decide to harvest it. Supporting the deer management program are 12 food plots ranging in size from a half acre to five acres. Depending on the time of the year, the food plots are planted in either cool or warm season forage for deer and turkey.



Feeding stations and mineral blocks have been established for supplemental feeding. Hard and soft mast trees and shrubs have been planted around the food plots including saw-toothed oak, gobbler oak, southern crabapple, Russian olive, Chickasaw plum, and persimmon. Additional plantings include blueberries, blackberries, and apple trees.

Of course, the key to wildlife management is sound timber management. An unproductive hay field was planted in loblolly pine to create a barrier, provide early cover, and enhance productivity. Not long ago, a 43-acre stand was harvested and site prepared leaving windrows to provide cover and travel corridors. To increase habitat diversity, a 10-acre portion of the harvest area was left fallow to promote more diverse wildlife cover. And because of the substantial amount of bottomland, best management practices (BMPs) for forestry are strictly followed. Recently, 41 acres of loblolly was commercially thinned to open the canopy and stimulate native vegetation. A three-year prescribed burning regiment has created the desired understory structure promoting native plants while controlling competing vegetation.

Aesthetics

As with any TREASURE Forest and especially with one that has received the Helene

Summer 2014



TREASURE Forest landowners Finley and Bette McRae survey the vineyard with their youngest son, Colin.

Mosley Memorial TREASURE Forest award, multiple use management is fundamental and almost becomes second nature. While McRae's Pond lists wildlife management and aesthetics as their two primary objectives, timber management, recreation, and education are all objectives of the landowners at one time or another. Because the McRaes live on the property, they take a very special interest in aesthetics.

Butterfly bush and other flowering plants such as "yes-terday-today-tomorrow," Burr oak, camellia, hydrangea, azaleas, English hawthorne, and contorted Filbert have been planted around the homes and cabins to attract several species of butterflies. River birch trees have been planted around both of the small ponds.

When needed, lower limbs are pruned; dead trees are removed and open areas around the facilities are mowed. Areas around the buildings are landscaped with shrubs and trees and mulched. October red and sunset maples greet visitors along the entrance drive.



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McRae's Pond Grows More than Trees

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Education

The educational activities on McRae's Pond are numerous. Events have included leadership workshops, "Outback America," and university ornithology and limnology class field trips.

The McRaes have a strong civic responsibility. They have hosted the "Citizens for a Better Greene County" conference and picnic. "Leadership Greene County" has held several workshops exploring future industrial and business opportunities in Greene County.

They also support and make their property available to "Promise Keepers" retreats. The McRaes believe in Promise Keepers' mission which is to ignite and unite men to become passionate followers of Jesus Christ through the effective communication of seven promises to God, their fellowmen, family, church, and the world. Promise Keepers' vision is simply put in three words: "Men Transformed Worldwide."

Findley and Bette established the "True Vine Foundation" by setting aside 70 acres for the purpose of providing facilities for Christian-based ministries and activities. A really unique complement to the Foundation is the Odyssey III High Ropes Adventure Course. In addition to the high ropes, the True Vine staff constructed 10 low ropes elements (3 Trust Falls, 3 Ship to Shore, Spider Web, Log Jam, Great Wall, Amazon, Zig Zag, Mohawk

Walk, Whale Watch, and King's Finger). The high and low ropes adventure courses were built to instill trust, communication, leadership, and team-building skills. The "Challenge by Choice" principle is used with participants on the courses to encourage pushing their limits, but not overstepping them.

Lastly, Colin McRae has hosted the Ducks Unlimited youth hunting event with the Eutaw Chapter for the past several years with the support of the Alabama Department of Conservation and Natural Resources (DCNR) Wildlife and Freshwater Fisheries, DCNR Marine Police, and the U.S. Army Corps of Engineers. Gun safety, waterfowl identification, and use of working hunting dogs are a few examples of the activities that are held at the annual event. Another of Dr. McRae's sons, Hunter, is a certified instructor for the National Sporting Clays Association and comes out to the hunt to teach proper techniques of firearm shooting.

Yes, McRae's Pond is a busy place where the family gathers to fellowship. Wildlife management is the key component to the family's multiple use philosophy. The beauty of nature is displayed throughout the activities on the farm, and education about the property and for the property is done with a thankful heart. According to Dr. McRae, "McRae's Pond exists only because of the grace of God. The desires and fervent prayers of the family are that all that exists here and all that is done here be a blessing to Almighty God."

Dr. Finley and Bette McRae are true stewards of the land and McRae's Pond is very deserving of the Helene Mosley Memorial TREASURE Forest Award. ♣



2014 Regional Forestry Events and Field Days



North Region

Thursday, October 2

*Burgess Tree Farm**

Colbert County

RSVP: Johnnie Everitt

Phone: (256) 383-4376

Email: colbert.county@forestry.alabama.gov

Topics include:

- ◆ *Predator Solutions: Trapping*
 - ◆ *Mulching Timber & Creating Wildlife Openings*
- ◆ *Thinning, Prescribed Burning & Timber Markets*
- ◆ *Pine Plantation Establishment & Invasive Species Control*

Central Region

Thursday, October 9

*Moore-Webb-Holmes Plantation**

Perry County

RSVP: John Ollison

Phone: (334) 683-6888

Email: ollisjp@acesag.auburn.edu

Topics include:

- ◆ *AgriTourism*
- ◆ *Wild Pig Management*
- ◆ *Longleaf vs Loblolly Management*
- ◆ *Stream Crossings*

South Region

Thursday, October 16

*Newman Property**

Coffee County

RSVP: Mary McLean

Phone: (334) 894-5596

Topics include:

- ◆ *Dove Field Management*
- ◆ *Hardwood Management*
- ◆ *Mid-Rotation Release*
- ◆ *Wetlands Management*

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



CAUSES OF FOREST HERBICIDE FAILURE

By David Mercker, University of Tennessee Extension Forester

Private landowners and forest contractors regularly use herbicides to accomplish silvicultural objectives, including site preparation, seedling and sapling release, thinning, and cull tree removal. The result of herbicide applications is normally satisfactory, provided the manufacturers' directions are properly followed. Sometimes, however, the results are disappointing, even with experienced applicators.

There are a number of explanations why herbicides sometimes fail to perform as intended, and they are summarized here:

1. **Soil Texture** – Herbicides act more slowly on fine-texture soils (clay) than on coarse soils (sand). Often it is necessary to slightly increase application rate on finely-textured soils as well as soils with high mineral and organic matter, and slightly lower the application rate on coarse (sandy) soils.
2. **pH of the Water** – Efficacy of herbicides can vary according to the pH of the water. Study the label to determine the most favorable pH range. Do not use surface water for mixing herbicides.
3. **Air Temperature** – Many herbicides will perform better with warmer air temperatures. Normally during cool or even cloudy weather, plants are not actively growing. Herbicides will not translocate readily and favorable results will be slow, if at all.
4. **Photo Decomposition** – Excessive sunshine in the absence of rainfall can cause some herbicides to function poorly.

Soil incorporation may be necessary (follow the label to see if this is recommended).

5. **Sap Flow** – When applying herbicides to the girdles or frills of certain trees (for instance maple) in early spring, sap flow can be so aggressive that herbicides are immediately “pushed” back out, never to reach the roots.
6. **Salt Form** – How well herbicides enter a plant is often dictated by the salt form. For instance, “2,4-D” ester is more volatile than the amine salt and can move off target more readily.
7. **Precipitation** – Whether in excess or too sparse, precipitation is a major factor in success with herbicides, and one over which the applicator has no control (other than in timing of application).
8. **Improper Application** – Poor site preparation, improper mixing, faulty spray equipment, variation in ground speed, etc., all contribute to inconsistency or failure.

Forest landowners that are inexperienced with herbicide application should first seek professional assistance, starting with the local county extension office or Forestry Commission office. Be sure to read and follow closely the label on the product to reduce the likelihood of failure. Some herbicides require specific additives and precautions. Remember too that restricted-use herbicides applied commercially require a pesticide applicator's license. ☞

Rooted in the Past

E.A. Hauss Demonstration Forest

Highlights Future Options for Landowners

*By Becky Barlow, Alabama Cooperative Extension Specialist,
Auburn University School of Forestry and Wildlife Sciences
and Ana Beatriz Melo, Visiting Scholar,
Luiz de Queiroz College of Agriculture (ESALQ/USP), Piracicaba/SP, Brazil*

As a landowner, you may have wondered how you can increase the productivity of your family farm or forest. Landowners often believe that loblolly pine plantations are their only choice when it comes to Southern forest management, but in light of current events, some landowners have started to look at other options. Pine timber prices are down. Recent outbreaks of loblolly pine sawflies have caused wide-spread damage to pine plantations in north Alabama. And for many, Conservation Reserve Program (CRP) contracts will soon run out. What is a landowner to do?

