Alabama's TREASURED Forests

Fall 2007

An Alabama Forestry Commission Publication

25th Anniversary

A Message From the State Forester

Linda S. Casey, State Forester

Dear Reader,

We at the Alabama Forestry Commission are very proud to celebrate the 25th anniversary of publishing our magazine, *"Alabama's TREASURED Forests."* Beginning with that first issue in 1982 through the present, our mission has been to provide you, the landowner, with timely information that will be useful in the management and stewardship of your forest.

As some things remain constant, others are changing at a faster and faster pace. One thing that remains the same is the need to challenge and support our youth in their education of our state's magnificent natural resources. In this issue we celebrate the accomplishments of the Coosa County's 4-H Wildlife Team. This team participated in the Wildlife Habitat Evaluation Invitational in Cedar City, Utah, and earned the title of National Champions. Additionally, two educational youth camps held in Butler and Sumter counties were well attended by over 70 kids this summer. These camps provide children with the opportunity to experience and learn about Alabama's natural resources, as well as learn about potential careers in the natural resources field. The success of these camps in providing an enriched learning experience is totally dependent on sponsors and volunteers. We express our deepest appreciation to all those sponsors and volunteers who made these camps such a success.

Another area that hasn't changed is the dedication of our employees in serving the landowners and other stakeholders of Alabama's forests. One such employee is Michael Older, AFC Covington County Forester. Mike was recently selected as the Outstanding Tree Farm Inspector of the Year and was honored at the 14th Annual National Tree Farm Convention in Madison, Wisconsin. Another employee demonstrated courage and heroic effort while battling the devastating wild fires that raged in Georgia this summer. James "Jimbo" Robinson, Forestry Specialist in Chambers County, was just one of our 25 Commission firefighters who volunteered to assist our sister state during this crisis. Putting his own life on the line, Jimbo continued to plow a safety zone when he and other firefighters found themselves stranded in the path of an impending firestorm. Stories about both of these AFC associates can be found in this issue.

There are two areas that are rapidly changing. We see an increased need to address the rate that non-native invasive species are spreading across our state, as well as share information on new and emerging value-added opportunities for landowners to market their forests. You can learn about these topics and much more, including how to protect your home against wildfire, in this Fall 2007 issue.

We hope that you will enjoy this anniversary edition of *Alabama's TREASURED Forests,* and we look forward to another 25 years of service to the people of Alabama through this publication.

Linda S. Casey

Alabama's TREASURED Forests

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On the Cover: In celebrating the 25th anniversary of our publication, we return to the cover of the very first issue, Fall 1982. *(Original artwork by Freda Groves)* *Design by Mike Kyser*
Background this page: The glorious colors of fall in the forest. *Photo by Tilda Mims*

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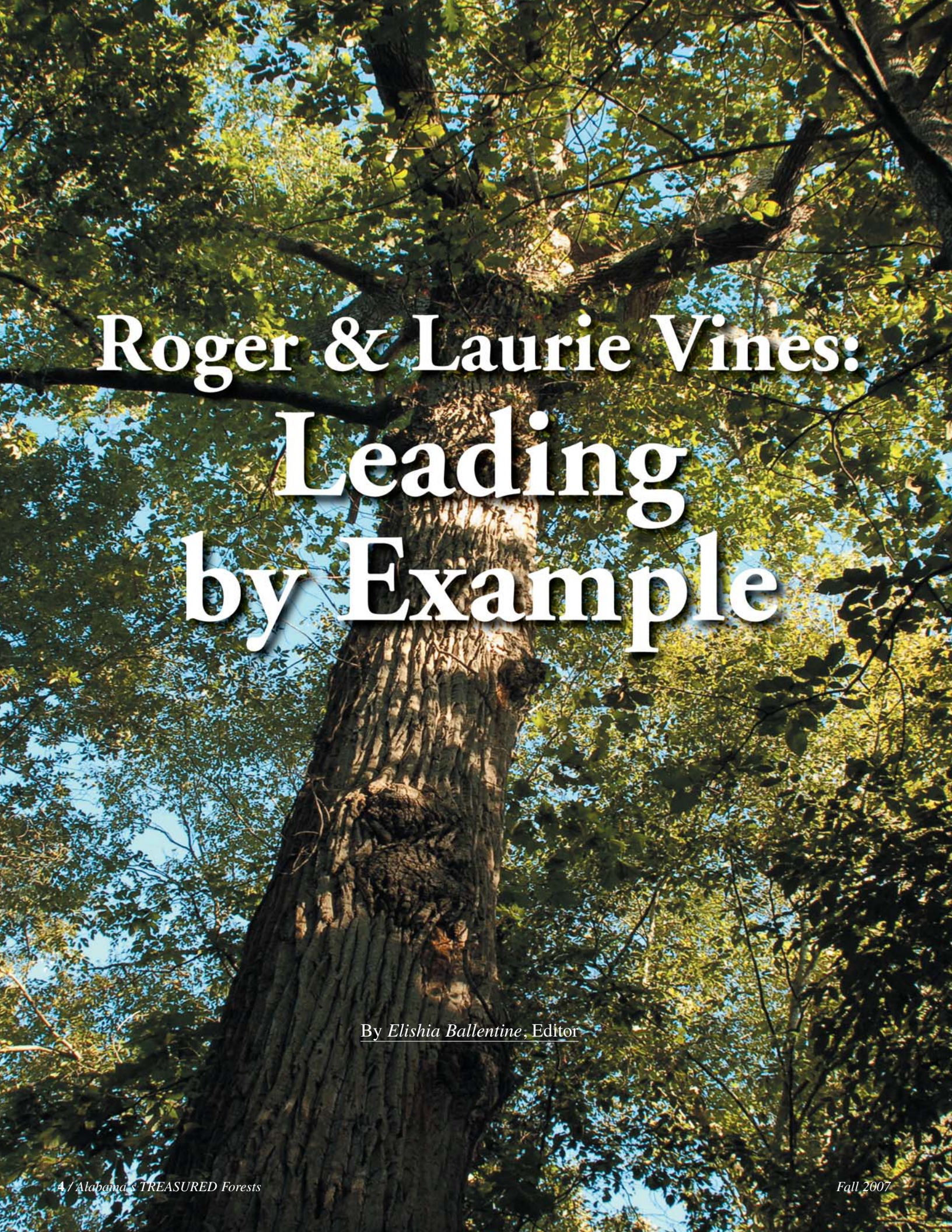

Roger & Laurie Vines: Leading by Example

By *Elishia Ballentine*, Editor

When Roger and Laurie Vines purchased their first 40 acres in Coosa County back in 1986, they considered themselves lucky to have found it. Recently married and ready to begin a family, they moved to Alabama where he took the job of Coosa County Extension coordinator, just down the road in Rockford. They had met while he was completing graduate school in Louisiana. Roger admits that it took some persuading . . . she was a city girl from New Orleans, and a little bit reluctant to move to a rural area.

Now some 20 or so years later, they have a total of 110 acres in this rolling terrain, and Laurie loves the "country." She has become an avid outdoor woman with a passion for fishing and deer hunting. Roger confessed that she actually has the bigger trophy buck on the wall!

Looking out across the beautiful landscape today, one would never guess that this property was completely cut over and virtually "treeless" when they bought it. They worked hard to make improvements, carefully site prepping and planting the first pines; then gradually adding more and more. As the years have gone by, Roger and Laurie have enjoyed watching the trees grow on this hilly Coosa County countryside – right along with their two daughters.

In fact, that's how Roger and Laurie remember the exact age of their first two pine plantations, because they were planted the same years the girls were born. The oldest pines are 21 years old – the same age as Emily – and were thinned at 16 years. The second plantation of pines is ready to thin now at 17 years old – the same age as Anna. The youngest loblolly pines are approximately 7 years old.

Given his educational background and experience, Roger is not afraid when it comes to trying new things and experimenting with different trees and crops. In addition to all the loblollies, he has also planted some white pines which normally only grow well in climates north of here. Roger has been fascinated to find rather large deer rubs on the young saplings. He doesn't know exactly why, but these signs seem to indicate that deer prefer this particular species of pine.

Down in the hardwood bottoms, which he had thinned to encourage vegetation, Roger experimented with rye grass. In yet another experiment, he grafted a Japanese persimmon tree with a wild persimmon tree. The resulting fruits are apple-sized persimmons.

As hunting and wildlife-watching are favorite pastimes, the family has created several greenfields. They call the largest one the "wildlife cafeteria" where Roger plants corn, soybeans, and sunflowers in the summer and wheat and oats in the winter. He keeps it in native grasses for wild turkey, and the plot is surrounded by fruit-bearing trees that attract all sorts of wildlife: sawtooth oaks, persimmon, pecan, and plums. Early this spring, Roger was looking forward to his best acorn crop ever from the 10-year-old sawtooth, when the late frost killed all the young acorns.

Other interesting features include a natural spring on the back side of the farm, and Mill Creek which runs the length of the property. The Vines built two nice fishponds for bass and bream, but both are extremely low this year with the continued drought. They also built a crawfish pond where they raised Louisiana Red Swamp crawfish in years past, but it is completely dry now.

Roger has planted several longleaf pines, short leaf pines, bald cypress, and river birch all around the property. However, one of the most interesting trees is one that he did *not* plant . . . a huge, beautiful

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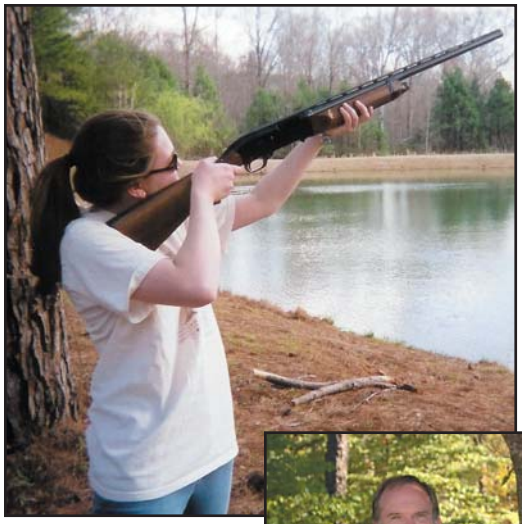


Top: While away at college, the Vines' oldest daughter, Emily, enjoys skeet shooting whenever she comes home.
Middle: Roger, daughter Anna, and Laurie Vines.
Bottom: Anna and Roger demonstrate that they cannot quite reach around the big yellow-poplar that towers over Miller Creek (also shown on opposite page).

Photo by Elishia Ballentine

Photo by Elishia Ballentine

Roger displays one of the large fruits that resulted from grafting a Japanese persimmon with a wild persimmon.

old yellow-poplar, growing right along the bank of the creek. It measures approximately 13 feet in circumference and 60 feet tall.

Still working with the Alabama Cooperative Extension System as Coosa County Extension coordinator, Roger says he's really a "jack of all trades." He educates landowners and citizens about all sorts of things, from soils to fishponds, from vegetable gardens to forests. Having the strong belief that it is important to help people and make a difference in others' lives, one of the significant facets of his job is time spent with 4-H students. This educational program of the Cooperative Extension System teaches youth about the value and principles involved in managing wildlife resources.

Although Laurie is a registered nurse, she too has worked in various forms of education for the last several years. After getting a second degree in elementary education, she taught school for a while. She currently works with the 4-H program in Chilton County and is the state coordinator for the Junior Master Gardener program.

Both daughters quite naturally inherited a love of nature and the land. The oldest, Emily, is a Fine Arts major at Shorter College in Georgia. She first became interested in wildlife art as a 4-H student. Although not a big hunter, she enjoys shooting skeet. The youngest daughter, Anna, enjoys both deer and turkey hunting. She's already bagged one of each, an accomplishment that she laughingly said was more than some of the guys at her school could say. She also loves taking care of her five goats and horse, Jackson. A senior at Sylacauga High School, she plans to study veterinary medicine at Auburn following graduation.

With dad and mom so actively involved in the 4-H program, they are quite proud of their daughters' accomplishments, and rightfully so. Both girls have been members of National Champion 4-H teams, collectively winning four championships in wildlife and forestry. They both also ranked highest in individual competition at the nationals. (See accompanying story.)

Over the past few years, the Vines' place has often been the site where the Coosa County 4-H team practiced their forestry and wildlife skills prior to competitions. The family has used the property to entertain and educate different Girl Scout troops, as well as host the Coosa County TREASURE Forest landowner tour. They have also hosted several of their own family reunions on the 4th of July each year, with fishing, four-wheeling, and walks in the woods.

