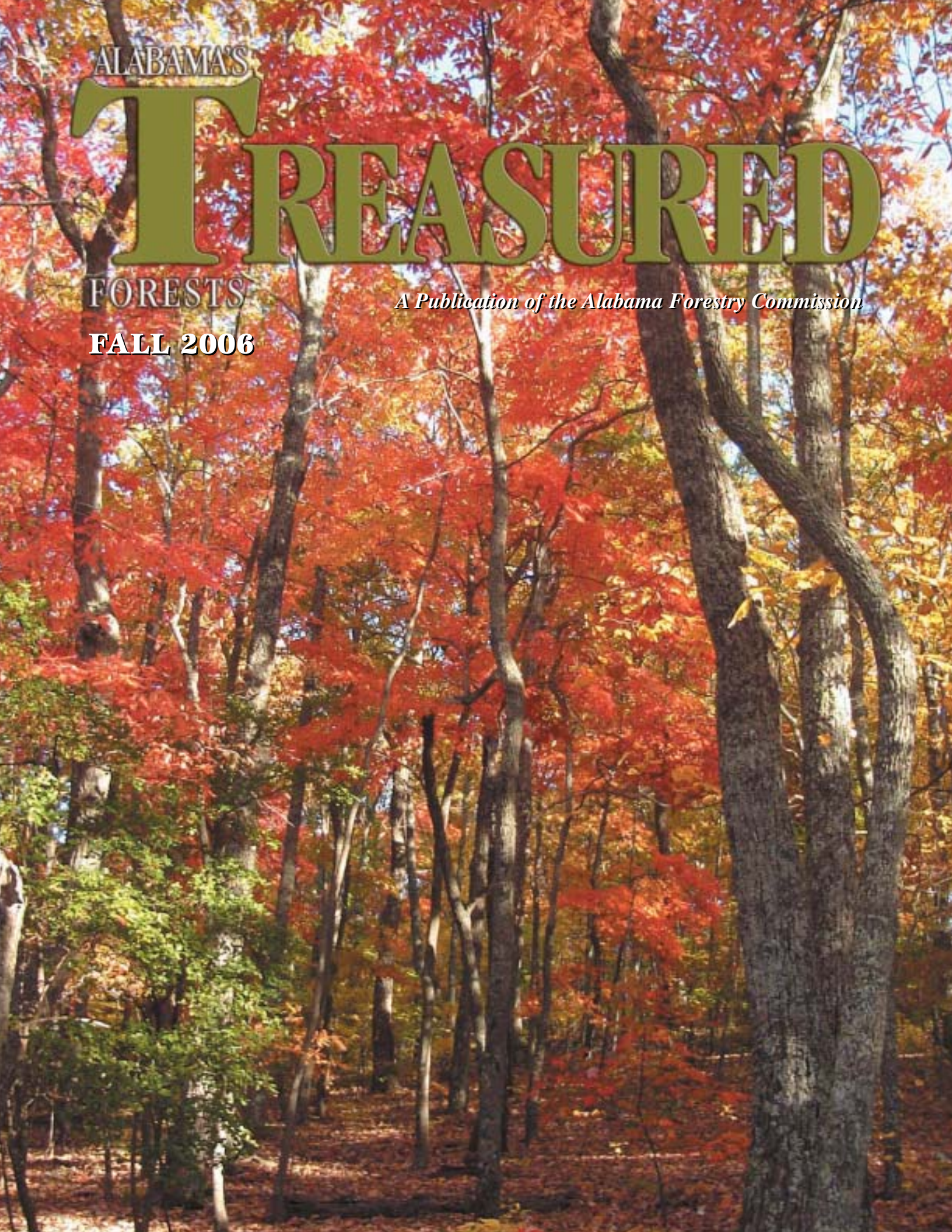

A Publication of the Alabama Forestry Commission

FALL 2006

Directory of Alabama Forestry Commission County Offices

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ALABAMA'S TREASURED FORESTS

Vol. XXV, No. 3 Fall 2006

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DEPARTMENTS

On the Cover: The brilliant colors of autumn on Horn Mountain in Talladega National Forest. *Photo by Art Henderson, USDA Forest Service*

Background this page: Scenic vistas such as this in Oregon were captured in snapshots by AFC wildland firefighters (see story on page 16). *Photo by Brandon Hunnicutt*