History tells us that we have more opportunities than we might think, and silvopasture is one of them. With the creation of the E.A. Hauss Demonstration Forest, the state's working silvopasture field laboratory, we can learn more about establishing and managing longleaf pine as part of this alternative forest system.

A history of woodland grazing

Early descriptions of the Southeast were documented in the late 1700s by William Bartram, an early explorer and botanist. He described the Southeast at that time in this way,

"This plain is mostly a forest of the great long-leaved pine (P. palustris Linn.), the earth covered with grass, interspersed with an infinite variety of herbaceous plants, and embellished with extensive savannahs, always green, sparkling with ponds of water . . ."

During this period, loblolly pine was never mentioned as occurring in pure stands, but instead was noted along stream

margins and taking over abandoned fields. Shortleaf pine occurred in pure stands west of the Mississippi River, and was found in mixed stands of hardwood in north Alabama and other Southern states. Slash pine occurred in pure stands along the Gulf Coast and into central and southern Florida. Longleaf occurred in pure stands over its entire range which included much of Alabama. Fire was an important part of Southern forest systems and greatly influenced pre-settlement forest compositions.

As the Southeast was settled by the Scotch-Irish, they brought with them a tradition of grazing. As a result of frequent natural (and sometimes man-caused) fire, the Southern woods were open with a grassy understory that was ideal for grazing livestock. Piney-woods cattle were managed at a rate of about 5-10 acres per head, depending on time of year and forage type. This history is noted in W.G. Wahlenberg's 1946 book, *Longleaf Pine*:

"In accordance with age-old custom, southern landowners usually tolerate grazing on their forest lands by the livestock of numerous small farmers. The typical forest range is open, no permits are required, no fees are charged, and usually no attempt is made to control fires set by stock owners."

Fencing laws were enacted, and eventually cattle and other livestock could no longer roam forests. Much of the South's longleaf pine timber was harvested, in part due to the need for more intensive grazing on smaller parcels of land. The practice of woodland grazing, as well as burning, largely disappeared from the Southern landscape. By the middle of the last century,

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Rooted in the Past

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the South's forests had transitioned to intensive loblolly pine plantation management.

As happens so often, things come full circle. History has shown that Southern forests can be ideally suited for woodland grazing, and while free-range grazing is not a viable option for today's landowner, the practice of silvopasture is.

Silvopasture as a contemporary land management option

As a modern agroforestry technique, silvopasture takes us beyond free-ranging cattle to a science-based land management system. One of the five typically-recognized agroforestry systems – which also includes alley cropping, shelterbelts or windbreaks, riparian buffer strips, and forest farming – silvopasture is the practice of managing property for live-stock, forage, and timber on the same parcel of land. Recognized benefits of this system include the production of high-quality timber, while also having improved cash flow opportunities from livestock and forage production. Additional benefits of wildlife habitat, native grass production, and improved soil and water quality may also be achieved with proper management. Silvopasture is the most common form of agroforestry in the Southeastern U.S. In the most recent USDA Census of Agriculture, Alabama ranks fifth in the nation with an estimated 119 farms across the state reporting that they practice alley cropping or silvopasture.

Southern pines are well suited for use in silvopasture systems because of their relative ease of establishment and shorter rotation length. Considerable work has been completed to examine the suitability of Southern pines such as loblolly and slash for use in agroforestry systems; however, few studies have included longleaf pine. Through work done on the E.A. Hauss Demonstration Forest, we hope to better understand what is needed for the successful establishment and growth of longleaf and loblolly pine silvopastures in Alabama.

A new direction for Hauss Nursery that is rooted in the past

Located near Atmore, Alabama, the E.A. Hauss Nursery was first established as a tree seedling nursery in 1952, which produced millions of loblolly, slash, and longleaf seedlings in addition to many hardwood and wildlife specialty seedlings for almost 55 years. In 2006, seedling production ceased and the mission of Hauss Nursery was re-aligned, in part to help meet the demand for longleaf pine and silvopasture research and demonstration in Alabama. Renamed the Hauss Demonstration Forest in 2007, the site now boasts a 75-acre demonstration of the establishment and growth of old field longleaf pine and loblolly pine silvopastures. This project is a result of a partnership of the Alabama Forestry Commission, the USDA Forest Service National Agroforestry Center, the Alabama Cooperative Extension System, Auburn University, and Alabama A&M University.



Measuring the loblolly pine on EA Hauss in 2009 first half of year

In the winter of 2008, a total of 12 approximately 6-acre blocks (four loblolly and eight longleaf) were hand-planted in double-row sets on an 8-by-6-by-40-foot spacing. Planting rows were established in an east/west orientation with 8 feet between the double rows, and 1-year-old loblolly or longleaf pine seedlings were spaced 6 feet apart within the scalped double rows for an 8-by-6-foot spacing that averaged approximately 300 trees per acre. A 40-foot “alley” between double rows of trees was left for forage production (Figure 1). All 40-foot alleys within a block contained pasture forages such as Bermuda or Bahia grasses and broomsedge bluestem grass. Silvopasture blocks were sampled by Auburn University for seedling survival, trees per acre, and seedling height after planting, and again in 2009, 2011, and 2013.

What Hauss Demonstration Forest has taught us

First-year survival was low for both loblolly (53 percent) and longleaf (39 percent) plantings. This was partly due to heavy competition from grasses. When implementing a silvopasture on

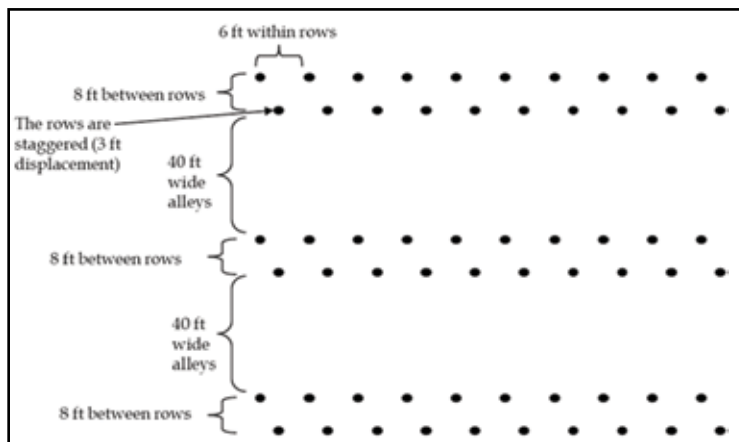


Figure 1. Example of loblolly and longleaf tree planting spacing on the E.A. Hauss Demonstration Forest near Atmore, Alabama.



LOBLOLLY on Hauss in 2012

an old field site, landowners should plan for early herbicide treatments to control vegetation around seedlings. Another reason for low survival was the accidental cutting of seedlings with mowing equipment. Since cattle or other livestock should not be introduced into a silvopasture until trees are approximately 8-10 feet tall, cutting hay in the alleys during the early years of a silvopasture can provide an additional source of income for landowners. But small seedlings can be difficult to see in the field, and the grass stage of longleaf can make it particularly difficult. It is important that equipment operators are aware of seedling locations and that alleys be the proper size to easily move machines between rows of trees. To help mitigate low survival on Hauss Forest, longleaf blocks were replanted in 2008 to achieve a 51 percent stocking rate, so that all blocks of loblolly and longleaf averaged around 150 trees per acre.

Tree height for both loblolly and longleaf silvopastures was measured and averaged across blocks by species. Early height growth estimates show that loblolly was about twice as tall as longleaf seedlings planted at the same time (Figure 2). By age 4, loblolly seedlings averaged almost 10 feet tall, while longleaf seedlings the same age were approximately 4 feet tall. By age 6, loblolly had doubled in height to almost 20 feet and longleaf averaged about 10 feet tall.

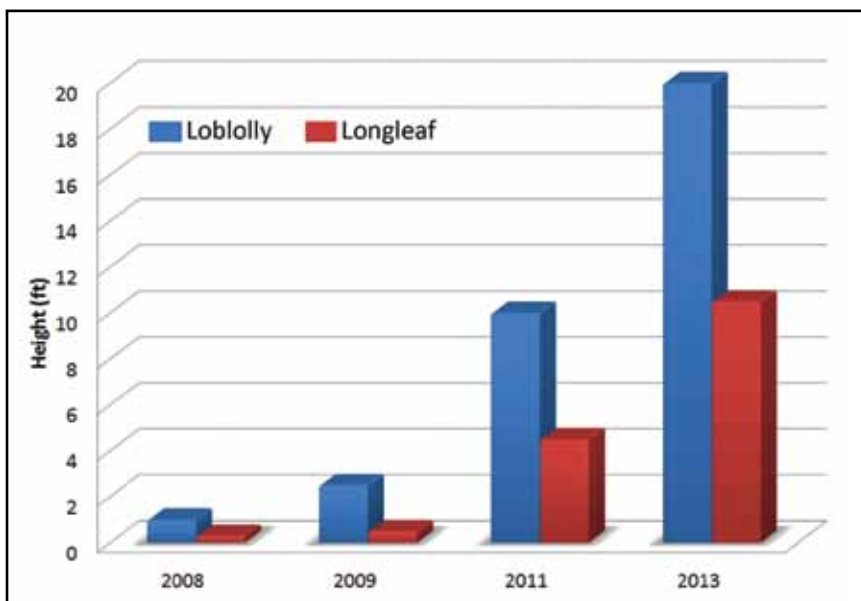


Figure 2. Average measured height of loblolly and longleaf pine seedlings in planted silvopasture sets on the E.A. Hauss Demonstration Forest near Atmore, Alabama.