The Vines' say that their original TREASURE Forest objectives were timber and wildlife. However, as time goes by, wildlife and recreation now seem to be more important. Enjoying the land with family is obviously a priority for Roger, Laurie, and the girls, worth much more than the monetary value of trees. It is heartwarming to see two educators who not only clearly love what they teach, they live it.

Above: The youngest of three pine plantations.
Right: One of several greenfields on the Vines property.

Alabama 4-H Team Earns National Championship in Utah

Once again, the Coosa County 4-H Wildlife Team represented Alabama at the National 4-H Wildlife Habitat Evaluation Invitational in Cedar City, Utah, on July 25-29, 2007. Once again, they returned home as National Champions. The scores were close, but Alabama won by a 10-point margin over the second place Utah team, followed by the Texas team in third place. A total of nineteen states were represented, and all the teams were already state champions.

This victory marks the tenth time Coosa County 4-H has had a team participate in the national wildlife event. Nine of these teams have all placed in the top three, including three national championships and four reserve national championships.

Team members for this year included Treavor Abrams, Samuel Cordner, Elijah Phillips, and Anna Vines. They were coached by Kristy Abrams and Roger Vines, Coosa County Extension Coordinator. Shelly Wood and Jennifer Ayers also assisted with the team.

The teams competed in several different events including aerial photo interpretation, wildlife foods, wildlife habitat management practices, a written rural wildlife plan, and a written urban wildlife plan. Anna Vines was the overall high scoring individual, Elijah Phillips placed fourth, and Samuel Cordner came in ninth overall. Treavor Abrams also did well, but placed out of the top ten.

The 4-H Wildlife Habitat Evaluation Program, commonly known as WHEP, is an educational program of the Cooperative Extension System to teach youth about the value and principles involved in managing wildlife resources. It began in Tennessee as a state 4-H program and has grown to a nation-wide event. Participants must first win their state competition to earn the chance to compete nationally. The rule is that teams are allowed to participate in no more than one national WHEP, so each winning state team gets only "one shot." Through the years, the contest has been held all over the country as each year it moves to a different host state. Next year Oklahoma will host the event. The National WHEP is sponsored by the U.S. Fish and Wildlife Service and International Paper.

According to Coach Vines, "The competition was very challenging. Our team members had to study really hard to learn an entirely new habitat that was so very different from Alabama. The competition site was on land dominated by high desert sagebrush and rugged mountains. The Utah and Texas teams had the advantage of being on familiar ground, so that made me especially proud of our Alabama team members who still came out on top. I have been coaching this team since they were in the fourth grade, so it's great to see them reach this long sought-after goal."

Alabama's Own 4-H National Champs *- Coach Roger Vines (left) with team members (clockwise): Treavor Abrams, Samuel Cordner, Elijah Phillips, and Anna Vines.*

During the trip out west, the team took advantage of many educational opportunities, visiting Grand Canyon National Park, Meteor Crater National Monument, the Painted Desert, the Petrified Forest, and Mammoth Cave. They also toured Hoover Dam and the Indian Cliff Dwellings in Walnut Canyon National Park along the way. Vines stated, "On top of this they made new friends from all across the country and learned about the plants and animals of the American West. But just as important, they learned about commitment to a goal, the value of hard work, and how to support their team mates. The 4-H'ers also learned to appreciate the support of their community, since over $2,700 was raised locally to support the team, making their trip possible. All of these folks share in this victory."

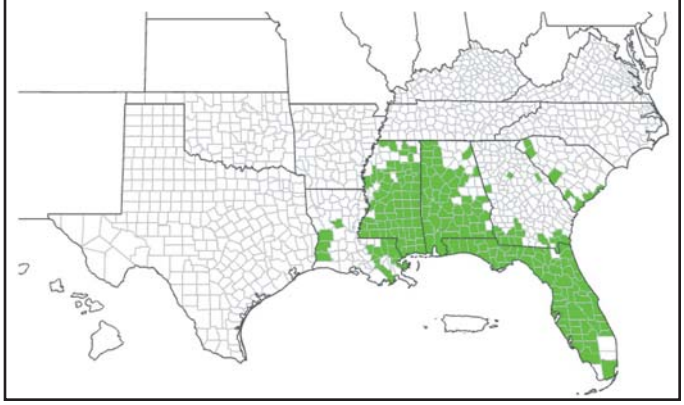
"One team member plans to apply to Auburn University and pursue a degree in wildlife biology," Vines went on to say, "so the 4-H Wildlife program has been a great place to start."

Cogongrass: A Growing Threat

By *Nancy J. Loewenstein, Ph.D.*
School of Forestry and Wildlife Sciences, Auburn University

Cogongrass has quickly become one of the worst invasive plant threats in Alabama. Considered one of the worst weeds in the world for good reason, cogongrass is aggressive, tenacious, and extremely difficult to control. Until five or ten years ago the plant was mostly confined to the southwestern counties of Alabama, but it is now spreading rapidly throughout the state (figure 1), reducing forest and pasture productivity, destroying wildlife habitat, impacting rights of ways, and presenting an extreme fire hazard. Slowing the spread of cogongrass now, before it becomes an insurmountable task, is crucial. Landowners across the state can help in this effort by learning how to identify cogongrass, how to avoid spreading it, and by taking steps to control it, when and if it appears.

Figure 1. **Cogongrass Distribution - Southern United States**



How to identify cogongrass

Cogongrass *(Imperata cylindrica)* often grows in dense, circular patches (figure 2). Its stems are indistinct and the sheaths of leaves appear to almost arise directly from the soil. Unlike many grasses that grow in clumps, cogongrass grows in a more spread-out manner. Yet within a patch of it, the individual stems can be densely packed together. The linear leaves are usually one-half to one inch wide and can range from one to four or more feet tall even within the same patch. The edges of the leaves are saw-toothed, feeling a bit like sandpaper. Leaf color is often yellowish green ranging to blue-green at times, and the central vein is whitish and off center, especially near the base of the leaf (figure 3). After a freeze the leaves will usually turn brown, but the dense thatch will remain standing.

Chris Evans, River to River CWMA, Bugwood.org


Charles T. Bryson, USDA Agricultural Research Service, Bugwood.org

Figure 2. (Left) Cogongrass (Imperata cylindrica) often grows in dense, circular patches.

Figure 3. (Below) Leaf color of cogongrass is often yellowish green ranging to blue-green at times. The central vein is whitish and off center, especially near the base of the leaf.


G. Keith Douce, Univ. of Georgia, Bugwood.org

Cogongrass flowers and seeds occur on a spike or 'head' that is two to eight inches in length and silvery white in color (figure 4). Seeds are light and fluffy like dandelion seeds and are easily blown off by the wind or a puff of breath. A patch of cogongrass in flower or seed (figure 5) is easy to spot, making the spring and early summer when it is in bloom the easiest time to find and identify this pest. Johnson grass – and several other grasses which are sometimes confused with cogongrass – have different looking flower spikes and bloom during the summer or early fall.

Cogongrass rhizomes (underground stems similar to roots) form a very dense entangled mat in the soil. They have pointed tips which are so sharp they can pierce the roots of other plants. The rhizomes are noticeably segmented and covered with flaky, paper-like scales. Beneath the scales, the rhizomes are bright white. Johnson grass also has segmented rhizomes, but they are not covered with scales and are not sharp tipped.

Growth habits, distribution, and impacts

Cogongrass is very hardy and can tolerate a wide range of conditions. It can be found in natural and planted forests, pastures and grasslands, orchards, disturbed areas, urban areas, along rights-of-ways, in wetlands, and even in saline areas near the coast. It is adapted to growth in full sun but thrives in moderate shade as well, and can survive in the shade of a forest understory, 'waiting' for a chance to take off if the canopy is opened up providing more light.

Cogongrass is also adapted to fire but it burns hotter and more intensely than

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Cogongrass: A Growing Threat

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Figure 4. Cogongrass flowers and seeds occur on a spike or 'head' that is two to eight inches in length and silvery white in color. Light and fluffy like dandelion seeds, they are easily blown off by the wind.

most other fire-adapted species. As a result, cogongrass fires tend to be especially destructive. Even longleaf pine forests which are adapted to and dependent on fire cannot tolerate cogongrass fires. After a fire, cogongrass rhizomes sprout and a new stand of pure cogongrass is soon in place and able to spread more rapidly in the burned-over area.

Cogongrass often dominates a site, creating such a thick stand both above and below ground that few other plants can successfully compete for space, nutrients, water, and light. Research also shows that cogongrass may release allelopathic compounds into the soil which can inhibit plant growth, and that puncture wounds from the sharp rhizomes can lead to rot and decay of roots of nearby plants. Wildlife cannot utilize cogongrass stands because of the dense growth, the extreme fire behavior, and because the low nutritive value and high silica content in the leaves make it unsuitable as forage. The bottom line is that cogongrass displaces many native species, reduces forest and pasture productivity, destroys wildlife habitat, impacts rights of ways, and alters natural fire cycles.

How to avoid spreading cogongrass

Like many invasive plants, cogongrass is a reproductive overachiever. Each plant can produce up to 3,000 windblown seeds and as the plant grows, the rhizomes spread underground as much as nine feet a year, putting up new plants along the way. Any rhizome segments that get broken off and moved to a new location can sprout and start a new plant, even weeks after being detached from the plant. It is through hitchhiking around the state – attached to skidders, fire plows, road graders, mowers, food plot equipment, and other forest and road maintenance vehicles and equipment – that cogongrass is spreading so quickly.

Clearly, helping this aggressive weed spread across Alabama and the Southeast is not in our best interest. It is also against the law. Cogongrass is classified as a Federal and State noxious weed, making it illegal to transport plants, seeds, or plant parts within the state or across state lines.

To avoid inadvertently transporting cogongrass hitchhikers, keep away from the plant when seed heads are present or when the soil is muddy and rhizomes can be broken off and stuck on vehicles or equipment. If you must work in areas infested with cogongrass, try to work in the contaminated sites last and make sure to clean vehicles, equipment, and clothing before leaving the site. It is also good practice to require that any off-site forest management equipment coming onto your property be cleaned prior to coming on site. Cleaning vehicles and equipment in the field may be challenging, but it is necessary to slow the spread of cogongrass and to avoid breaking the law.

How to control cogongrass

It has been said that you should never do anything to cogongrass just once because you will only make it mad. Indeed, controlling it takes time, effort, and persistence. This is why prevention of infestations is the most successful and cost-effective control measure for cogongrass. Of course, infestations do occur and the resulting control measures will depend on the location and size of the infestation.

In areas that can be tilled, repeated tillage to a depth of at least six inches throughout the growing season may control cogongrass. In areas where tillage is not an option, the herbicides glyphostate and imazapyr have proven most effective for control. Herbicides can be applied in the spring before flowering to suppress seed production, but should be applied in September or October for control and eradication. Complete eradication of the cogongrass rhizomes is exceedingly difficult and the plant will typically re-sprout following herbicide treatment, calling for multiple follow-up treatments. Some land managers have found that mowing or burning one to four months prior to herbicide application improves treatment success.

Site rehabilitation is important after control of a cogongrass infestation has been achieved. Fast-growing native grasses, forbs, and/or trees which can protect the soil and out-compete rogue cogongrass plants or other opportunistic non-native plants should be established as quickly as possible. Continued surveillance and diligence is required to maintain control of a site recovering from a cogongrass infestation.

More information about cogongrass and its control can be found at the web site: **www.cogongrass.com.**

C. Bryson, Bugwood.org

Figure 5. A cogongrass infestation in flower or seed is easy to spot.

Asiatic Bush Honeysuckle: What Happens When Non-native Invasive Plants Escape Cultivation?

By *Dana McReynolds*, Forest Health, Alabama Forestry Commission

Ah, the beautiful and exotic bush honeysuckle; its fragrant and visually captivating flowers are magnificent. Its lush green leaves are geometrically positioned, opposite on tan branches. Moreover, the size of this fan-shaped shrub is reasonably manageable as an ornamental plant because of its maximum height growth of approximately 20 feet. Additionally, the ripened, glossy berries are tasty edibles to an abundance of wildlife species. It sounds like the perfect ornamental shrub to plant in your yard, right? Not so fast, this wonderful shrub is non-native and very invasive.