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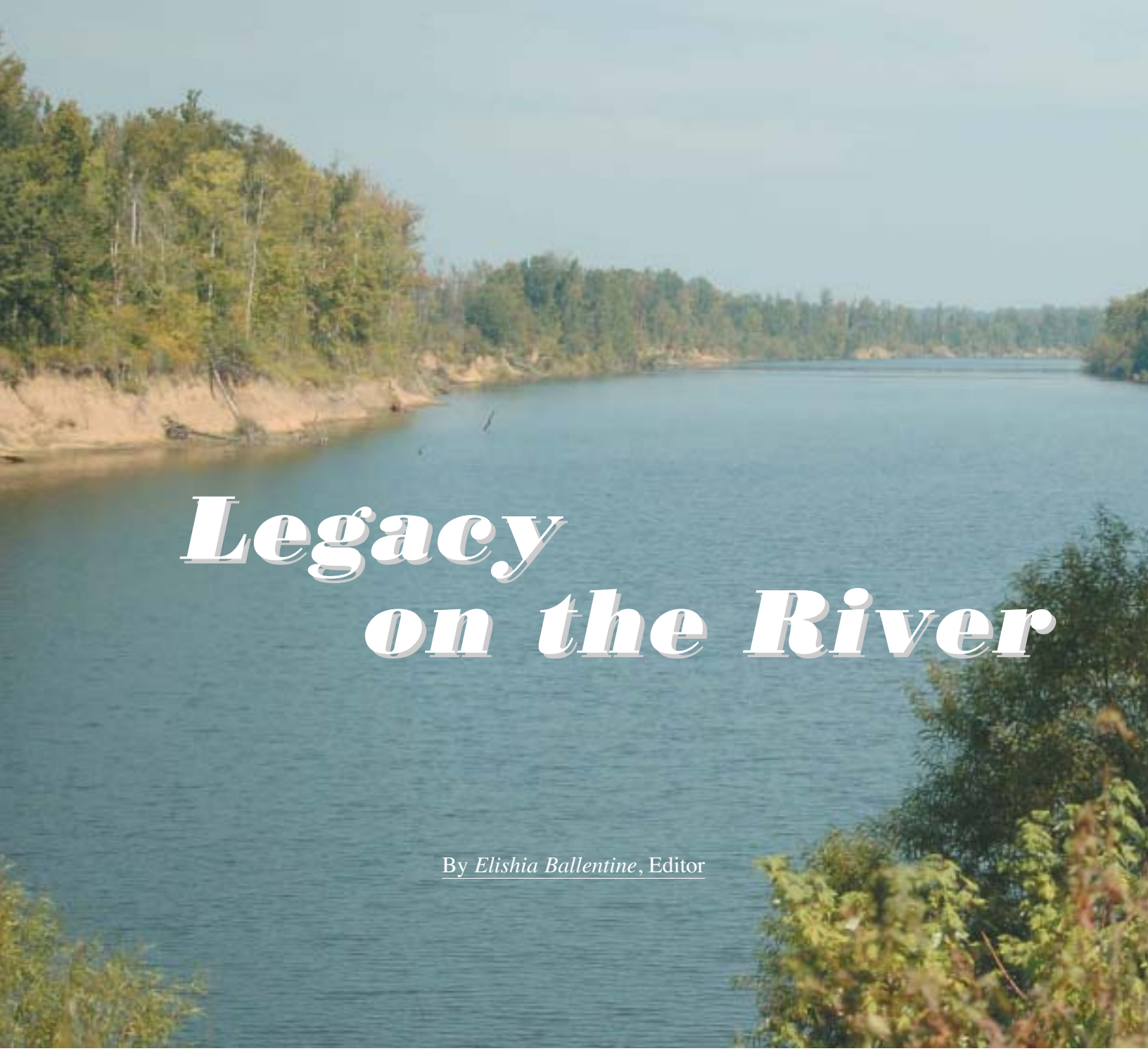

Legacy on the River

By *Elishia Ballentine*, Editor

As the Tombigbee winds its way through the river valley of present-day Marengo County, the waters are quiet, not giving a hint of the past. But the history of this area is as rich as the black soil along the banks. Before the first Europeans arrived, it was inhabited by Indians who cultivated great fields of maize. Then around 1540, Spanish explorer Hernando de Soto and his soldiers marched through . . . life would never be the same for the Choctaws along the river. In the early 18th century, further upstream, the French built Fort Tombecbe and battled with the Chickasaws and British. A few years later, the first white settlers to the area were expatriates from France. Where the Black Warrior merges with the Tombigbee – in what is now the city of Demopolis – these Napoleon sympathizers formed the "vine and olive colony." At about the same time, in 1817, just a ways down river St. Stephens became the first capital of the Alabama territory.

While the third generation of the Tutt family now caring for this rich bottomland along the river respects the great history of the region, they're much more interested in the future. The three brothers who inherited the property – Walter, Webb, and Wallace Tutt – are intent on handing it down "even better" for the fourth generation and those that follow. This idea of "leaving it better than they found it" was one of the values instilled in them by their father and mother. It's this motivation that drives them to constantly make improvements on the land, and incidentally led to winning the *Helene Mosley Memorial Award* for the Southwest Region in 2004.