Based on these findings, by age 4 the loblolly pines in this system were easily “livestock resistant” and cattle could be introduced into the system. For the longleaf blocks, however, a landowner would need to wait until about age 6 to introduce livestock into the system. To improve height growth in longleaf silvopastures, landowners should consider prescribed burning. Fire is an important part of any longleaf forest system, and based on findings at Hauss Forest there is some early evidence that it may actually improve height growth of longleaf seedlings in a silvopasture. As part of the 2013 measurements, both a burned and an unburned block of longleaf silvopasture were compared. Seedlings on the burned block averaged one foot taller than the unburned block. Based on these findings, prescribed fire may

help increase height growth and therefore allow for the earlier introduction of livestock into a silvopasture system.

Hauss helps landowners think about other options

Grazing in pine forests is an important part of Southern land management history. And while it is not appropriate for everyone, silvopasture is an option that works well for many, providing long-term income opportunities from timber as well as a source of additional income and cash flow from livestock and forage that can be important to a private landowner. Early studies on Hauss Demonstration Forest have shown that although it may not have the rapid early growth of loblolly pine, longleaf should not be dismissed as a viable option for landowners interested in silvopasture.

Future studies and demonstrations on E.A. Hauss will include tree pruning, prescribed fire, and cattle grazing. Pine straw production as an additional source of revenue will also be examined. Silvopastures are ideal for pine straw raking, because of the open understory and wide row spacing. So you can see, we still have much to learn from Hauss Demonstration Forest. And thanks to the generosity of the Alabama Forestry Commission and their partners, Alabama’s landowners will benefit from what is learned.☞



LONGLEAF on Hauss in 2012



Photo by Charles LeCroy

Shagbark Hickory



Southern Shagbark Hickory

2014 Champion Trees

By Brian Hendricks, Registered Forester, Champion Tree/FIA Coordinator
Alabama Forestry Commission

The quest to find “champion” trees continued to be a high priority for many Alabamians in 2014 as a total of 45 new trees were nominated for this prestigious honor. Of the 45 nominations, 11 trees achieved the status of CHAMPION in 2014. One of the new champions, a southern shagbark hickory, has a good chance of being declared a national champion later this year!

With the addition of these new champion trees and the subtraction of champions that had died, Alabama now has a total of 147 champions distributed throughout 48 of its 67 counties. Baldwin County holds claim to the most champions in the state with 16, followed by Madison and Wilcox counties which have 12 champions each.

Of the 11 new champions, eight are outright champions while three are co-champions. Co-champions are trees whose total

scores are in close proximity of each other. The new 2014 champion trees, along with their nominators and owners, are listed below.

The purpose of the *Champion Tree* program is to discover, recognize, and preserve the largest tree of each species in Alabama. Anyone can nominate a tree for *Champion Tree* designation by completing an on-line nomination form; however, an Alabama Forestry Commission (AFC) forester is responsible for collecting the tree’s measurements.

When determining a champion, three of the tree’s components are taken into consideration: circumference, height, and crown spread. The formula used to determine the size of a tree is as follows: one point for each inch of circumference, plus one point for each foot of height, plus one point for each four feet of the average crown spread.



Photo by Tommy Lawler



Photo by Elishia Balentine

Southern Magnolia

For a tree to be eligible for the *Champion Tree* program, it must be a species that is recognized as native or naturalized in Alabama. A naturalized tree is an “introduced” species that has established itself in the wild, reproducing naturally and spreading.

Once a new champion is identified, both its owner and nominator receive a certificate. The nominator is also presented with a permanent tree marker that is to be placed in proximity to the base of the tree. New champions are added to the *Champion Trees of Alabama* publication which can be found on the AFC website at: www.forestry.alabama.gov.

If you know of a tree that you think might be the largest of its species in the state, you are encouraged to send in a nomination.

To complete a nomination form on-line, visit the AFC website and click on the “Champion Tree Program” fast link found on the home page.

Due to limited AFC resources, a nominator is strongly encouraged to review the measurements of the current champion to get an idea if the candidate tree’s score has a chance of defeating it before sending a nomination. After all, there are millions of “big” trees in Alabama, but to be a CHAMPION, it must be THE “biggest!”

Nominations may be sent in year-round, but for a tree to be eligible for *Champion Tree* designation in 2015, the forms must be received by the program coordinator no later than June 1, 2015.☺

TREE SPECIES	COUNTY	NOMINATOR	OWNER
Birch, River	Lee	Patrick Thompson	Michael Murray
Elm, Siberian	DeKalb	Daniel Green	Joseph West
Hickory, Mockernut	Coosa	John Goff	John T. Goff Family LLC
Hickory, Shagbark	Blount	Charles LeCroy	Charles & Jamie LeCroy
Hickory, Southern Shagbark	Wilcox	Wayne Webb	Tommy & Jeanell Lawler
Magnolia, Bigleaf	Wilcox	Tommy Lawler	Tommy & Jeanell Lawler
Magnolia, Southern	Autauga	Teresa Lee	Reuben Gardner
Oak, Chestnut	Clay	Nick Jordan	Lamar Dewberry
Oak, Georgia	Lee	Patrick Thompson	Davis Arboretum at Auburn University
Pine, Virginia	DeKalb	Jason Shelton	DeSoto State Park
Yellowwood	Monroe	Wayne Webb	U.S. Army Corps of Engineers

Why is Cogongrass So Successful at Invading the South?

By Zoë Hoyle,

Forest Service, Southern Research Station (SRS), Science Delivery Group

It grows on every continent except Antarctica and has earned a reputation as one of the worst weeds on earth. Now it's one of the most threatening invasive species in the South. Native to Southeast Asia, cogongrass was accidentally introduced in the United States as packing material in an orange crate that arrived in Grand Bay, Alabama, in 1912. A few years later, it was intentionally planted as a potential forage crop in Mississippi and as a soil stabilizer in Florida. And then it began to spread. SRS Forest Inventory and Analysis data indicate that cogongrass currently grows on over 66,000 forested acres – and counting – throughout the southern United States.

In the South, many of our forests are crowded with invasive plants – English ivy, privet, oriental bittersweet, and kudzu – to name just a few. These plants can often edge out the natives, reducing the diversity of understories and altering forests. Understanding how these plants arrived in the southeastern United States and adapted to thrive in local conditions can help with efforts to control and eradicate them.

Cogongrass (*Imperata cylindrica*) is a perennial grass that's causing huge problems in the Gulf Coast and other regions of the South where temperatures don't get cold enough to limit its growth. This weed invades forests, rights-of-way, and agricultural fields, literally taking over the landscape and altering ecosystems. Cogongrass varies widely in appearance, suggesting that there may be wide genetic variability within the species.

A recent study by a U.S. Forest Service scientist and university collaborators used population genetics to better understand the phenomenally successful invasion of cogongrass in the South. "We set out to investigate patterns of genetic diversity and divergence in cogongrass in the areas in Mississippi and Alabama where the plant was believed to have been introduced from two different locations in its native range," said Rima Lucardi, lead author of the study and research ecologist with the Forest Service Southern Research Station; Insects, Disease, and Invasive Plants unit.

Data from the genetics study supported previous observations that two major cogongrass lineages were introduced. The two detected genetic lineages occurred in two distinct groups, one in

central Mississippi, the other more commonly encountered throughout southern Mississippi and Alabama. It was suggested that these genetic groups resulted from separate introductions from differing parts of the native range of the grass. The researchers found that the geographic distribution of what may be the two original lineages of cogongrass have managed to spread throughout the Southeast, and may have benefited from exchanges of genetic material in the two states.

Researchers also found that cogongrass appears to rely more on sexual reproduction than previously thought, which can lead to increased genetic diversity – unlike asexual clonal propagation, which has been widely presumed to be the main way cogongrass reproduces and spreads.