Originally from Asia, the bush honeysuckle was originally introduced into North America in the 1700s and again in the 1800s. It was widely used as an ornamental plant for landscape areas and a wildlife shrub for ample browsing. This shrub species is a prolific producer of fruit and seed that is browsed and spread by several wildlife species such as birds, deer, and small mammals. Because the Asian continent has several beautiful bush honeysuckle shrubs, several species were introduced to North America (Amur honeysuckle, Morrow's honeysuckle, Tartarian honeysuckle, sweet-breath-of-spring honeysuckle, and Bell's honeysuckle); thus the group name, Asiatic bush honeysuckle.

Today, the range of Asiatic bush honeysuckle in the United States extends from Maine to North Carolina and west to Missouri. There are some cases as far south as Georgia, west to Texas, and now in North Alabama. This exotic honeysuckle is relatively shade tolerant and will quickly occupy a forest understory. It is believed that this plant was introduced into our state by homesteaders planting it in their yards in Huntsville. Over the years, the shrub escaped cultivation and invaded neighboring disturbed sites, roadside areas, and forest openings. It eventually escaped the yards of Huntsville and infested the Monte Sano Preserve as well as the Monte Sano State Park, ignoring the lag time of most non-native invasive plants.

The Land Trust of Huntsville and North Alabama recognized the problem with Asiatic bush honeysuckle in the Monte Sano Preserve. This non-profit organization, dedicated to preserving lands for public use, has the goals of enhancing recreation, education, conservation, and prosperity in North Alabama. To accomplish these goals in the Preserve, the organization initiated an eradication project by first determining the most effective method of controlling this invasive plant that had spread throughout 600 acres on the preserve.

Andy Prewett, Land Manager for the Land Trust of Huntsville and North Alabama, has been working on this project in the Monte Sano Preserve for several years. Control of the shrub is considerably difficult and labor intensive, but several methods are being implemented. The main control used during the last few years has been removing the plant species from the site. Concerned citizens and local students

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Asiatic Bush Honeysuckle

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These volunteers at Monte Sano Preserve demonstrate that control of the shrub is considerably difficult and labor intensive. Clipping it down to ground level and spraying the stump with an herbicide mix tends to be the preferred method of removal. Using pick mattocks to dig the plant out of the ground by its roots is another common method used.

volunteer their services toward this effort, while the Land Trust provides the equipment (brush clippers, herbicide spray, and pick mattocks). Clipping the shrub down to ground level and spraying the stump with an herbicide mix tends to be the preferred method of removal, because seed from native plants are not disturbed. Using pick mattocks to dig the plant out of the ground by its roots is another common method used. This technique definitely removes the exotic plant, but can also disturb native plant seed and remove fertile top soil.

Since this exotic species can spread at a rate of approximately one acre a year, controlling its expansion is first priority. Volunteers task for hours and often clear a sizeable area. Usually, they begin to work at controlling the shrub at the "head" or forefront of the infestation, and work backwards towards the source. This method drastically decreases the spread. Approximately seven acres have already been cleared since this project started. While cutting the shrub down to the ground may not eliminate the species, it controls and reduces the spread. Herbicides can be easily applied to a stump in the understory, and natural vegetation can regenerate. Wildflowers, forbs, grasses, and legumes will begin to occupy and diversify the site, as evidenced in the treated areas. There are, however, treated areas where the honeysuckle has returned. This is a common problem with most non-native invasive plant species. Several treatments may be needed to completely eradicate this exotic shrub.

The work to eradicate and control Asiatic bush honeysuckle is demanding and will require repeated treatments. Even then, there is no guarantee that it will be completely eliminated from the Monte Sano Preserve. So, are these efforts in vain? Not at all; during the winter months when most of the deciduous understory vegetation is dormant, the results are quite vivid. The contrast of controlled areas against the areas not controlled is definitely noticeable. Progress may appear to be slow, but the volunteers' accomplishments remain warranted and needed.

New methods to control Asiatic bush honeysuckle are being initiated. The Land Trust is implementing a research project to compare and contrast the herbicides, *Round Up* and *Pathfinder II*. Future test plots have been identified and established. A comparison between the two herbicides will be made on their effectiveness and cost. This project is being funded by a grant from the Alabama Forestry Commission and the USDA Forest Service.

The efforts of these volunteers should definitely be recognized; they are providing a service to restore the ecosystem of this Preserve back to a healthier state. What can other concerned citizens of North Alabama do to restore this serene area? Besides being reactive by providing labor to control Asiatic bush honeysuckle, concerned citizens can also be proactive and substitute the planting of this shrub with native, flowering shrubs. There are other admirable activities that citizens can do to prevent the existence and spread of Asiatic bush honeysuckle. If Alabamians want to become more involved in the eradication/control project in the Monte Sano Preserve, contact Andy Prewett of the Land Trust of Huntsville and North Alabama for more information (**Andy@landtrust-hsv.org**).

References

Miller, James H. Non-native Invasive Plants of Southern Forests: A Field Guide for Identification and Control. *Southern Research Station, 2006.*

Prewett, Andy. The Land Trust of Huntsville and North Alabama. ***Andy@landtrust-hsv.org.***

Site of test plots is marked to compare herbicide treatments.

AFC Forester Receives National Tree Farm Award

The Alabama Forestry Commission's Michael Older, Covington County Forester, was named this year's recipient of the Outstanding Inspector of the Year award at the 14th Annual National Tree Farm Convention, held in October in Madison, Wisconsin.

Sponsored by the American Tree Farm System, this national award honors Tree Farm inspectors who give of their time to inspect Tree Farms and work to educate landowners and the public of the benefits of sustainable forestry. Tree Farm is a land certification program in which forest owners must meet standards and guidelines, develop a written management plan, and pass an inspection.

Older's love of the outdoors and forestry, combined with his commitment to landowners, make him a natural for this honor. Since his involvement with the Tree Farm program from the early 1990s, he has certified 102 new Tree Farms, earning him the American Tree Farm System's Gold Hardhat Award. This is a prestigious award earned by very few tree farm inspectors. The Alabama Forestry Association, sponsor of the Tree Farm program in Alabama, also recognized Mike at their annual meeting in September 2007 in Orange Beach, Alabama. He had previously received both the Bronze and Silver Hard Hat Awards for his efforts.

Mike is one of five "train-the-trainers" in Alabama qualified to teach and recertify inspectors in the Tree Farm program, and he has conducted numerous Tree Farm training workshops across the state.

While volunteering with the Alabama National Tree Farm Committee, Older has served as the past Longleaf District chairman and is currently the South Alabama chair of the state committee. He recently chaired the 2007 Southern Regional Tree Farm Field Day, held on the property of the Solon Dixon Center in Andalusia. In 2006, he also served as co-chair of the Field Day for the 13th Annual National Tree Farm Convention, which Alabama hosted in Mobile. It was recognized as being one of the most successful field days in the history of National Tree Farm conventions.

Michael Older, AFC Covington County Forester, discusses Tree Farm certification with a landowner.

Mike works hand in hand with landowners in Covington County and was the nominator for the 2001 and 2002 Alabama Tree Farmer of the Year Award, one of which was selected as the 2001 *National* Tree Farmer of the Year! Employed with the Alabama Forestry Commission since 1990, most recently as Covington County Manager, Mike has also certified over 80 TREASURE Forests. Additionally, he currently serves on the editorial board of *Alabama's TREASURED Forests* magazine.

Actively involved in every facet of the forest community, Older is a member of the Society of American Foresters, Longleaf District Chapter; the Covington County Forestry Committee; the Covington County TREASURE Forest Association; the Alabama Forestry Association; the Alabama Wildlife Federation; the Alabama Hunter Education Association; and the National Rifle Association along with other memberships.

Mike received his Bachelors degree in Forest Management from Auburn University in 1982. He served four years in the U.S. Marine Corps, and retired in 2005 from the Alabama Army National Guard after 24 years of service. He and his wife Betty Ann live on their Covington County farm (which just happens to be both a TREASURE Forest and Tree Farm), sharing it with four horses, four dogs, and several cats. He has one daughter, Amanda, who is an RN.

Congratulations, Michael . . . we're proud of you! Thanks for your dedication to your job and the landowners with which you work.

Taxes and Your Forestry Investment

By *L. Louis Hyman*, Alabama Forestry Commission

Forestry is a long-term investment, and careful planning is necessary to maximize the financial returns. Federal income taxes deeply affect your investment at two critical junctions: tree planting and timber harvesting.

Reforestation Tax Deduction

Beginning in 2004, landowners are allowed to directly deduct the first $10,000 of reforestation expenses each year. This deduction applies to both tree planting and natural regeneration.

A landowner can deduct costs involved in site preparation such as mechanical, chemical, or prescribed burning work; purchasing seedlings or seed; planting labor; and any post planting herbicides used in the first year. This includes site preparation for natural regeneration such as herbicide and burning under seed trees or shelterwood cuts. Labor costs consist of any labor you pay for, including paying family members, but not the labor of the taxpayer or spouse.

The $10,000 limit is an annual cost. In Alabama it is a common practice to site prepare in autumn (October through December) and plant trees in the winter (January through March). These activities fall in two calendar years, so the landowner can claim up to $10,000 in site preparation cost one year and up to $10,000 in planting costs the next year. Any costs over $10,000 can be amortized over a seven-year period.

There is a special tax benefit for landowners who own less than 500 acres of forestland in counties impacted by Hurricane Katrina. Areas of west Alabama, Mississippi, and Louisiana are included in the Gulf Opportunity Zone Act. Landowners in the "GO Zone" may deduct $20,000 per year for reforestation done during 2005 through 2007.

To claim the reforestation deduction, a taxpayer needs to record the cost of reforestation (up to $10,000) on line 36 of Form 1040. To do this you would write in "RFST" on line 36 and then the amount of the deduction. This is used as an adjustment to gross income, which will have an impact regardless of whether or not you itemize your other deductions.

Capital Gains Treatment of Timber Sale Income

One of the most critical issues facing a landowner is how to handle the proceeds of a timber sale. A mistake in reporting can cost a landowner up to 70% of timber revenue in taxes and fines. The key point is the need to claim capital gains treatment for the timber sale. If a landowner does not use capital gains, then the sale is treated as ordinary income. All proceeds are taxed at the regular rates, up to 35% of revenue. In addition, this type of ordinary income is considered self-employment, so the taxpayer must pay an additional 15.3% self-employment tax. And then, because under IRS rules a taxpayer must prepay at least 90% of the expected tax on ordinary income by December 31, the taxpayer may be hit with an insufficient payment fine, which can be up to 20% of the amount owed. These taxes and fines can really impact the financial return on a forestry investment.

However, by using capital gains, a taxpayer can greatly reduce his or her tax bite. To begin with, the tax rate on capital gains is limited to 15% of the gain. If a taxpayer's other income is less than roughly $62,000, the capital gains rate is only 5%.

Ordinary income is taxed on the total revenue received. Capital gains are only taxed on the profit or gain from the sale. The sale income is reduced by any selling costs and the basis in the timber, and then the profit is taxed at the lower rate.

The first deduction is for ***selling costs***: any expenses paid by the landowner to prepare, conduct, or repair a timber sale. This can include the forestry consultant's commission and fees, any sale advertising costs, any survey or property line marking done for the sale, and any new roads or bridges paid for by the landowner. It also includes any repairs done by the landowner right after the sale to repair roads, bridges, fences, gates, or other structures damaged during the timber harvest. A landowner can also include any pre-harvest site preparation such as prescribed burning, understory chipping, or timber stand improvement done as part of the timber sale process.

The other deduction is for ***basis***. Basis is the "cost of goods sold," the out-of-pocket cash investment in the trees or property being sold. Basis is built three ways. The most common is when a property is purchased and the purchase price is allocated to the various aspects of the property, such as the land, the timber, and any structures. Another way is when a property is inherited, the basis is set as the fair market value of the land, trees, and structures as of the date of death or the date the will is probated. The third way is to add to the property by building a structure or road, or by planting trees.

As pointed out earlier in this article, there is a strong tax benefit in deducting the cost of reforestation either right away or using the amortization method. The result of both methods is the "using up" of the basis in the reforestation, so that when the trees are sold, there may be no basis to deduct. Even without any basis, it is still imperative for a landowner to use capital gains treatment, because the taxpayer can deduct any sales costs and use the greatly reduced capital gains tax rate.