Their grandfather, who owned a saw mill in the area, originally bought the

Growing up, the Tutt brothers enjoyed spending time at "Barney's Upper" (Landing) on the Tombigbee River. Both Walter and Webb (above) still live in Marengo County, while brother Wallace now lives in Florida.

Photos by Elishia Ballentine

land along the river in the 1950s. At that time there were a few pines, but it was mostly hardwoods, cattle pasture, and open row crops of cotton and corn. Changes began in the 1980s when the Tutts actively started developing the property by planting loblolly pines in different successions. The oldest plantations are approaching 28 to 30 years of age, while others are in the 12- to 14-year-old range. Walter Tutt, who has taken more of a "hands-on" role in the management of the property and timber business, said the plan was to execute a 35-year rotation with two or three thinnings, then harvest and reforestation. However, they've already been forced to salvage some damaged timber in the wake of tornados as well as Hurricanes Ivan and Katrina.

A lot of the hardwood bottomland is still fairly young. Walter stated that much of it was high graded in previous years, so they are now trying to harvest some of the lower grade species and allow natural regeneration to take hold.

The brothers practice what they preach: after any harvest, they make sure to leave the forest as good, if not better, than before, providing streamside management zones (SMZs). They carry out road maintenance primarily in the fall, making improvements with dozer and motor grade equipment, installing culverts, and building bridges. In recent years they've also tried planting longleaf seedlings to see if they will be as successful as the loblolly.

Over time, the Tutts have acquired more land and now own a little more than 1,200 acres, divided into four parcels. However, it's this original parcel on the river that is held most dear to the whole family. Growing up in the nearby community of Nanafalia (pronounced nan-ah-fah-LYE-yah), the three brothers always loved going there, whether to find an outdoor adventure or just get away from the world for a while. Now they bring their kids out here where it's safe to let them wander around and roam all over the woods. It has sort of become a family tradition for a Tutt to take his or her first buck at "Barney's Upper" – the property still bears the name of a boat landing from earlier era.

Although this TREASURE Forest is primarily managed for timber, wildlife is their secondary objective, and these brothers believe the two go hand in hand. According to Webb Tutt, the wildlife has always been exceptional here, and good "quality" hunting is another legacy they want to leave their children – an appreciation of what a sportsman is all about.

In addition to an abundance of deer, there's also a variety of other game: turkey, squirrels, rabbits, and wild hogs. The river and the lay of the land contribute to this rich diversity of wildlife; however, the brothers are constantly "micro-managing" to improve on what nature has given them. Each year they plant about ten grazing food plots in the winter and provide supplemental feeding in the summer. For deer they create browse and fertilize native honeysuckle; for turkey, they create nesting habitat and plant chufas. Other practices include planting fruit trees (mostly crabapples) and Chinese chestnuts; collecting soil samples before planting food plots, then liming and fertilizing properly; planting millet in dove fields; and using goats to control privet and kudzu. If only they could control the wild hog population – the one animal of which there are too many. Both Webb and Walter voiced

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(Left:) One of the prolific crabapple trees planted for wildlife. (Above:) Some of the younger hardwoods near the river.

All photos by Elishia Ballentine

their dismay regarding the damage and challenges arising from this problem.

The brothers credit a deer management program – as well as using common sense – for an increase in the number of large deer over the last few years. Hunters seeking trophy deer come from Birmingham, Mobile, Montgomery, and Tuscaloosa to lease land from the family. Some restrictions are imposed on hunting, but Walter says they are more like recommendations than strict guidelines. They encourage the hunters to provide supplemental wildlife foods also, and ask them to keep observation sheets, of which reports are monitored annually.

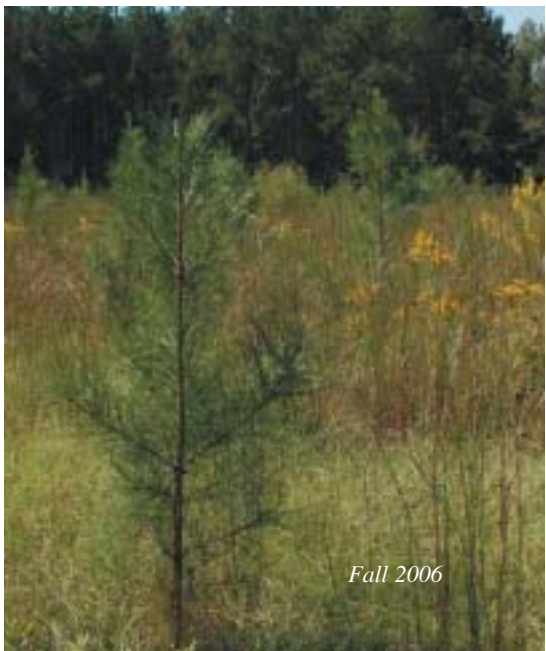
Just as their grandfather and father before them, the Tutt brothers say they and their families are "people of the land." The family occasionally celebrates birthdays here at the landing, but whether or not there's a party, it's always a "holiday." Adults sometimes come to the property to "get away," although both grown-ups and children truly enjoy being out in the country. Webb says they often get here and don't want to leave! Besides hunting, they participate in horseback riding and other pastimes. Big – and little – kids enjoy exploring on four wheelers and golf carts.