"Our research suggests that the rapid expansion and persistence of cogongrass during the last century may be due to a combination of introduced diversity, the number and timing of individuals introduced, multiple reintroductions, and reproductive flexibility in response to different environmental conditions," said Lucardi. "Knowing more about the distribution of cogongrass' genotypes could help with future management efforts, especially if we find out that management tactics affect the two groups differently."

Reprinted from CompasLive, Southern Research Station. To read the full text of the article, find the PDF at www.treearch.fs.fed.us/pubs/45777. For more information, email Rima Lucardi at rlucardi@fs.fed.us.



"Sunlit Pine Branch" by Elmore DeMott

PINE

ART EXHIBITION

SCHEDULED SEPTEMBER 3 – OCTOBER 31

By Barbara Reed, Alabama State Council on the Arts

From the longleaf pine forests that covered Alabama before settlement, to the millions of acres of loblolly pine plantations that are part of our contemporary timber industry, pines have played a crucial role in Alabama culture, development, and industry. Pines are symbolically and ceremonially important trees to many Native American people, but their meaning varies from tribe to tribe. Some view the pine tree as a symbol of longevity that denotes wisdom and harmony with nature. Today's long-term management of pine forests produces a renewable resource, erosion protection, watersheds, recreation, and habitats for wildlife.

A new exhibition, PINE, exploring pine trees and forests through an artistic lens will be on display in the Georgine Clarke Alabama Artist Gallery from September 3 until October 31. Operated by the Alabama State Council on the Arts, The Georgine Clarke Alabama Artists Gallery is free and open to the public Monday-Friday from 8 am-5 pm, and is located on the

first floor of the RSA Tower in downtown Montgomery at 201 Monroe Street.

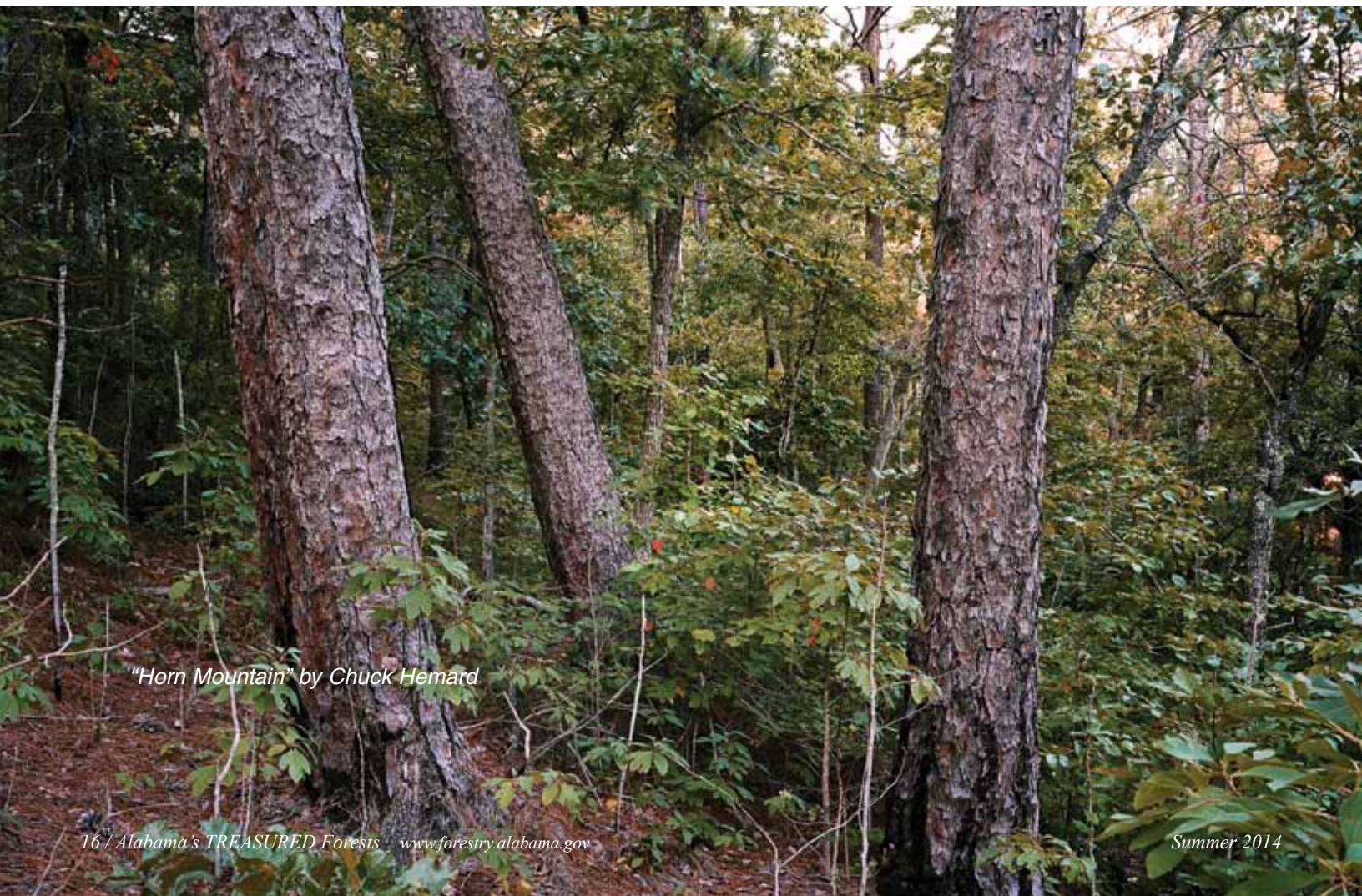
For this exhibition, four Alabama artists look at pine from a variety of perspectives: Photographer Elmore DeMott of Montgomery documents controlled forest burns in her series of photographs from the past two years. Photographer Chuck Hemard of Auburn explores old-growth pine forests in south Alabama and Georgia in his series of large-format photographs. Sculptor and furniture maker Ethan Sawyer from Dothan and sculptor Chuck Moore of Valley have transformed salvaged heart pine and given the wood a new life as artwork. Also included in the exhibit will be an assortment of pine needle baskets crafted in Alabama.

Elmore DeMott, a Montgomery artist featured in the PINE exhibit, shares her perspective, "As a photographer I find myself defining the world in terms of light, shadows, and patterns.

(Story continued on page 18, photos on 16 and 17)



"Eglin Fog" by Chuck Hemard



"Horn Mountain" by Chuck Hemard



"Night Burn" by Elmore DeMott

PINE ART EXHIBITION

(Continued from page 15)



"Table" and "Tractor Bench" (with inlaid pine sections) by Ethan Sawyer

Capturing beautiful colors, fascinating shapes, and unique textures with a camera is both a challenge and a delight, especially when uncommon perspectives create striking images and lasting impressions." DeMott continues, "When at work, it is as if the rest of the world disappears and my camera and I are alone with that which is before us. I aim to capture the essence of my subjects with a goal of sharing the stories my photographs can tell."

Photographer Chuck Hemard was born in New Orleans, Louisiana, and was raised in Hattiesburg, Mississippi. After earning a Bachelor of Arts degree in Psychology from the University of Southern Mississippi in 1999, he relocated to Athens, Georgia, and received his Master of Fine Arts from the University of Georgia in 2004. He now teaches photography at Auburn University and is the recipient of an Alabama State Council on the Arts Photography Fellowship. Capturing the beauty and mystique of nature, Hemard presents the pine tree as beautiful, resourceful, and vibrant. In this exhibition, his photographs visually explore the remnant landscapes of old-growth longleaf pine-lands across the coastal plain of the Deep South. The images attempt to describe and reflect on what remains of one of America's most significant landscapes, a landscape with deep ties to the cultural, economic, and environmental histories of Alabama and the larger southern United States. Longleaf pine-lands once were a dominant element of a landscape mosaic that covered the coastal plain from Virginia to east Texas, some 90 million acres at the time of European settlement, and have all but been wiped away. When properly maintained with frequent, non-fatal fire, the longleaf ecosystem rivals the tropical rainforests in terms of biodiversity, yet today the decline of this ecosystem has been listed as the third most endangered in our country.

Furniture maker and sculptor Ethan Sawyer of Dothan comments, "I enjoy the complexities of nature and how it can simultaneously be both delicate and strong, as well as direct and reactionary. I think the same holds true for my work; I like to have organized plans for projects, but I also like to allow for a slight degree of flexibility once I get the material in my hands. This is especially true when I choose to work with wood, since all lumber pieces have their own personality. This level of flexibility allows me to think on my feet, and always provides a new morsel of education."