Prior to 2005, there was some confusion as to whether a timber sale fully qualified for capital gains treatment. This depended on whether the sale was done "lump sum" with a single payment for all the trees, or by the unit, with the seller getting checks depending on how much wood is cut. Since January 1, 2005, *any* timber sale – by definition of the law – qualifies for capital gains treatment. The only requirement is that the taxpayer must have owned the property for at least one year prior to sale.

A landowner can use the tax rules to boost his/her after-tax return on investment by making sure to use capital gains treatment for timber sale revenue, maximizing the deductions against that sale revenue, including whatever basis is in the timber. After the sale, rapid reforestation is good forest management. Net costs can be reduced by taking advantage of the reforestation tax deduction, with careful attention to include all allowed costs. Both of these tax breaks will help you maximize the TREASURE in your Forest.

Photo by Steve Maslowski, USF&W

Listen to the Music

Prairie Warbler

By *G. Ryan Shurette*
Forest Botanist, USDA Forest Service

Step outside on a still early-summer morning and listen. They're everywhere! Regardless of where you live in Alabama, the one group of wildlife (besides fire ants) you can pretty much count on seeing every single time you are outdoors remains the same … birds. Over 350 species can be found in our state and almost every type of habitat is utilized by some species of bird. Some species are generalists and use several types of habitats, while others are specialists, requiring more refined, often unique habitats. Specialists are sometimes used as indicator species for the presence of a rare habitat type or as a measure of habitat quality. Specialization can often lead to trouble if you are a bird in today's ever-changing landscape. Although many birds are very common, several species have shown decline over the past few decades. Habitat degradation has been suggested as a major contributing factor in this trend.

One habitat type for example, the longleaf pine *(Pinus palustris)* forest community, ranks among the highest in displaced and degraded ecosystems. Historically, 90 million acres of longleaf forest covered the Southeast; now there are less than three million. This forest system is fire dependent, therefore fire suppression has altered much of what remains from its original state. This change in habitat, in turn, has changed populations of bird species in Alabama and the rest of the

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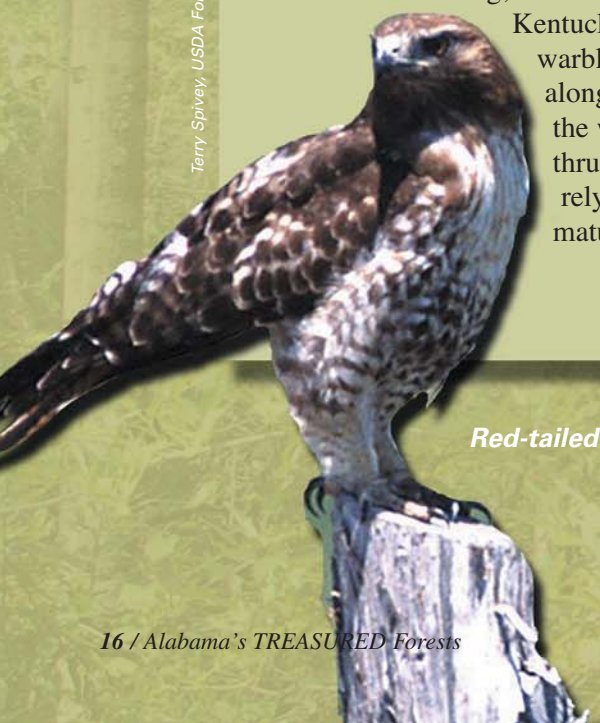
Listen to the Music

(Continued from page 15)

South. Birds associated with open, fire-maintained longleaf are declining in many areas of the Southeast, including prairie warbler, northern bobwhite quail, Bachman's sparrow, brown-headed nuthatch, yellow-breasted chat, and Henslow's sparrow. However, landowners can actively manage for some of these "species of concern," even on relatively small tracts of timberland. Opening pine stands by thinning or by reducing the "midstory," followed by periodic prescribed burning will usually produce the herbaceous vegetation and habitat structure many of these species require. Although longleaf is preferred for this type of management, loblolly and shortleaf stands can be managed in the same way. Growing-season fire is often utilized to restore the character of open pine communities, but care should be taken with growing-season burning if the timber stand has not been exposed to regular fire.

Other bird species require certain types of mature deciduous forest to fulfill their survival needs. Worm-eating, hooded, and Kentucky warblers, along with the wood thrush, rely on mature oak-hickory forests. Another wood warbler, the cerulean warbler, is an uncommon summer resident that nests in old-growth riparian hardwoods in northern portions of Alabama. The yellow-billed cuckoo, or "rain crow," is a caterpillar specialist found in mixed mature deciduous forests. These species are also declining across the state due to modification or loss of their habitats. Land management for species such as these typically involves longer rotations – 50 years or greater – of hardwood stands. Some of the species mentioned above would also benefit from the inclusion of some small early-succession patches (gaps) in the forest.

Several other unique habitats exist in Alabama, each with its own group of specialist bird species that have adapted to life there. Generalist bird species, on the other hand, can be found just about anywhere. Examples of generalists are American crow, tufted titmouse, northern cardinal, Carolina chickadee, Carolina wren, red-tailed hawk and even wild turkey. These species typically have a wide range of diets and habitat requirements, and for the most part, can adapt to changing landscapes. It is likely that you will not completely displace these types of species, regardless of the type land management practices



Terry Spivey, USDA Forest Service, Bugwood.org

Red-tailed hawk

Redbellied woodpecker

Johnny N. Dell, Retired, Bugwood.org

Carolina wren

Johnny N. Dell, Retired, Bugwood.org

American goldfinch

Terry Spivey, USDA Forest Service, Bugwood.org

Chipping sparrow

Johnny N. Dell, Retired, Bugwood.org

American Woodcock

you apply. In fact, some of the best advice for general songbird management is to create or maintain many types of habitat on your property. This diversity of vegetation increases edge and appeals to a wide variety of species. Many of these "common" birds are often backyard birds, and can be attracted and viewed by placing feeders and nest structures around your home. Seed feeders, especially during winter, can be very effective in keeping large numbers of birds near your window. In Alabama, expect to see chipping sparrow, northern cardinal, American goldfinch, Carolina chickadee, mourning dove, house finch, purple finch, red-winged blackbird, and red-bellied woodpecker at a winter feeding station.

Humans have been living with birds in this part of the country for around twelve thousand years now. We have always, directly or indirectly, managed for them, even if we were unaware of it. However, the rate of influence we have exerted on wild birds – and other wildlife species – has increased exponentially over time. Native Americans utilized fire to clear forests and manage game. This undoubtedly had some effect on local bird communities, both positive and negative, depending on the species. In the last two hundred years or so however, humans have imposed drastic effects on some bird populations. The passenger pigeon, for example, was once the most common bird in the country, numbering over five billion. They lived in enormous flocks. During migration these flocks could sometimes be a mile wide and 300 miles long, taking several days to pass overhead. Today, there are no living passenger pigeons. Their extinction resulted, in part, from uncontrolled shooting and trapping during the 1800s, when pigeon meat was commercialized as a cheap food for slaves and the poor. However, habitat loss and disease also played a role. The Carolina parakeet shared the same fate when the last wild birds died out in 1904. Other species that were once found in Alabama, such as Bachman's warbler and the ivory-billed woodpecker, may already be gone as well.

Through current conservation laws and sound land management practices, we can do our part to help conserve bird species and their habitats, especially those that are unique.

Terry Spivey, USDA Forest Service, Bugwood.org

House finch

Terry Spivey, USDA Forest Service, Bugwood.org

Red-winged blackbird

James W. Hybart, III

Cardinal

James W. Hybart, III

Mourning dove

Ricky Layson, Ricky Layson Photography, Bugwood.org

Developing New Markets:
Carbon Trading, Biomass, and Ecosystem Services

By *Walter E. Cartwright,* RF
Assistant Forest Management Division Director, Alabama Forestry Commission

New markets are evolving for forest products, forest biomass, carbon storage, and many ecosystem services such as water quality, wildlife habitat conservation, protection of threatened and endangered species habitat, and others. One Texas utility is paying landowners to protect habitat for an endangered warbler, along with purchasing carbon credits from those same landowners to offset nearly 85 million tons of carbon emissions per year from their coal-fired facilities. This article will discuss efforts underway to develop and promote new markets for timber landowners willing to participate in new initiatives.


Photo by Kelvin Daniels

CARBON TRADING

Because of the perception that greenhouse gas emissions, particularly carbon dioxide, are causing global warming, "Cash for Carbon" is the cry being heard among many landowner groups that are being asked to profit from the sale of carbon stored in their forests from the process of converting carbon dioxide (CO_2) to carbon and oxygen. Carbon is stored in the tree bole, limbs, roots and many other shrubs in the forest. Carbon Aggregators are trying to buy those credits and asking landowners to enter into long-term agreements to store carbon over long time periods. Contracts are renegotiated approximately every five years due to price fluctuations in this evolving market. At present, the Chicago Climate Exchange is the only market trading carbon credits in the United States. More detailed information can be obtained on their website at **www.chicagoclimatex.com**, where the price as of the end of August 2007 was near $3.00 per metric ton of CO_2, down from nearly $5.00 per ton in June 2007.

What does all this mean for a landowner with a healthy, growing stand of timber in Alabama? Well, it depends on many factors, including stand age, size, density, species, and management intensity. Basically, a young healthy stand of loblolly pine on good soil, being managed for maximum growth will capture and retain about two tons of carbon per acre per year. A ton of carbon is equal to 3.87 tons of CO_2, so that stand will store 2 x 3.87 or 7.74 tons of CO_2 per acre per year. At the current market price of $3.00 per ton, a landowner could sell his carbon credits for $23.22 per acre per year for the term of the contract. These dollar values are for illustrative purposes only, and will fluctuate with market price and the above factors indicating how fast a stand is growing and storing carbon.

Some states have recognized the need to set up a Carbon Registry to allow landowners to record carbon credits being stored on their properties and be a clearinghouse of information for landowners, aggregators, legislators, and others. Our neighboring State of Georgia has established a Carbon Credit Registry and has begun certification of registered foresters to educate them on their carbon measurement protocols and have creditable data being entered into the registry. Their protocol only allows credits for merchantable tree stems, as measured

inside bark, and does not consider carbon in tops, limbs, stumps, and roots. The logic is that these materials will be left in the woods to decay, thereby releasing the carbon back to the atmosphere. However, registered foresters have the option of using volume tables established by the University of Georgia or using their own volume tables to enter data.

The Alabama Forestry Commission has recognized the need to take the lead in setting up a similar registry in Alabama, not only so that landowners will have the same opportunities as other states, but also to establish a uniform protocol for measuring and reporting carbon credits. Discussions are underway with stakeholder groups to plan a strategy for setting up this registry and decide on protocols that would be used to measure volume and carbon credits being stored in each particular stand of timber.

A word of caution is advised on the continued perception that global warming is a reality. A recent article entitled, "Global Warming: Man-Made or Natural" by Dr. S. Fred Singer, Professor Emeritus of Environmental Sciences at the University of Virginia, delivered during a seminar on Economics and Environment, states that all scientific evidence indicates that greenhouse gas emissions are not causing a warming of the environment, but rather have an overall "cooling effect." The article states, "Human activities are not influencing global climate in a perceptible way. Climate will continue to change, as it always has in the past, warming and cooling on different time scales and for different reasons, regardless of human action. I would also add that – should it occur – a modest warming on the whole would be beneficial. This is not to say that we don't face a serious problem, but the problem is political. Because of the mistaken idea that governments can and must do something about climate, pressures are building that have the potential of distorting energy policies in a way that will severely damage national economies, decrease standards of living, and increase poverty."

Dr. Singer closes with, "It is a great shame that so many of our resources are being diverted from real problems to this non-problem. Perhaps in ten or twenty years this will become apparent to everyone, particularly if the climate should stop warming (as it has for eight years now) or even begin to cool. Today the imposed costs are still modest, and mostly hidden in taxes and charges for electricity and motor fuels. If the scaremongers have their way, these costs will become enormous. But I believe that sound science and good sense will prevail in the face of irrational and scientifically baseless climate fears." (Reprinted by permission from *Imprimis*, a publication of Hillsdale College, August 2007, Volume 36, Number 8.)