Self-taught sculptor Chuck Moore of Valley has created hand-tooled pieces in wood, stone, and metal for the past 40 years. Moore's art has evolved through a process of trial and error, success and failure. When designing a sculpture, Chuck lets the medium he is working with play a large role in his design. He feels that if he tries to force a design into a piece without using its natural flow and movement, it will lose some of its innate beauty. It is important to Moore to look beyond the surface of the medium and make his design from what he sees in it. Most of his work is created from material that he has found, been given, or from scraps of previous projects. In recent years, he has purchased soapstone and incorporated that material for diversity in his work.

Artists have found the pine tree beautiful and a significant subject matter in their work. Don't miss the opportunity to come and reflect on this important exhibition, PINE, September 3 – October 31. For more information, contact Elliot Knight, Visual Arts Program Manager/Gallery Director, Georgine Clarke Alabama Artist Gallery (334)242-4076, ext. 250 or elliott.knight@arts.alabama.gov



"Carved Bust" (left) and "Totem" (right) by Chuck Moore

MEMORIAL

Dan James

Alabama Landowner Hall of Famer

(November 6, 1936 - May 2, 2014)

*By Tim Albritton, Forester,
USDA Natural Resources Conservation Service*

In my 29 years of working in forestry and natural resources in Alabama, I have worked with many landowners that have taught, inspired, and encouraged me. What a blessing these landowners have been in my life. There is no “Alabama Landowner Hall of Fame” of which I am aware, but if there were such a group, I would recommend we induct Dan James as the initial member.

Dan James of Brent, Alabama, died on May 2, 2014. He was a respected leader, knowledgeable landowner, and great communicator to the common man. He possessed all those qualities deserving of belonging in a landowner’s hall of fame.

First, he loved to share information with others, and he did it in a way that made you feel good. He didn’t talk down to you or speak as if he was in a hurry. You got the feeling he was actually doing you a favor; and, he was. He was a willing deliverer of valuable information. I would often remind myself when I was in his company: “Tim, if you slow down long enough and pay attention, you might learn something.”

Second, he was knowledgeable about the subject of trees and forest management. It was a rare occasion that I would spend time with Dan when he wouldn’t say something about a tree.

Always using the scientific name for the species, he knew its native range, wood characteristics, uses, medicinal purposes, and so much more that I often felt embarrassed because I was the forester!

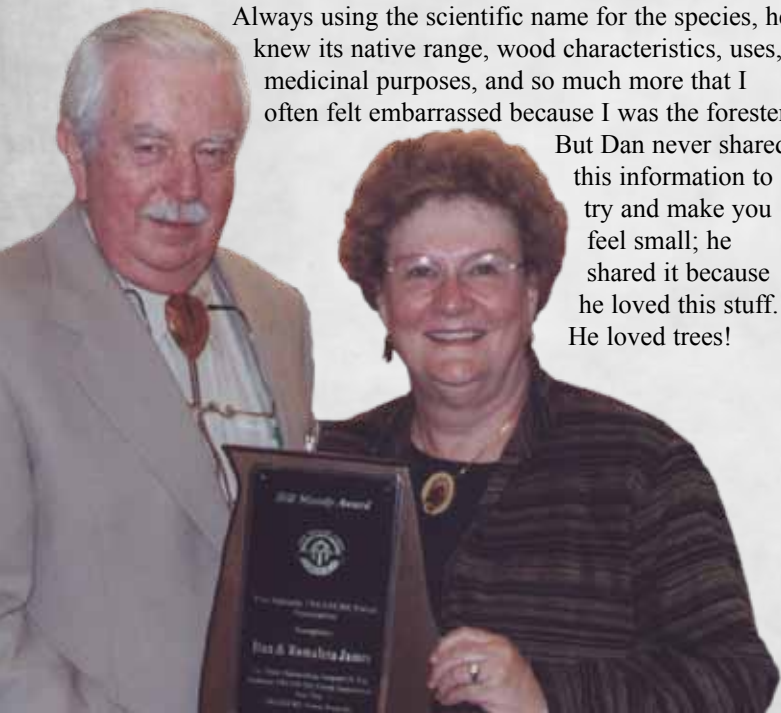
But Dan never shared this information to try and make you feel small; he shared it because he loved this stuff. He loved trees!

Third, he was willing to take a leadership role if needed. In addition to serving as chairman of the Soil and Water Conservation District and the Alabama State Tree Farm Committee, Dan was president of the Alabama TREASURE Forest Association and the

International Wood Collectors Society. He not only was involved in the local Bibb County Forestry Planning Committee, but was also instrumental in the creation of the Alabama Forestry Planning Committee (now the Alabama Natural Resources Coordinating Council). This is just a sample. He did much, much more, including leading a prison ministry.

Many times we don’t really appreciate someone until they are gone; but, in Dan’s case this is not true. I appreciated him while he was here. I knew he was someone special, and he will be greatly missed. We all have been given gifts from God. What makes some people more special than others is that they use their gift for the greater good: helping others. Dan was a wise steward of his gifts, leaving Alabama and all of us a great heritage and example to follow. ☮

Editor’s Note: After having their Bibb County property certified as a TREASURE Forest (#385), Dan and his wife, Romaleta, received the “Helene Mosley Memorial TREASURE Forest Award” in 1986. Other honors included being named Alabama’s “Tree Farmer of the Year” in 1989 and later “Forest Conservationist of the Year” in 1992 by the Alabama Wildlife Federation. The couple was presented the “Bill Moody Award” by the Alabama TREASURE Forest Association at the 2002 Alabama TREASURE Forest and Landowner Conference. Then in 2003, Dan James was the recipient of the “W. Kelly Mosley Award” for his contributions in the advancement of environmental knowledge and mentoring youth on the issues of timber production and wildlife.





The Alabama Tree Recovery Campaign: *Offering Hope and Restoration for Tornado Victims*

*By Dale Dickens, Registered Forester, Urban Forestry Coordinator
and Cliff Hawkins, Urban Forestry Partnership Coordinator
Alabama Forestry Commission*

Many homeowners in North Alabama can now look out their windows or down their city lanes, and see small trees growing toward a much fairer leaf-adorned sky. However, they remember the darker days . . . the devastating winds and toppling trees. The Alabama Tree Recovery Campaign is a story of restoration and hope, of many volunteers and organizations working together to replace trees torn and destroyed by swirling winds.

In the months following April 2011, when dozens of tornados ripped across Alabama and surrounding states, the Alabama Forestry Commission joined forces with the Arbor Day Foundation to begin a multi-year, large-scale initiative to restore trees to the stricken North Alabama communities. Through this Alabama Tree Recovery Campaign, over 60



communities in 24 counties have received seedlings, information, and assistance in replanting their lost urban forest: trees which will not only provide shade and beauty, but also purify the air and water in these communities for years to come. Now in its third and final year of seedling distribution and planting, more than 85,000 native tree seedlings will be in the ground growing to replace those lost to the catastrophic winds of 2011.

The native wind-resistant tree species chosen for the give-aways included: flowering dogwood

(*Cornus florida*), northern red oak (*Quercus rubra*), Shumard oak (*Quercus shumardii*), blackgum (*Nyssa sylvatica*), black willow (*Salix nigra*), sycamore (*Platanus occidentalis*), and eastern hophornbeam (*Carpinus carolinensis*). Crape myrtles (*Lagerstroemia* spp.) were also planted.

TREEmendous Support

A word of thanks goes to each and everyone involved in the Alabama Tree Recovery Campaign. The employees of the Alabama Forestry Commission and the members of The Arbor Day Foundation deserve praise for their work done in this worthy program. However, the number of trees delivered would not have been planted without the countless volunteers and homeowners who applied their own sweat equity. We also recognize the financial contributions from individuals, private foundations, and corporate sponsors across the nation and globe without which this campaign would not have been possible, including the Alabama Power Foundation, Apache Corporation, the Australia-based Cotton On Foundation, Daniel Foundation of Alabama, Davey Tree Expert Company, FedEx, NASCAR, and Protective Life Insurance.

Success Stories

The April 2011 tornado in Tuscaloosa was not the beginning of the loss of our urban forest in my neighborhood, Forest Lake, or the other neighborhoods along the storm path, Rosedale, Alberta, and Holt. But it was such a stark, devastating event that the people of Tuscaloosa and the state of Alabama were drawn to recognize what of nature we were losing in our daily environment.

The outpouring of volunteer energy following the storm needed to be matched by an outpouring of goods and ideas. One such match was certainly the Alabama Tree Recovery Campaign. In addition to local donations, the Tree Recovery Campaign helped provide the first signs of hope to our area.



arrival of new trees into yards where houses were being rebuilt and onto lots where the future was, and even now may remain uncertain, brought back in dreams and hope.

Companied with that donation, a dedication to rebuilding and revitalizing Tuscaloosa continues today. The trees symbolize perfectly the progress we make as a society to create vast and wonderful improvements to our lives, a process which takes vision and work over time. I appreciate the resources the Tree Recovery Campaign and our local donors have provided to the process.

*Robert Kemp
Druid City Canopy Coalition (DC3)
Tuscaloosa*

Athens Limestone

When Lynne Hart, Executive Coordinator of Keep Athens-Limestone Beautiful (KALB), was approached by Clifford Hawkins asking if KALB would be interested in organizing a tree seedling giveaway for Limestone County residents, she immediately agreed!

Limestone County's trees were ravaged by the April 2012 tornadoes, and this was a great way to help the residents reforest their county after those devastating storms.

KALB members had never organized a seedling give-away before, and they were a bit concerned about how to make it go smoothly. They would have over 5,000 seedlings of different varieties to give away. How would that many trees be handed out and how would the general public identify the trees they received?

Hart knew the KALB organization couldn't do it alone, so she recruited volunteers from two local Boy Scout Troops to help tag the trees with identifying codes. A seedling order form was created that included the codes for each tree. This order form was included in their monthly eNewsletter and on their website for two months prior to the giveaway. They advertised the event on local radio and television stations, in local newspapers, and through social media. It was a community effort to help find homes for these seedlings!



On the morning of the event, volunteers from across the community arrived to help. The trees were lined up and everyone was given instructions. The volunteers didn't have to wait for customers, because some people arrived an hour early!

Traffic control was very important! As people drove into the park, they were given an order form to complete if they didn't have one already (most did). Vehicles were organized into two lines flowing in and out of Big Spring Memorial Park. It was a very cold morning, so they did not ask anyone to get out of their vehicles. This also helped keep the line moving. KALB volunteers went to each vehicle, took their order forms, placed a large, brightly-colored number on the dashboard of the car, and went off to fill their order. Additional volunteers were stationed with the trees to help fill the orders. When the order was filled, the volunteer easily found the right vehicle by locating their number on the dashboard.

As the seedlings were given to their new owners, they were also provided written care and planting instructions so the seedlings would have the best chance for survival.

This very well-organized group gave away over 5,000 seedlings in three hours!

KALB received a great deal of feedback from city and county officials, as well as residents of Limestone County who benefited from the seedling giveaway. Everyone was so appreciative and grateful for the opportunity to add these trees to their community after such great loss. The people of Limestone County knew they had not been forgotten.

(Continued on page 22)

Alabama Tree Recovery Campaign

(Continued from page 21)

As mayor of the small town of Glen Allen, we the residents were very fortunate and honored to receive tree seedlings provided by the Alabama Forestry Commission for distribution. The April 27, 2011, tornado that crossed through our town limits destroyed numerous trees as well as homes, which of course fractured many lives.



Once it became known that your Commission was going to be giving away tree seedlings, I worked intensively spreading the word. We issued press releases to our local newspapers stating that the

Forestry Commission would be giving away the seedlings at no cost in an attempt to help refurbish areas which had been destroyed by the significant storm. Those residents who were affected received the allotted amount of tree seedlings and were very appreciative of the Forestry Commission for providing the free seedlings. I have spoken with several of those who received the seedlings and I'm happy to report that the residents are still grateful for the program provided by the Forestry Commission. Although some of the seedlings didn't make it due to weather and other obstacles, most seemed to survive and are growing as time allows.

We had a great turnout at the seedling give-away and ended up running out of seedlings quickly. Residents showed up at the give-away site well in advance, and the line formed in long lengths across the parking lot. Thanks to the assistance of the students from the Future Farmers of America, Hubbertville School Chapter, the event was well organized and well received by the public. The only complaint received was the fact that several residents who showed up to get seedlings were disappointed that they were limited to the number of seedlings allowed, and that the dogwood seedlings had run out prior to their opportunity in the receiving line.

My view of the event overall was that we had an overwhelming turn-out. As you are aware, we even had residents who showed up at the end of the give-away, who left without any seedlings because we had given them all away. Once again, I have nothing but praise for your assistance with this project and for the great benefit provided to our residents by the Alabama Forestry Commission following the tragic loss of the 2011 Alabama tornadoes.

*Respectfully,
Allen J. Dunavant
Mayor, Town of Glen Allen*

I wanted to thank you for your help and assistance these past three years with the Alabama Tree Recovery Campaign (ATRC). The ATRC played an important role in assisting Jefferson County communities impacted by the 2011 and 2012 tornado outbreaks. Several communities suffered extensive loss of trees and vegetative cover, leaving the landscape featureless and the communities vulnerable to the associated impacts of storm-water runoff. The ATRC offered citizens a FREE way to help restore the benefits that such vegetation brings, including reducing storm-water runoff, capturing and filtering pollutants, increasing storm-water infiltration, and reducing soil erosion.

Citizens who participated in the ATRC had a reason to participate and most all of them had a story to tell. Some stories were practical, some economical, and some emotional. Citizens were so thankful to have the opportunity to help replant their landscape – to add back various elements that were taken away and with no charge.



It was remarkable to hear the many associations that people had with their trees. They would come and say how they miss the shade their tree gave during the summer, and how much hotter their homes are and how much more expensive it is for them to run the air conditioner. How they were amazed the skies were so much brighter at night because the city lights that the trees must have blocked were now gone. How they missed the birds and wildlife that used to come to their yard, but they haven't seen after the storms. They would say they were surprised at how much more water runs off their property and practically floods their streets and driveways, and that they were astonished at how fast the rain water flows and washes away areas of their yard and driveway. It was amazing to hear the many memories people had associated with their trees and their emotional ties to those trees: kids playing and climbing on them, feeders and art hanging from them, photos of families (generations, even) that were taken underneath them.

I certainly hope this Alabama Tree Recovery Campaign will continue on past 2014, expanding its reach to more communities in Alabama.

*Warmly,
Hana Burwinkle
Education Training Coordinator, Jefferson County Storm
Water Management Department
Birmingham*

Pleasant Grove

On April 27, 2011, lives and landscape in the City of Pleasant Grove, Alabama, were deeply affected by the F-4 tornado within a matter of minutes. The storm killed eleven people, completely destroyed 358 homes, and left many homes needing repairs.

With help from the Forestry Commission, Arbor Day



Foundation, and our local Boy Scout Troop 120, a total of 3,300 trees was given to those that were affected by the tornado. Troop 120 picked up the trees and set up a point location across from Hill's

Grocery for two weekends. The first weekend they gave out seedlings and helped plant trees for those that needed assistance. They then gave away trees at the same location the following weekend. There were enough trees left over after giving to Pleasant Grove residents, so the troop went to the community of Concord and gave away the remaining trees.

This is a small step in getting back some trees that were lost in the tornado. It was sad to see such a loss of trees. The city has a total of 250 vacant lots; some have what is left of trees that were heavily damaged and is a reminder of the devastation that came through the city. The city council is presently working on a plan to get right-of-entry and permission to cut and drop the trees that cannot grow back and be healthy.

We are very appreciative of the trees given to the property owners and we acknowledge it will be a long time before we can see a considerable growth with the seedlings, but it is a step in the right direction of rebuilding and replacing trees that were lost. We have to keep the faith and work towards restoration one step at a time.

*Karen Duncan
City Clerk, City of Pleasant Grove*

Birmingham

The donation of trees from the Alabama Forestry Commission to the Keep Birmingham Beautiful Commission has assisted in the ongoing effort to keep Birmingham a Tree City. A total of 1,200 seedlings were distributed to school children, residential and business communities, churches, and the general public during the Arbor Week Celebration that included the 22nd Annual Plant Dig.

Held at the New Georgia Landfill, the Plant Dig annually allows 150 to 500 individuals to harvest local trees and plants in a natural setting. There were 25 volunteers available at the Plant Dig to assist individuals in loading the trees, plants, and seedlings.

Providing "free" trees is a way of encouraging people to plant. The trees are making an observable impact on Birmingham's residential, commercial, and business landscapes, adding value, shade, and beautification.



Trees for the Future

While the cleanup and rebuilding in these communities will continue for years to come, there is still an opportunity to support the Alabama Tree Recovery Campaign and help in the healing process by making an online donation at www.arborday.org/Alabama. For every dollar in donations, a 2-4 foot seedling will be added to those already planted.🌱

Editor's Note: The 85,000 tree seedlings distributed through the Alabama Tree Recovery Campaign were in addition to the 275,000 trees given out across the state by the Alabama Forestry Commission in those three years through normal seedling give-aways.

Here Today, Gone Tomorrow?

Loblolly Pine *Sawflies* in Northwest Alabama

By Dana Stone, Forest Health Coordinator,
Alabama Forestry Commission



With a normal range of temperatures and sufficient amount of precipitation over the last few years, forest pests have not been highly considered a serious threat to trees. Many of Alabama's forest pests that thrive under adverse environmental conditions, such as the Ips engraver beetle or oak decline, noticeably decreased with just a few reported cases. However, the population of at least one "periodic pest" multiplied and became quite destructive despite the current weather pattern. In fact, the favorable climatic conditions may have influenced the increase and effect of the loblolly pine sawfly (*Neodiprion taedae linearis*) which made its presence known in Northwest Alabama by defoliating several hundred acres of mature pines.