WOODY BIOMASS TO ENERGY

Forest residues have been used to fuel boilers in a mix with coal, fuel oil, and natural gas for over 30 years. The difference now is that almost NO residues are left in the woods after a logging operation, and almost all mill residues are being used by some industry to offset their energy costs. We have frequent calls from industries wanting to find a source of mill residues, especially when natural gas prices surge and carbon dioxide emission standards are harder and harder to meet. One recent test of fine woody biomass mixed at 1% with coal fines reduced emissions by 30%. That revelation has led to further tests with higher percentages of woody biomass to determine the reduction in emissions.

Congress is appropriating billions of dollars for research and development of technologies that would convert woody biomass to ethanol, methanol, and other chemicals. Several grants were awarded to partnerships between forest industry and major oil companies, while others have been awarded to the major chemical companies to develop an enzyme that would convert woody biomass to cellulosic ethanol. Biomass Gas & Electric Company (BG&E) announced plans to build the largest waste wood-fired power-generating plant in the United States. The company recently signed a 20-year Power Purchase Agreement (PPA) with Progress Energy Florida to provide the utility with electric power. A 75-megawatt renewable energy plant will be built on a Florida site to be determined later.

BG&E's advanced technology uses a two-step process. First, the woody biomass is superheated in an oxygen-free environment to produce a synthetic gas, which powers a turbine to generate electricity. Heat from that process is captured in a second system, which produces steam to run a generator and produce additional power. This highly efficient and extremely low-emission process – called "combined cycle" – offers a significant power production alternative that is both cost-competitive and environmentally friendly. The Progress Energy contract is the third signed by BG&E. Previous agreements were signed with the city of Tallahassee, Florida, and Georgia Power Company.

Alabama's Alternative Energy Advisory Group, Biofuels Committee recommendations to Governor Riley included "biomass to energy" and several other alternative energy resources and incentives including:

- Encourage alternative transportation fuel usage by state agencies and other governmental entities.

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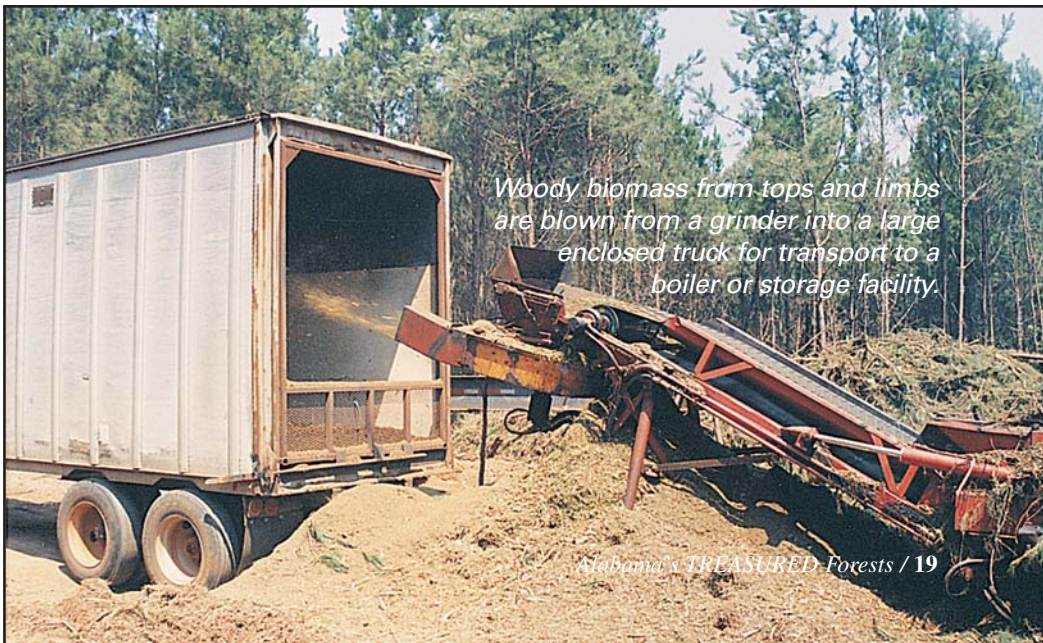

Woody biomass from tops and limbs are blown from a grinder into a large enclosed truck for transport to a boiler or storage facility.

Developing New Markets:

(Continued from page 19)

Photo courtesy of Kronospan

Kronospan's $500 million facility is nearing completion and will use a tremendous volume of wood across all size classes. This manufacturer will employ over 700 people in the Calhoun and Talladega counties area.

- Provide funding for alternative fuel research, development, and education.
- Feedstock development.
- Establish an *Alabama Energy Commission*.
- Incentives for bio-fuel feedstock producers.
- Income tax credit for retail distribution and infrastructure.
- Incentives for consumers.
- Bio-fuel production incentives.
- Establish an *Interagency Alternative Fuels Working Group*.
- Quality assurance to meet fuel ASTM (American Society for Testing and Materials) national standards.
- Legislation developed in regard to alternative fuels should be economically feasible and include provisions for tax-exempt entities.

OTHER ECOSYSTEM SERVICES

The term "ecosystem services" is becoming more familiar to the forestry community as corporations, landowner groups, and environmental groups, along with the federal government, are paying landowners to create, preserve, or restore critical habitats for threatened or endangered species. Some payments are made for mitigation of natural resources that were destroyed by development or pollution. Several states have even purchased property and/or long-term easements to protect critical watersheds that filter their municipal water supply. Alabama can certainly understand that strategy as we suffer through a 100-year drought for the second year. Clean air, water, recreation, aesthetics, wildlife, and wildlife habitats are increasingly important to Americans, many of which live in urban settings and rarely get out to the country to enjoy nature in its purest forms. As discussed above, "perception is reality" to most people; however, we already know that our forests are being fragmented and the average ownership in Alabama has dwindled to an average of just over 50 acres. These ecosystem services will become even more valuable as land patterns change, urban centers grow, and management schemes evolve to protect all the different components.

MARKETS FOR PRODUCTS

New markets will be purchasing smaller timber products in the near future as three major manufacturers open for business. Louisiana Pacific Corporation will begin manufacturing oriented strand board at a facility in Thomasville, Alabama. They will purchase small pulpwood-size trees and reportedly use 185 loads per day. That area in the Southwest part of the state has lacked a market for pulpwood since the closing of two major pulp mills.

In Meridian, Mississippi, a new plant that manufactures engineered wood products will begin operation soon, drawing wood from West Central Alabama. They too will use small pulpwood in their process and increase the demand for those products. Landowners will definitely benefit from the demand pressures and resulting price increases for their wood products.

Another major industry, Kronospan U.S., L.L.C., will start up soon in the Anniston, Alabama, area and will use a tremendous volume of wood across all size classes. This integrated plant will produce several products from oriented strand board, laminated wood flooring, medium density fiber board, and several other products. They also hope their facility will be energy self-sufficient, using by-products from the mill.

Many other forest products industries have expanded, investing billions in Alabama to improve their processes, increase mill capacities, create more jobs, and use more forest products. During 2005, there were 69 announcements of new and expanding businesses, creating 2,830 new jobs and investing $630.8 million. Kronospan alone had a capital investment of $500 million! During 2006, there were 74 announcements of new and expanding businesses, creating 1,905 new jobs, and investing $352 million.

More detailed information can be found in the 2006 Forest Resource Report on the Alabama Forestry Commission website at **www.forestry.alabama.gov.**

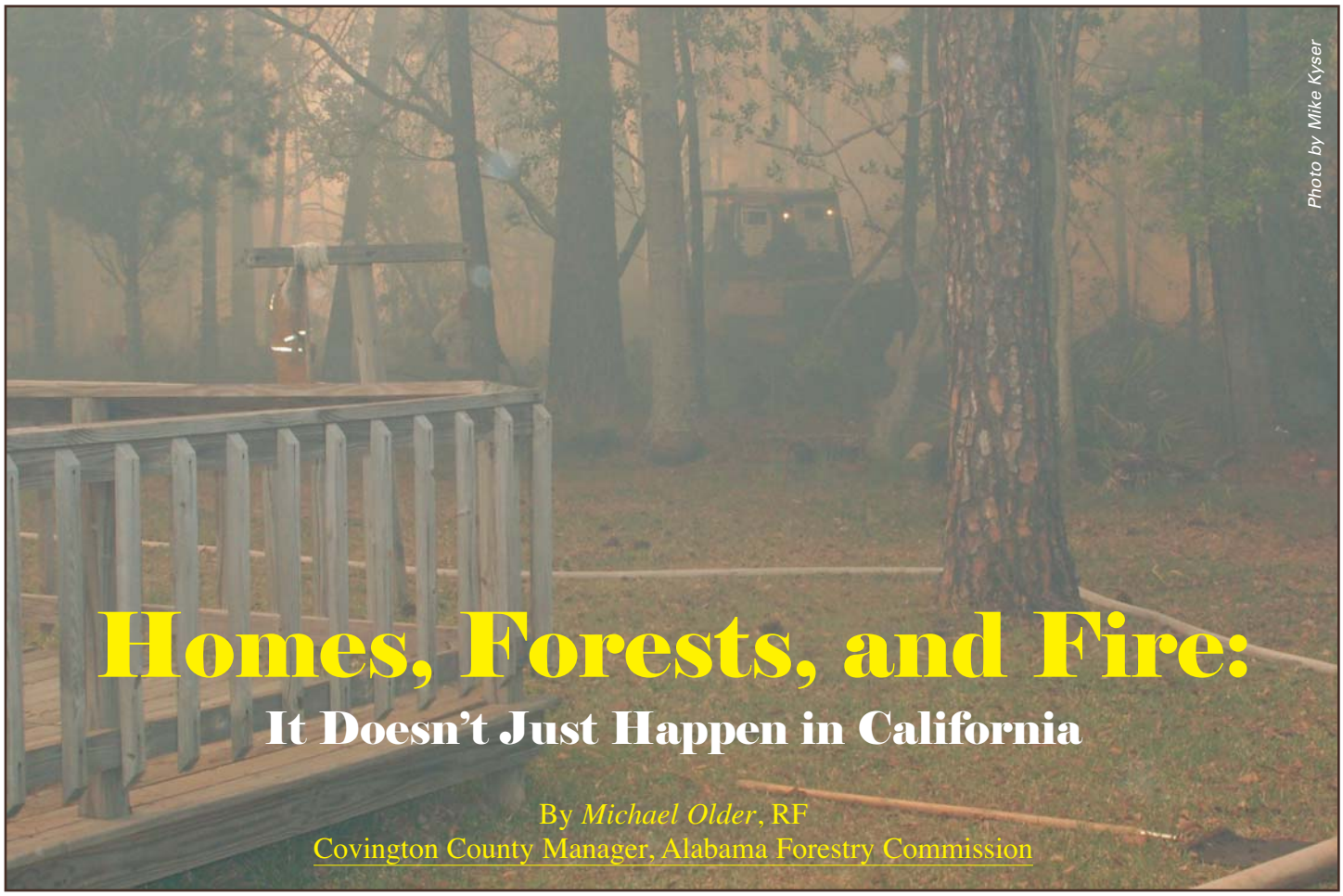

Photo by Mike Kyser

Homes, Forests, and Fire:

It Doesn't Just Happen in California

By *Michael Older*, RF
Covington County Manager, Alabama Forestry Commission

Fire in the southern forest is a natural occurrence, but when you add in the growing human population . . . the question of, "What should I do if my property is threatened by a wildfire?" becomes more relevant by asking yourself, "What can I do to lessen the damage *when* my property is threatened by a wildfire?" The best solution is to become "Firewise" by learning and implementing practices that reduce, not eliminate, the possible catastrophic effects of a wildfire near your home and property. During the summer months, television news stories about western fires are plentiful. As we have seen earlier this year with the Bayou La Batre fires, huge fires can and do occur in Alabama as well. Fortunately, most wildfires are controlled quickly before they escalate into the lead news story on the local television station. However, during drought conditions and with stretched firefighting resources, this may not always be true.

One of the best wildfire prevention tools is the use of fire itself through prescribed burning and the establishment of permanent, maintained firebreaks. If prescribed burning is a viable option, use it. Often in the wildland-urban interface, prescribed burning is not an available tool. Therefore, other measures must be utilized to obtain the similar effects of removing the fuel component of fire.

On large wildfires there are sometimes not enough firefighters available to protect all the homes in a heavily populated area. Triage may be used: those homes having a higher chance of surviving the fire and that can be safely protected will have the manpower allocated to their defense. You need to do your part by proper planning and following these guidelines.