Like last year, in late spring of 2014 there were several reports of what appeared to be dying pines. Most of the visible damage was occurring on healthy loblolly pines growing in well-managed stands. A closer look revealed that the culprits were once again the larvae of the loblolly pine sawfly feeding on and defoliating pine needles. Infestations were reported in Colbert, Marion, Franklin, Lamar, and Fayette counties.

This particular species of pine sawfly produces only one generation per year. The larvae cause the damage to host trees by feeding on the foliage in the spring, mainly from April to May. During the early stages of attack, young larvae consume the outer tissue of the needles. The remaining section of the consumed foliage turns reddish-brown, giving an appearance that the trees are burned or injured by bark beetles. In the latter part of the infestation, the mature larvae consume the entire needle, practically defoliating the tree. The larvae feed for approximately four weeks before falling to the ground to eventually pupate in the soil and litter layers. A mature larva is approximately 1.25 inches long with a chocolate-brown colored head and a dull green body with heavy black stripes along each side.

Most pines will not succumb to the attack. Affected pines do recover from this partial defoliation and start growing lush green needles again by summer. However, a severe attack for three or more consecutive years may drastically reduce tree

Larvae of loblolly pine sawflies feed on loblolly pine needles.

Photo by Karl Byrd, AFC

vigor, causing the pines to become more susceptible to other pests such as bark beetles.

The best recommendation for controlling this pest is to wait until the upcoming summer to see if infested pines rebound from the attack with new green foliage. Population outbreaks are generally sporadic and localized within a large area. Because the loblolly pine sawfly is a native periodic pest, natural predators such as birds, small mammals, and parasitic organisms will prey on this defoliator. Other biological agents such as pathogens, viruses, and even starvation will eventually reduce the population.

Another option for controlling this defoliating pest is the use of contact insecticides which are effective when the larvae are present, although somewhat cost prohibitive for large acreage or pines in a stand of trees. Insecticides are generally used on infested pines in residential or commercial areas where aesthetics are a concern.

While this was the second consecutive year that the Alabama Forestry Commission received a formal report of the loblolly pine sawfly damaging trees in Northwest Alabama, it was the third consecutive year of an infestation for some loblolly stands.

Each year following the attack, these pines were recovering and growing green needles by late June. However, areas in Marion and Franklin counties that were infested the previous year were not recovering as quickly as the new spots found in 2014.

Will the loblolly pine sawfly appear again next year? The answer to this question is difficult to say, but generally periodic pests are present at an epidemic level for only three to four consecutive years. This species may not appear in great numbers again until several years from now – suddenly defoliating pines during the spring season and then gone the following year.

If you do suspect that your pine stand is being infested with the loblolly pine sawfly, please report this information to your local Alabama Forestry Commission office.☎

- In 2013, the loblolly pine sawfly infested over 500 acres in Franklin and Marion counties.
- In 2014, this forest pest infested approximately 200 acres in Fayette County; 330 acres in Colbert County; 1,200 acres in Lamar County; 2,070 acres in Franklin County; and 4,097 acres in Marion County.



Photo by Karl Byrd, AFC

Aerial view of large area of loblolly pines damaged by sawfly in Marion County. (Inset) Close-up of sawfly damage to loblolly pines.



Best Management Practices (BMPs) for Forestry

Why is Implementation So Important and Stressed So Much?

By Jim Jeter, BMP Forester/Hardwood Specialist,
Alabama Forestry Commission

The last issue of Alabama's TREASURED Forests magazine contained a great article by Roberta Swann and Tom Herder entitled "The Mobile Bay Estuary and Coastal Population Growth: The Challenge of Keeping What We've Got." To quote the opening lines, "The Mobile Bay Watershed drains three quarters of the State of Alabama, much of Georgia and Mississippi, and even portions of Tennessee, making it the sixth largest basin by area with the fourth highest fresh-water inflow in all of North America."

Alabama is blessed as a state to have as much, if not more, water and diversity than any state. We are also blessed to have 22.8 million acres of forestland within the state, the majority of which is owned by private landowners. These landowners are presently free to choose the direction of management for their property as long as they do not violate any state or federal laws.

To quote another article from that same magazine, "Forest Management and Stream Water Quality," by Dyson, Muenz, and Reutebuch, "The U.S. Geological Survey estimates that 10 percent of the freshwater resources of the United States either originate or flow through the state of Alabama. Alabama contains over 77,000 miles of waterways, of which approximately 47,000 miles are perennial streams, meaning they flow year-round."

If you have not read these articles, you need to. If you have read them, please read them again, and pay attention to the statements about aquatic biodiversity and endemism. Also discussed is threatened and endangered species, many of which live in small headwater streams.

There are many forces at work to protect these species, even if it means forcing a landowner to follow a specific management regime. Remember, we are free to choose at the present time, barring no violations of current law.

The majority of the smaller headwaters I just spoke of originate and flow through forestland – land owned by private landowners. Most foresters, water quality folks, and water treatment folks will tell you "Healthy Forests Equal Clean Water." You might wonder how to keep forests healthy? The answer is management which involves, yes, cutting of timber.

The latest numbers in print from the Alabama Cooperative Extension System and the Alabama Agribusiness Council related to timber production in Alabama are as follows:

Timber Production and Processing = 122,020 jobs

Money Produced by

Timber Production and Processing = \$21.4 Billion

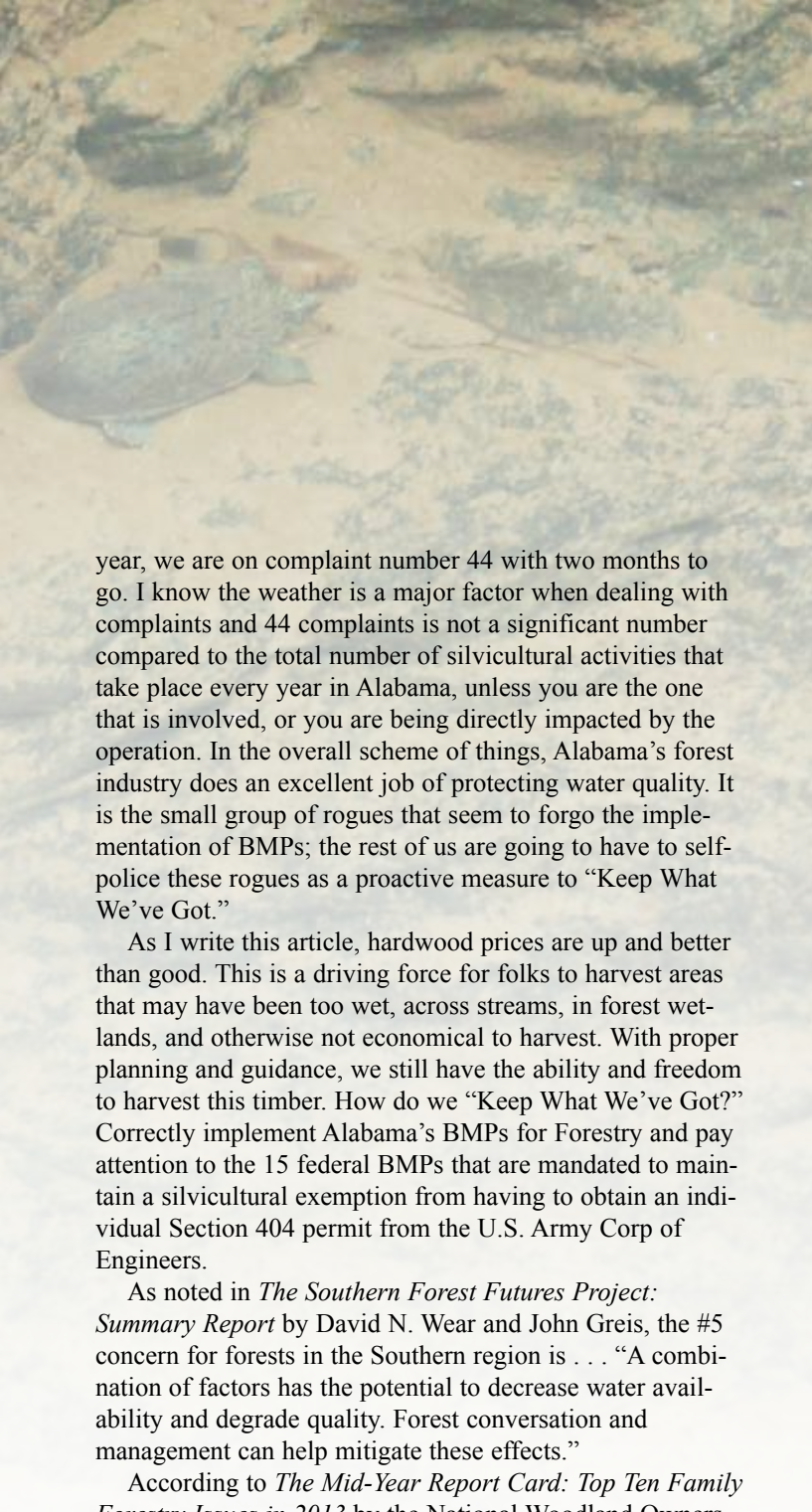
The Challenge of Keeping What We've Got

How do we keep the freedom that we currently have to manage the forestland of Alabama? The main answer is to be proactive and not reactive. Utilizing and correctly implementing Alabama's BMPs for Forestry is one way. Right now we have the choice of which BMPs to use and the flexibility to be site specific. Another way to be proactive is to work with natural resource professionals — such as registered foresters — to do some pre-planning of any silvicultural activity, especially if a stream or water body is in the operation area or close by. And, of course, there are third-party certification programs available to help you. In Alabama they are mainly Tree Farm, Sustainable Forestry Initiative (SFI), and Forest Stewardship Council (FSC).

“Healthy Forests = Clean Water”

On the public (agency) side of the field, the Alabama Rivers and Streams Network is a group of state agency, federal agency, and non-government (NGO) folks working in a proactive and cooperative manner to designate the "best of the best" aquatic habitat left in the state. These areas are called Strategic Habitat Units (SHUs). Investigation of these areas has already prevented the listing of some species, as well as formulated the re-introduction of some listed species. If you live or work in any of these areas, you need to support the group. Implementation of forestry BMPs is all that is requested from the landowner; the right thing to do to protect water quality.

While I know I am preaching to the choir, we still continue to field complaints dealing with silvicultural practices and water quality. Some are not valid; however, some are. So far this fiscal



year, we are on complaint number 44 with two months to go. I know the weather is a major factor when dealing with complaints and 44 complaints is not a significant number compared to the total number of silvicultural activities that take place every year in Alabama, unless you are the one that is involved, or you are being directly impacted by the operation. In the overall scheme of things, Alabama's forest industry does an excellent job of protecting water quality. It is the small group of rogues that seem to forgo the implementation of BMPs; the rest of us are going to have to self-police these rogues as a proactive measure to "Keep What We've Got."

As I write this article, hardwood prices are up and better than good. This is a driving force for folks to harvest areas that may have been too wet, across streams, in forest wetlands, and otherwise not economical to harvest. With proper planning and guidance, we still have the ability and freedom to harvest this timber. How do we "Keep What We've Got?" Correctly implement Alabama's BMPs for Forestry and pay attention to the 15 federal BMPs that are mandated to maintain a silvicultural exemption from having to obtain an individual Section 404 permit from the U.S. Army Corp of Engineers.

As noted in *The Southern Forest Futures Project: Summary Report* by David N. Wear and John Greis, the #5 concern for forests in the Southern region is . . . "A combination of factors has the potential to decrease water availability and degrade quality. Forest conservation and management can help mitigate these effects."

According to *The Mid-Year Report Card: Top Ten Family Forestry Issues in 2013* by the National Woodland Owners Association, water quality and quantity are listed as the #7 issue.

"How do we keep what we've got?" By being part of the proactive solution and not part of the problem.☸



HARDWOOD CORNER

TREASURED Dog Days of Summer

Has the magazine gone to the dogs? No, pictured here are just a few of the camera-friendly pups the staff has encountered over the last few years when visiting landowners. It's pretty obvious that these canines enjoy Alabama's TREASURE Forests as much as their people! And of course, we couldn't leave out Blaze and Ember, the AFC Arson Dogs.





2014 Annual Meeting October 9 – 11, 2014



ALABAMA TREASURE FOREST ASSOCIATION



At the School of Forestry & Wildlife Sciences,
Auburn University, Auburn, Alabama

Thursday, October 9

6:30 – 9:30 p.m. – Board of Directors Dinner
Conference Hall, Forestry & Wildlife Sciences Building

Friday, October 10

9:00 – 11:30 a.m. – Registration
Conference Hall, Forestry & Wildlife Sciences Building

11:30 a.m. – 2:00 p.m. – Lunch and General Session
Conference Hall, Forestry & Wildlife Sciences Building

2:15 – 4:30 p.m. – Breakout Sessions
Classrooms 1207, 1219, & 1221 –
Forestry & Wildlife Sciences Building

Topics include:

- *Edible Non-Timber Forest Products*
- *Eagles of Alabama – Southeastern Raptor Center*
- *Aging and Judging Trophy Bucks*
- *GPS Use for Private Landowners*
- *Properly Established Forest Roads*
- *Timber Trespass Liability Issues*

6:30 – 8:30 p.m. – Dinner
Conference Hall, Forestry & Wildlife Sciences Building
*Keynote Speakers: Senator Tom Whatley and
State Forester Greg Pate*

Saturday, October 11

8:00 – 8:30 a.m. – Breakfast at the Pavilion –
Mary Olive Thomas Demonstration Forest

8:30 – 11:30 a.m. –
Tour Mary Olive Thomas Demonstration Forest
*A 400-acre TREASURE Forest owned by the School of
Forestry & Wildlife, located just outside of Auburn. Learn
how some of the most current research can help grow and
harvest timber more efficiently.*

Accommodations

The Hotel at Auburn University
(800) 228.2876

Cost to Attend is only \$50 per person–
includes three meals, Friday's educational seminars and
Saturday's field trip

*For info, call or email:
Kristin Sides (334) 613-4138, ksides@alfafarmers.org
or Rick Oates (334) 613-4305, roates@alfafarmers.org*

Register online at www.atfa.net

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Hot Off the Press!

GOSSE NATURE GUIDES

TROY L. BEST AND JULIAN L. DUSI

Mammals OF ALABAMA

The University of Alabama Press (UAP) and the Alabama Wildlife Federation (AWF) are pleased to announce the publication of *Mammals of Alabama*, a landmark guide to the state's mammalian fauna.

The 304-page work incorporates decades of research, collecting, and writing by the late Julian L. Dusi, professor of zoology at Auburn University for 45 years, and co-author Troy Best, professor of zoology and curator of mammals at Auburn University. In fascinating entries covering every Alabama species – both native and introduced – the authors offer identification notes, typical sizes and weights, habitat, behaviors, and other key data about each species.

Colorful and user-friendly, *Mammals of Alabama* assumes no prior knowledge of zoology. Animal experts, however, will also be delighted by the wealth of data about each species's dental formula, parasites and diseases, and other topics. A unique feature of the book is Dusi's extensive collection of carefully preserved and photographed animal skulls. With this sturdy field guide, hunters, hikers, farmers and gardeners, and other outdoor enthusiasts can easily identify animals with great precision.

Of vital interest to zoologists across the Southeast, *Mammals of Alabama* was made possible by support from the Alabama Wildlife Federation, the oldest and largest non-profit conservation organization in Alabama. Founded by sportsmen in 1935 to promote the wise stewardship of Alabama's natural heritage, the mission of the AWF is to preserve and celebrate Alabama's astonishing natural resources as a basis for sustained social and economic prosperity.

"Alabama is blessed with one of the richest and most varied natural environments in our nation," says AWF executive director Tim Gothard. "Our members value high-quality information about Alabama's wildlife. That's why we were delighted to partner with the University of Alabama Press and the authors at Auburn University to produce this new book, which sets a new standard for natural field guides."

Mammals of Alabama is part of UAP's "Gosse Nature Guides," a series of books that explore, catalog, and educate about Alabama's nature and wildlife for Alabama families, outdoor enthusiasts, sportsmen, scientists, and tourists. The series is named for Philip Henry Gosse, an English-born zoologist, naturalist, and scientific illustrator. Gosse was one of the first writers to explore and write about Alabama. "In my 30-year history in publishing, I have never seen a more complete field guide of this sort," said Press director Curtis Clark. "We're grateful for and admire AWF's leadership in the critical area of natural resource conservation."

Authoritative, exhaustive, and accessible, *Mammals of Alabama* is an instant classic and an essential reference for backyards, glove compartments, hikes, families, libraries, and classrooms. 🐾

For more information, contact the University of Alabama Press at 1 (800) 621-2736 or visit www.uapress.ua.edu. The University of Alabama Press is a proud member of the Association of American University Presses. The Press currently publishes 70-75 new titles a year and has over 1,800 titles in print; it is a founding member of the University Press Content Consortium and is at the cutting edge of digital publishing. The Press is the publishing arm of the University of Alabama.



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