Creating a defensible space is one step in the "Firewise" direction. Defensible space is the area between a house and an oncoming wildfire where the vegetation has been modified to reduce the wildfire threat and provide an opportunity for firefighters to effectively defend the house. Vegetation can be modified by decreasing the amount, height, arrangement, and flammability. First, determine the size of defensible space needed. Slope and vegetation type are the main factors. With gently sloping terrain and low grass, 30 feet of open space may be adequate. As the slope and height of vegetation increases, the area of defensible space should increase up to 100-200 feet.

Fuel breaks are important components within the defensible space. They can be open, well-maintained lawns, driveways, paths, parking areas, and other areas that break up the fuel availability. Water features such as streams, ponds, and pools are also effective. Borders, fences, walkways, and mulches using rock or concrete can also be incorporated into the landscape.

The second step of creating defensible space is to remove and reduce dead vegetation. All dead trees, shrubs, branches, dried and cured weeds, or wildflowers should be removed from the defensible space on a regular basis. Also, limit the amount of ground litter such as pine needles, leaves, and mulch to 2 to 3 inches in depth. Do not store firewood, gas bottles, or other combustibles within the defensible space. These should be located outside the home's defensible space and on the uphill side of the house. Clean all debris from roof tops, gutters, and

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Homes, Forests, and Fire

(Continued from page 21)

awnings on a routine schedule at least once a year. Flying embers from wildfire account for the majority of house fires with the roof being the most vulnerable. Remove any branches or limbs within 15 feet of the chimney and powerlines.

Separation and arrangement are the next steps. Provide space between plants and tree canopies. At least 10 feet of separation between tree canopies may be adequate on gentle slopes, and up to 30 feet separation on 40% slopes and greater. Separation distance is measured between tree canopies, not tree trunks. When planning and planting both trees and shrubs, remember the size at maturity of the species being planted. Remove "ladder" fuels that will allow the flame to climb from the ground level through the shrub layer into the larger tree crowns. In this defensible space, plant only species that are less flammable, drought resistant, and low growing. Plants, shrubs, and trees of shorter height with open branching habits should be used closer to the house. A list of southern plants can be found at **www.ext.vt.edu/pubs/turf/430-300/lists.html.**

To summarize all these steps, make the defensible space "lean, clean, and green." Within a minimum of 30 feet from your house, limit (lean) the amount of flammable vegetation. Do not allow dead vegetation and other flammable debris to accumulate (clean). Maintain healthy (green) plants during the fire season.

Other considerations include access to your home of firefighting equipment; roads need to be wide enough for two-way traffic, giving adequate clearance for large vehicles. Also, water availability for suppression efforts is crucial, and have your address posted and readable on the roadside.

Photo by Charles Squires

The photo below and this aerial view of scorched forestland, both taken during the Bayou LaBatre fire of April 2007, demonstrate just how close the flames came to a number of homes built in the wildland urban interface.

Lastly, maintain the defensible space. Regularly inspect the property looking for compliance with the steps listed above. Take action to correct problems as they occur. Implementing these practices should provide some peace of mind during the fire season.

If a wildfire threatens your home, you need to have an evacuation plan in place for your family and pets. Listen to the radio and television for details. Park your vehicles pointed toward the exit and loaded with needed clothing, medicines, important papers, and supplies. Also, shut off gas at the tank or meter; turn off all pilot lights; then close all windows, doors, garage entrances, and vents.

If you stay to aid in protecting your home, wear only cotton or wool clothing with long sleeve shirts, long trousers, and boots. Gloves and eye protection should also be worn as a minimum. BE SAFE. Do not wait too long to decide to evacuate.

For more information on Firewise, the Alabama Forestry Commission's brochure, "Living With Fire: A Guide for Protecting Homes from Wildfire" is available at local county offices or on line at **www.forestry.alabama.gov** and **Firewise.org.**

Photo by Mike Kyser

AFC Firefighter Faces Massive Inferno

***The following story is reprinted with permission, courtesy of* The Montgomery Advertiser.**
Jimbo Robinson was one of 25 Alabama Forestry Commission firefighters who traveled to Georgia to assist our neighboring state in the worst wildfire campaign in that state's history. At the close of the six-week campaign, the AFC had sent a total of eight, four-man firefighting crews (seven men served in two separate details – Robinson among them), one arson investigator, and one payroll clerk to assist the Georgia Forestry Commission, the US Fish and Wildlife Service, and the USDA Forest Service on fires that totaled over 500,000 acres. This assistance was provided under the Southeastern Fire Compact, a mutual aid agreement between the Southern states and other natural resource agencies.

A veteran firefighter's voice softens when he recalls a moment during a frantic bid to save his life and those of fellow foresters battling a massive blaze in south Georgia.

James "Jimbo" Robinson was surrounded. He entered the fire zone to put in breaks – dirt lanes – to halt the march of the blaze. Suddenly, he was closed in by an inferno with flames growing from five feet high to more than 50 feet. Pushed by the wind, they were advancing at him and four other men from both directions.

He didn't know if he was going to make it out alive.

"Right before it (the fire) blew over, there is a point in there when you don't know if you are going to make it," the Chambers County firefighter said.

When Robinson entered the battle zone south of Waycross, Georgia, conditions weren't that bad. But things changed quickly for the firefighter sent by Alabama officials to help.

A fellow (AFC) firefighter, Todd Taggart, was watching from afar. He said that after Robinson drove his bulldozer into the woods, a column of smoke, or plume, several acres wide developed.

Taggart said all of a sudden the bottom dropped out of the plume, leaving firefighters on the ground with almost no visibility.

At that point, word went in for everyone to pull out. But Robinson got turned around. He could barely see the front of his bulldozer. Then he and several Georgia foresters found themselves in a life-threatening situation.

Robinson credits his training for preventing a tragedy.

The men used their equipment to dig deep into the ground to make sure onrushing flames wouldn't find anything to burn near them.

Photo by Brigetta Giles

In addition to fighting wildfires in Georgia this year, the Alabama Forestry Commission's Jimbo Robinson also worked on several western wildfire details in 2006.

Robinson, who was working on a bulldozer with a cab, was able to push dirt, brush and trees a few moments longer than his counterparts who were exposed to the smoke on their machines. That extra time may have made the difference.

With work on the safety zones finished and the flames approaching, the Georgian firefighters hit the ground and hunkered down. Robinson stayed in his cab. The flames, some now reaching 100 feet high, leaped over the men, Robinson said. Hoses hanging on the side of Robinson's bulldozer melted.

But he was happy to be inside. He was ready, if the situation deteriorated, to jump out and put up a fire resistant tent.

"It was so hot in the bulldozer that your fingers would burn if they touched the doors," he said. "My windows didn't bust. But if they had, I would have jumped out and deployed my shelter."

Now back in Alabama, the father of two still has memories of that particular blaze earlier this summer.

"It's hard to believe how hot, and how much wind the fire created," he said. "We were in the wrong place, at the wrong time."

Unfortunately, the fires that ravaged thousands of acres in Georgia could easily break out here, Robinson said. The ground is just as dry. "Usually, in the end of summer, you have dry spells," he said. "But when you have normally green grass and bushes start to burn, you are dry."

Robinson, 36, is almost counting on fighting fires this year in Alabama similar to those in Georgia. "It's just a matter of when," he said. "The question is, will we be ready?"

AAVFD President Johnny Alberson accepts Wildland Fire Prevention Grant check from State Forester Linda Casey. Looking on are: L-R Chauncey Wood, District 6 Director; Sgt/Engineer Bryant Wisdom, Clio VFD, Barbour County; Captain Ronnie Danner, Ariton VFD, Dale County; and Chief Robbie Davidson, McIntosh VFD, Washington County.

Working Together for Your Protection: AFC & AAVFD

By *Elishia Ballentine*, Editor

In the state of Alabama, there are over 1,000 volunteer fire departments and approximately 25,000 volunteer firefighters.

The organization that works behind the scenes for these departments and individuals is the Alabama Association of Volunteer Fire Departments (AAVFD), celebrating its 30th anniversary this year. Established on May 20, 1977, the AAVFD coordinates grants, scholarships, insurance and other benefits for its 881 member departments and firefighter families. The AAVFD also drafts and introduces legislation to benefit the volunteer fire service.

According to Chauncey D. Wood, Public Relations Director for the AAVFD, "Serving as a volunteer firefighter is a tough job, not just physically, but also in keeping pace with the professional and educational requirements. The guidelines have become stricter. To qualify and be certified is time consuming – individuals must attend classes, study, and pass tests – then keep up with continuing education. In recent years, it seems that volunteerism is slipping away. Therefore, one of the missions of the AAVFD is the recruiting and retention of volunteers."

Johnny Alberson has served as AAVFD's president since 2005, but according to Wood, the backbone of the organization is Executive Assistant, Sandra Mott. In addition to keeping this large group organized, she edits the association's newsletter.

Another facet of the AAVFD is its partnership with the Alabama Forestry Commission (AFC). Each year, the Commission implements several beneficial programs for the 998 volunteer fire departments which are "certified" with the Commission. (To achieve AFC certification, a fire department must have 12 or more firefighters.) The Commission assists the departments in the purchase of new equipment and firefighter clothing, and they also assist in forming new departments in areas where fire protection is needed.

The relationship between the two organizations is actually three-fold: The AFC provides financial support, equipment donation, and firefighting reinforcement. The Commission provides financial support by administering wildland fire prevention grants to the state's qualifying volunteer fire departments for the development of prevention programs in their coverage areas. Funded by the Alabama legislature and channeled through the Commission's budget, these grants have totaled approximately $100,000 annually since 2000. The Rural Community Fire Protection Steering (RCFP) Committee, created under Alabama law, is composed of 25 volunteer firefighters from the four Commission regions who monitor all appropriations for the volunteer fire service and provide recommendations to the State Forester for the distribution of these funds.

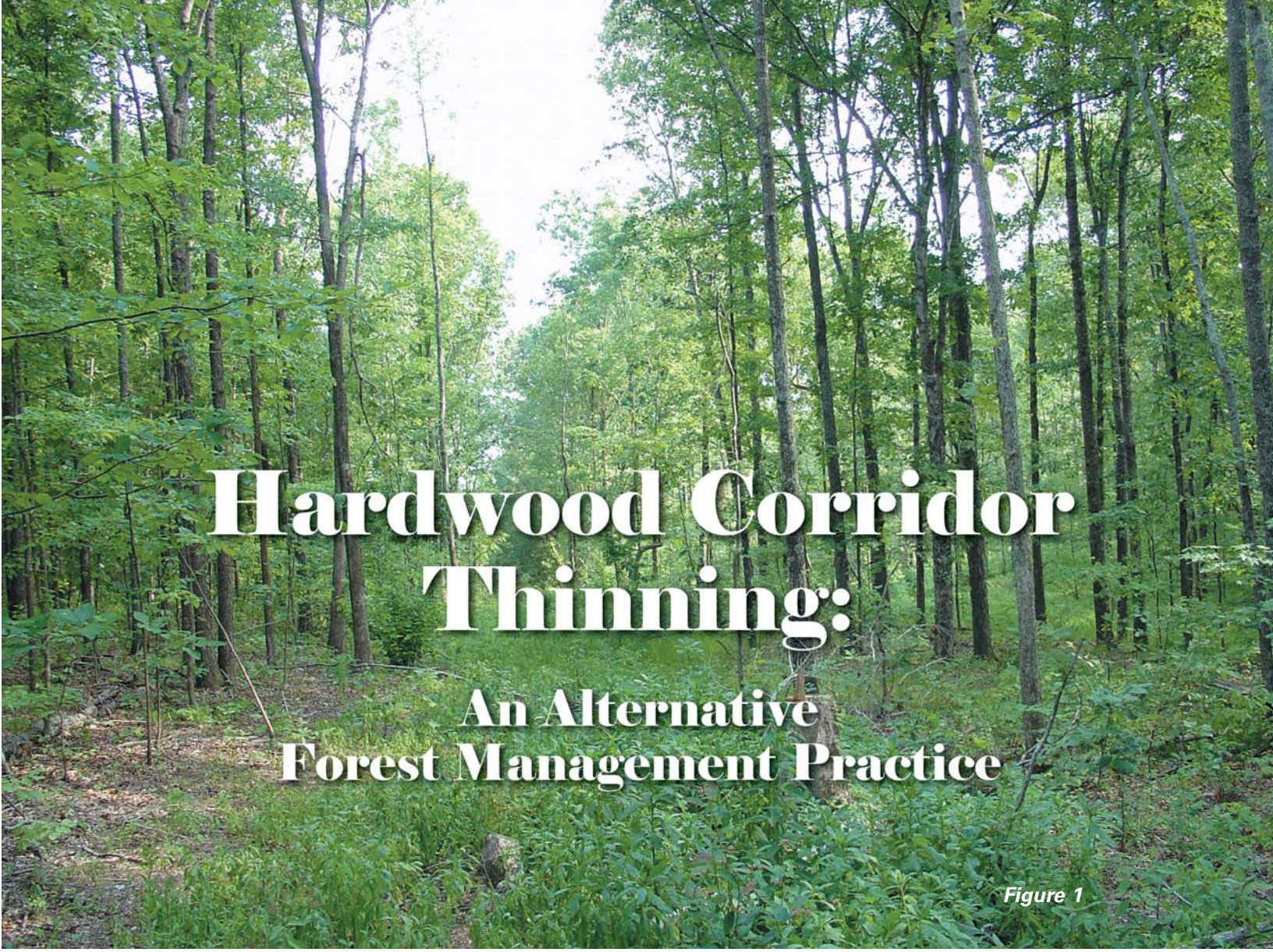
The AFC provides surplus equipment and radios to the AAVFD as well. This equipment can be as large as brush trucks, or as small as chainsaws, rakes, shovels, flaps, or axes.

The Firefighter Property Program (FPP) allows the AFC to obtain property and transfer it directly to a volunteer fire department. The Commission also obtains Federal Excess Personal Property (FEPP) wildland fire suppression equipment through the USDA Forest Service and the General Service Administration (GSA), then inspects and makes repairs as needed to ensure that it is in safe operating condition before being issued to volunteer fire departments.

As for firefighting, Wood stated, "The Commission and the volunteer units work 'hand in glove' as a team . . . they go on fire calls together . . . AFC firefighters provide backup to the volunteer firefighters, and the volunteers back up the AFC firefighters. The VFDs arrive with pumper trucks or brush trucks on wildland and grass fires, then the AFC personnel comes in with dozers and plows, and they work elbow to elbow."

Wood went on to say, "The AAVFD could not function without the AFC." As population growth continues to spread into the wildland urban interface all across the state, the Alabama Forestry Commission relies as well on the cooperation of the Alabama Association of Volunteer Fire Departments and the efforts of its volunteer firefighters.

Photo by David Mercker



Hardwood Corridor Thinning:

An Alternative Forest Management Practice

Figure 1

By *David Mercker*, Ph.D., The University of Tennessee Extension Forester

Throughout the U.S. there is an abundance of family-owned hardwood Tree Farms having forests that are over-stocked and are experiencing reduced growth. These forests have potential of producing quality hardwood timber at rates faster than current growth indicates. The average growth rate on individual trees is restricted, often increasing only one-to-two inches in diameter per ten years.

The Situation

Time and again the owners of these Tree Farms desire to begin thinning their forests and even seek technical assistance for that purpose. Yet, professional foresters often have difficulty with management recommendations due to a lack of product marketability, or landowner objectives and/or financial constraints. For instance, commercial thinning may not be viable because markets for small or poor quality trees are either non-existent, or extraction is not profitable. Further, the expense of rehabilitation practices such as timber stand improvement is simply out-of-reach for the landowner. In cases such as these, professional foresters typically recommend doing nothing and suggest re-evaluating the Tree Farm in ten years. Although this recommendation has application, many landowners desire revenue-generating, active forest management, and are simply not accepting of the "do nothing and wait ten years" recommendation. They are seeking a new and innovative method that both improves the forest and provides income.

A Possible Solution

"Mechanical thinning" is a forest management practice regularly applied in conifer (pine) Tree Farms during early and mid-rotation. Mechanical thinning could be applied in dense hardwood Tree Farms, too. With this, trees are harvested without regard to their species, quality, or crown position. Rather, trees are designated for thinning based on a predetermined spacing or pattern. Mechanical thinning can be applied both pre-commercially (in overstocked sapling stands) or commercially (when markets exist for the trees to be thinned).

Thinning forests accomplishes several things: alters or improves species composition, redistributes growth to fewer but more desirable trees, reduces stocking, shortens rotation, improves tree (and forest) health, diversifies wildlife habitat, and when possible, provides moderate income. Mechanical thinning is normally overlooked in the management of hard-

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wood stands, yet most of the above-mentioned benefits can be realized. Here is introduced ***hardwood corridor thinning***.

The Procedure

Implementing hardwood corridor thinning (HCT) requires cooperation between landowner, forester, and logger. Adequate local markets must also exist for the products to be harvested, typically pulpwood and small sawtimber. Occasionally larger sawtimber may be present depending on the previous land use.


Figure 2

HCT is not a complex model to implement. Essentially one-third of the trees are removed by harvesting linear strips, or *corridors*. Typically the corridors are 20 feet wide, repeated on 60-foot centers. All trees within the 20-foot corridors are harvested, and 40 feet of undisturbed trees on either side of the corridors are left. The sequence is then repeated.

In some cases, trees within the corridors are actually delineated for removal by professional foresters, while in other cases the loggers are directed on the thinning design and they are allowed to create the corridors themselves. Once the thinning is complete, the corridors are obvious when viewed linearly (figure 1), but are much more discrete when they are viewed from a radial direction (figure 2).

Modifications

Modifications in HCT can be made to suit a variety of ownership objectives, and include:

- Along with harvesting all trees within the corridors, additional thinning (or crop tree release) can be conducted in the 40-foot retention areas, thereby more fully releasing future crop trees. This will help avoid the development of lop-sided crowns that potentially form from a one-sided release.
- Rather than aligning the corridors in a systematic, linear fashion, they can be aligned to follow elevation contours creating a more natural (or wave-like) appearance.
- The corridors can periodically be shifted to harvest around especially desirable trees, leaving them for the future.
- "Swells" within the corridors of one-half acre or more can be made to enhance wildlife nesting and other habitat needs.

Unsolved Questions

HCT is an under-utilized forest management practice with some uncertainties. Often fresh approaches are first tested and analyzed, then modified and implemented. Presently, research is lacking but developing in this area of hardwood management. Unsolved questions and genuine concerns exist. For instance, the propensity of the crop trees located along the corridor edge to become damaged could be problematic. Damage can result from epicormic (undesirable) branching, wind throw, or the logging operation itself. There is also uncertainty with the composition and quality of the regeneration (new seedlings) that originates within the corridors following the harvest. Another hesitation relates to the appearance and utility of a forest. To many landowners, the corridors will be considered an improvement by providing access for recreation, vistas for wildlife viewing, and lanes for fire protection and hunting. Others may dislike the linear appearance.


Figure 3

Concluding Remarks

Hardwood corridor thinning offers a means of providing a modest income in some forest stands that have been traditionally overlooked or left unmanaged. It offers a "walk lightly" approach with minimal disturbance or damage to the residual trees, enhancing conditions for wildlife and recreation, all while retaining or even enhancing aesthetic values.

Landownership objectives change and forest management techniques should move concurrently. Many landowners claim scenery, wildlife, and hunting as higher ownership objectives than timber production. For them, alternative forest management approaches are needed to improve the forest and provide periodic timber income, without compromising the other benefits (figure 3). Most professional foresters and landowners desire to maintain flexibility for future management considerations. HCT may be the opportunity they seek.

Butler County Natural Resources Youth Camp Teaches Environmental Lessons for Past Twelve Years

By *Paul E. Hudgins*, RF, Butler County Manager, Alabama Forestry Commission

Spending three days and two nights in the deep woods of Butler County is not the typical way most kids spend part of their summer vacation. However, for 26 students from across Butler County, that's exactly what they did. Interested sixth grade students from across the county submitted applications to their school. Science teachers, guidance counselors, and principals then selected the students who would represent their respective schools by attending the youth camp. Students chosen to attend the camp are selected based on their overall performance during the school year, not solely on grades. These students are then recognized at their respective school's honor banquet, awards night, or academic celebration.

Selected students spend three days and two nights at Mussel Creek Hunting Camp, a rustic cabin located on private property in north Butler County. The Butler County Forestry Planning Committee (FPC) sponsors the Natural Resources Youth Camp with tremendous support from the forest community, local businesses, and interested individuals. For twelve years, the FPC has offered this "hands-on" camp for area sixth-grade students without charging the students any fees.

The Natural Resources Youth Camp gives kids the opportunity to learn more about our forest environment and how it relates to Alabama's economy, as well as the important role it plays in our everyday lives. Campers leave the amenities of home behind to take part in the camp, as there are no televisions, telephones, or radios. The camp offers students something to do from 7 a.m. to 10 p.m.– and often later if they're the last to get a shower.

The camp begins with students being given their very own compass and then a "crash course" on how to use it. They are also taught how to determine distance with pacing. The students are then broken into groups, with representation from each of the four schools in the county. These groups compete in an orienteering course that stretches across open land and wooden terrain. Of course, snake leggings are not an option; they are a requirement. This activity requires the students to work together individually and as a group in order to complete the course. Students are required to compete at least one leg of the course alone, without any assistance from their team. Awards are given at the end of camp to the group that can complete the course in the fastest time with the most correctly-located points.

While some students are learning about the orienteering course, others are learning about power line safety from Jason Settle, Engineering Supervisor with Pioneer Electric. Still others are learning about home fire safety from the Greenville Fire Department and that department's smoke trailer. These two activities work in conjunction with the orienteering exercise to ensure that students have a busy first morning.

After a hearty lunch, the students are treated to Project Learning Tree activities entitled "Tree Identification" and "A Nature's Journal." Chris Irwin, Education Coordinator with the Alabama Forestry Association, teaches these activities to the students and even awards prizes to the three students that correctly identify the most trees.

Beth Chastain and Jimmy Massey of the Butler County Natural Resources Conservation Service teach students

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Youth Camp

(Continued from page 29)

about soil and water conservation with an activity entitled "A Water Gun Runoff." This activity demonstrates how different land covers can affect soil movement and how the soil movement could eventually impact creek sedimentation. Students follow up this activity the next day with a chance to explore and learn what really lives in a local creek with Mark Sport from the Alabama Department of Environmental Management. The students take creek samples using nets, and look at the samples through a microscope to make an evaluation of the creek's overall condition. Once the condition is determined, the students have time to explore, play, and swim in Mussel Creek.

The kids also learn how to identify different wildlife tracks with Mike Older of the Alabama Forestry Commission's Covington County office. Mr. Mike uses the Project Wild activity "Making Tracks" to introduce students to the different types of tracks made by Alabama wildlife. If making tracks isn't enough, students also learn how to identify different types of wildlife habitat and what it takes to improve the wildlife on their property with Michelle Isenberg, Wildlife Biologist/Products Specialist with BASF.

While there is still some daylight, Heather Wierzbicki, Project Forester with MeadWestvaco, takes the students on a ride on the Project Learning Tree activity, "A Tree Factory." This activity demonstrates to the students what is really going on inside the tree.

After a dinner of fried catfish and some "fixin's" of a Cajun Low Country boil, the students learn about basic first-aid and safety from Chad Phillips, EMS Coordinator with the Greenville Fire Department. The campers are taught about snake and spider bites, and the "how to's" of correct bandage application. Luckily so far, there has been no need for an actual hands-on application of what they learn in first-aid! After some really interesting stories and photographs by Mr. Chad, the kids get serious about hunter ethics and firearms handling and safety from James Altiere and Tommy Atkins with the Alabama Department of Conservation and Natural Resources.

The second day starts off with an early morning walk along the dirt road with Charlie Kennedy, President of the Alabama Ornithological Society. Mr. Charlie, as he is affectionately called, explores the woods of Alabama with the students, looking for a variety of birds both large and small. Next, the students are treated to "A Cooperative Environment" with Jim Stiles. In this presentation, sponsored by both the Alabama Electric Cooperative and Pioneer Electric Cooperative, the students are given a hands-on, up-close encounter with some of Alabama's local inhabitants. Pine snakes, king snakes, tree frogs, toads, and leggless lizards are just a few of the "creatures" that the kids get to touch and hold, if they dare. Even some of the adults opt out of holding a snake!

After spending some one-on-one time with Alabama's reptiles, the campers are treated to some local Indian history by Charlie Clark, Executive Director of the Crenshaw County Farm Service Agency.

He shares some stories and artifacts he has collected from years of studying the Native American culture.

This year, in addition to time spent on Indian history, Chuck Simon and Neil Faulkenberry introduced the students to a little Alabama history with their "1800s Cow Camp Living History" presentation.

Each night, well after dark, the students are loaded onto the FPC's tour trailer and driven through the woods of South Alabama. While looking for nightlife and taking time to call up some bard owls, we were lucky enough this year to call up a pair of owls that perched on a limb just above the trailer.

The third day at camp is spent learning to shoot skeet, black powder, .22 rifles, and archery. For some of the students, this is their first time ever shooting a firearm or pulling a bow. And for others, this is their opportunity to show everyone how good they really are, or *think* they are. For the past twelve years, the girl campers have always given the boys a run for the top shooter. Girls, as a general rule, listen to the instructors better and are easier to teach.

Finally, special guests from the Bartlett Nature Conservancy show students the differences between red-tail hawks, bard owls, and the golden eagle. And on occasion, the birds of prey even give a flight demonstration.

To closeout the "camp experience," the campers are given the chance to win one of only ten water guns that were used earlier in the water gun run-off activity. Special awards are given for the best shooter in each of the firearm events, as well as top shot in archery. We even give out an award for the "most scared" camper!

"An experience of a lifetime!" . . . that is just how one camper described her camping experience.

Alabama Forestry Camp:
Ten Years of Introducing Youth to Forestry

By *LaKedra C. Byrd*, Northeast Outreach Forester, Alabama Forestry Commission

The main goal of Alabama Forestry Camp is to expose underserved and uninformed students about the field of natural resources, with a concentration in forestry. Students attending the camp are generally not familiar with the natural resources field. These children include minorities, those from limited-resources, and those that are living in an urban environment. Attending forestry camp gives these students an opportunity to explore careers in Forestry and Natural Resources that they may not otherwise receive.

Since 1997, Alabama Forestry Camp has hosted 25-35 students from across the state each year. This year the camp not only reached its 10-year milestone, but it also reached a record-breaking number of students, with 47 in attendance. Camp was held June 3-7, 2007 in Epes (rural Sumter County), Alabama at the Federation of Southern Cooperatives Rural Training Center. Students came from 14 different counties within the state, including: Limestone, Jefferson, Cullman, Baldwin, Wilcox, Sumter, Colbert, Mobile, Calhoun, Lee, Autauga, Marengo, Shelby, and Cleburne.

Sunday -– June 3, 2007

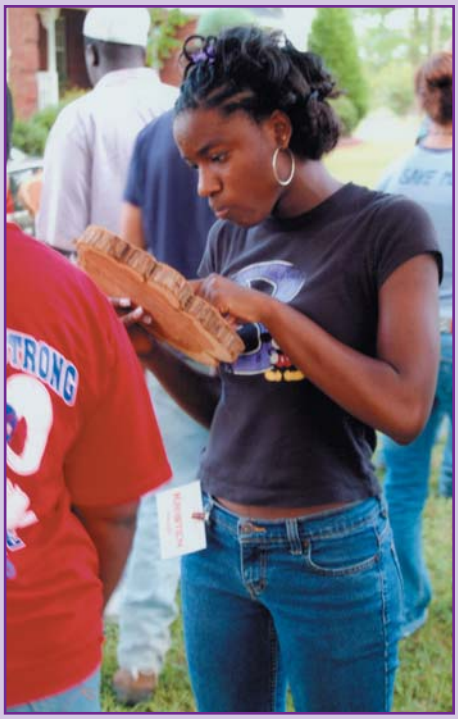
After the campers settled in, the first field trip was a visit to the Smith and Sons' TREASURE Forest in Greene County. The students toured the Smith Family land, and were familiarized with the unique and rich history of how the Smiths acquired their property, the importance of land ownership, and most importantly, how to become good stewards of the land. The Smiths have diversified their 356-acre tract and are managing their property for timber, wildlife, aesthetics, and recreation. The family is definitely adhering to the TREASURE Forest mission of *"Taking the land that God has loaned us, and making Him proud that He did."*

Upon returning to camp, the students enjoyed Native American folklore as told by Charlotte Pierce of Tuskegee University and crafting clay medallions at sunset.

Monday -– June 4, 2007

The campers spent the morning at Lake Hollalah in Pickens County. The Westervelt Company staff informed the students about the importance of the forestry within our state. They talked about how we are dependent on trees for clean air, clean water, and many of the products that we use in our daily lives. The morning activities included information on tree identification, wildlife management, silviculture, and forest management. Students identified some of the many different tree species found throughout Alabama and became knowledgeable not only about the economic importance of trees in our state and economy, but also the recreational, economic, and conservation benefits of managing wildlife as well.

After lunch the campers visited the Tom Beville Lock and Dam in Aliceville (Pickens County). Allen Brewer with the U.S. Army Corps of Engineers spoke to the students about the value of the lock and dam system. The students also toured the historic Visitors' Center, a reproduction of a mid-1800s mansion that houses a museum focusing on the history and development of the Tombigbee River and waterway system. The students then explored the U.S. "Snagboat Montgomery" which is one of the last steam-powered boats in the South, and they experienced a demonstration of the lock system.



That evening, local wood craftsman Barry Pfizer carved the campers' names into old pieces of wood for them to keep as souvenirs from camp.

Tuesday -– June 5, 2007

Up and out early, this is usually the most exciting day of camp for the students. They traveled to Oakhurst Farms for a morning of fishing. Maurice Jackson from the Alabama Wildlife and Freshwater Fisheries Division spoke to the students about the recreational and commercial opportunities of inland fish management. The campers learned many different knot tying, casting, and fishing techniques. They enjoyed the fishing so much that they caught six coolers of catfish: more than enough for their catfish dinner the next day!

After everyone got cleaned up from the fishing trip, the afternoon sessions consisted of Woodland Survival by Lynn

Washington (Alabama Forestry Commission), Pond Management by Claude Reeves (Alabama Cooperative Extension System), Compass and Map Reading by Ron Smith (Tuskegee University Cooperative Extension Program), Global Positioning Systems by Sarah O'Sullivan (Alabama Forestry Commission), and Fire Ants by Kathy Flanders (Alabama Cooperative Extension System).

College and Career Night was held that evening. Recruiters and professionals from various colleges and universities spoke about their academic programs, scholarships, and career opportunities for students that are interested in careers in forestry and natural resources. The presenters were as follows: the Alabama Forestry Commission by Otis French, Alabama A&M University by Rosalind Peoples, Auburn University by Sara Crim, Tuskegee University, Alabama Cooperative Extension System by Willie Lampley, US Army Corps of Engineers by Kenneth Day, the Alabama Wildlife and Freshwater Fisheries Division, Lurleen B. Wallace Community College by George Showalter, and the USDA Forest Service.

Also, the campers heard presentations on important life skills such as Dress for Success presented by Greg Woods, Alabama Forestry Commission, and Verbal and Nonverbal Communication Skills by Tuskegee University.

Wednesday ~~ June 6, 2007

The students enjoyed a scenic bus trip to Moundville Archaeological Park in Hale County. Park Manager Bill Bomar talked to the students about the history of the Native American settlement in Moundville and the significance of the archeological mounds. The campers enjoyed a nature tour near the Black Warrior River, as well as a visit to the park museum where they were able to view Native American artifacts.

That evening, Brian Darr of Southern Forest Industries gave the students an opportunity to learn about Urban Forestry and the importance of trees in an urban setting. The students toured the city of Moundville, learning that well-managed trees are a vital part of the urban environment, enhancing the quality of life in our communities and towns. They learned that the key to enjoyment is having trees that are safe, healthy, plentiful, well placed, and attractive.

Thursday ~~ June 7, 2007

On the final day of camp, the students had the opportunity to visit Moundville Wood Products (Gulf States Sawmill). On the tour, led by Rick Powell, they saw the industrial side of forestry and how managing these precious resources land them products that they use everyday.

Also on the last day, a graduation ceremony was held for the campers who were joined by parents and camp counselors. The students received a graduation certificate and a photograph with this year's guest speaker, Linda Casey, Alabama's State Forester.

The Alabama Forestry Camp program has proven to be one of the most effective mechanisms for informing and recruiting students who were traditionally under-represented in the forestry and natural resources professions. Over the years, more than 250 students have benefited from the camp experience. Publicity for the camp has also indirectly informed a large number of students, their parents, and their siblings, about forestry and natural resource opportunities.

During the past ten years, the Alabama Forestry Camp has been promoted and sponsored by professionals from 20 organizations including the Alabama Forestry Commission, Alabama A&M University, Auburn University, and Tuskegee University, as well as the Alabama Cooperative Extension System, the USDA Forest Service, the Alabama TREASURE Forest Association, International Paper, the Federation of Southern Cooperatives, Livingston City Fire and Rescue, the Alabama Advisory Outreach Council, the Westervelt Company, Lurleen B. Wallace Community College, Gulf States Paper Corporation, the Alabama Department of Conservation and Natural Resources, Moundville Archeological Park, the U.S. Army Corps of Engineers, Tuscaloosa Parks and Recreation, the Alabama Indian Affairs Commission, and Southern Forest Industries.

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Jack-in-the-Pulpit

Arisaema triphyllum (L.)

By *Fred Nation*, Educator, Baldwin County

Jack-in-the-pulpit (also known as Indian Turnip) is an upright herbaceous perennial, to about 3 feet tall, in the *Arum* family, *Araceae*. The leaves are pinnately divided into three, occasionally five elliptic or ovate segments. In late winter or early spring, flowers consist of a long, cylindrical spadix, surrounded by a tubular, encircling spathe. The spathe is variably striped, colored purple, brown, or green, with a pointed hood that arches over the spadix. The fruit is a cluster of berries, green, becoming bright red when ripe. Below ground there is an oval, fleshy, root-like corm.

Arisaema triphyllum is one of a group of plants called "ephemerals." They bloom in late winter or early spring, when they can get a crack at the sunlight, to make and store food before leaves form on the trees and shrubs above. When the shading forest canopy has leafed out, the ephemerals have already completed their life cycles for the year. Since they are in a hurry, their flowers are typically quite showy, to attract pollinators during their brief flowering period. Trilliums and trailing arbutus are other examples of conspicuous, early-flowering spring ephemerals.

The reproductive strategy of Jack-in-the pulpit is amazing. The small flowers grow separately on the central rod-shaped spadix, with male flowers above, and females below. The plant somehow "decides" to be a functional male or a female. One set of

OF ALABAMA Plants

Photo by Fred Nation

flowers matures, while those of the other sex usually do not develop to maturity. Plants that end up as females produce the fruits, which look like large ripe strawberries lying on the leaf litter in the fall. By then the rest of the plant has died back and withered away for the year. The strongest plants, with the most stored energy, seem to become females. Weaker individuals either "decide" to be males, or they do not flower at all. So, the best and strongest of the Jacks are actually Jills! Each plant can change functional gender from year to year. This year's male or non-flowering individual may store enough energy to flower and set fruits as a female next year.

The fleshy corms of Jack-in-the-pulpit were gathered as staples by some Indian tribes, but they are edible only after being thoroughly dried or roasted. The raw corms and all parts of the plant contain calcium oxalate crystals, which are extremely irritating and corrosive to mucous membranes of the mouth and throat. The powdered or grated root was prescribed medically as a diaphoretic, to induce sweating, as an expectorant, which expels phlegm, and as a counter-irritant. This last usage is an interesting extension of the Doctrine of Signatures, which states that "like cures like;" if it is irritated or inflamed, irritate it with a counter-irritant. For example, a congested chest might be treated with a mustard-plaster. Sore joints, boils, or even venomous bites were counter-irritated with mustard oil, the juice from hot peppers, or with the raw, grated corm of Jack-in-the-pulpit. Arisaema triphyllum was official in the United States Pharmacopoeia from 1820 to 1873.

Other members of the Arum family are gold club *(Orontium aquaticum)*, the rare spoonflower *(Peltandra sagittifolia)*, and the invasive exotic, wild tarot *(Colocasia esculenta)*. Jack-in-the-pulpit, the most famous member of the family, is not as common as it once was, but it can still be found in rich, moist hardwood forests throughout Alabama. It is one of our most distinctive plants, and one of our most beloved and interesting wildflowers.

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