There are several ponds on the property; two are intensively managed for brim and bass. They feed the fish during summer months, but do not fertilize, primarily because the ponds are also used for swimming. Maintaining water quality is a high priority for the Tutts because the ponds and river are such a vital part of life at the farm. In addition to fishing and swimming, they enjoy skiing on the river. Boats remain in the water year round, providing an activity center not only for their children and friends, but also the hunters on the property.

While caring for the land is rewarding in itself, the Tutts also realize they have been entrusted with a great responsibility. They understand the importance of teaching how to tend the land – not only to their own families, but to others as well. Walter commented, "We're blessed with an opportunity to own property and be stewards," adding that he felt that possibly one of their most important tasks is to educate children on sound management of the forests and water quality. To that end, they conduct forestry tours to offer lessons in timber management and harvesting. They have also hosted numerous other groups on the property, including church outings and Sunday School cookouts for both youth and adults. Boy Scouts come out to fish in the ponds and also observe deer and other wildlife in a natural setting, often for the very first time.

Always remembering the value of property and wildlife inspired by their parents, it is the goal of the Tutt brothers not only to pass on this land to the next generation, but the legacy of truly caring for and improving it as well.

(Left:) The tall pines in the distance are an example of the different ages of loblollies. (Right:) The Tutts are also experimenting with longleaf to determine its success.



UNCLE SAM WANTS YOU

. . . TO PLANT TREES

By *Lou Hyman*, Assistant Fire Division Director

The federal government is strongly biased towards the growing of trees. Some of this is fueled by environmentalism. Some of it is fueled by the need for wood products. Some of this is fueled by the desire to help rural landowners. Regardless of motivation, the result is a variety of incentives for landowners to plant trees.

Cost Share Rebate Programs

Historically, the federal government has given direct assistance to help landowners plant trees. This practice goes back to the Soil Bank of the late 1950s, when the government paid landowners to take farm lands out of production by planting forest trees. Many of these stands grew to full maturity, providing those farmers with a good income throughout the 1980s and 1990s.

Other early programs included the Forestry Incentives Program, which gave landowners rebates of up to 65% of the cost of site preparation and tree planting. This program helped hundreds of landowners plant forest trees prior to its expiration in 2000.

The Conservation Reserve Program (CRP) was started in the 1980s to encourage farmers to plant trees or permanent cover crops on erodible farm lands. The farmer enters into a 10-year contract with the federal Farm Services Agency (FSA) to plant trees and maintain them on land that was planted in an agricultural commodity in four of the last six years. The CRP program pays 50% of the cost of tree planting, plus an annual "rental" payment for the 10-year period. The Farm Services Agency also has a special CRP program that focuses on the planting of longleaf pines on old farmland, using the same criteria and payments as the regular CRP.

Both the FSA and the federal Natural Resources Conservation Service (NRCS) also have a program to help with tree planting. The Environmental Quality Incentives Program (EQIP) provides up to a 60% rebate for landowners to address significant natural resource concerns through a 5- to 10-year contract. EQIP will pay for tree planting and some site preparation.

The NRCS hosts another program called the Wildlife Habitat Incentive Program (WHIP) which provides cost assistance to landowners for developing or improving wildlife habitat. WHIP will give up to a 60% rebate on the cost of site preparation and planting of longleaf pines and some hardwoods, as well as many permanent wildlife openings.

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Uncle Sam Wants You . . . To Plant Trees

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The State of Alabama provides a state-funded cost share program, the Alabama Agricultural and Conservation Development Commission Program (AACDCP). The AACDCP provides up to a 60% rebate for practices aimed at erosion control, agricultural water quality improvement, and improving forest resources. Forestry practices include site preparation and tree planting. The trees must be maintained for at least ten years.

After Hurricane Ivan, some limited funds became available to replant trees in forest stands with over 15% damage from the storm. The Forest Land Recovery Program (FLRP) is a short-term program, but rebates up to 75% of the cost of site preparing and replanting damaged forest stands. Both this program and the AACDCP are administered by the Alabama Soil Conservation Districts Committee.

All of these cost share programs are managed on the local level. For more information, contact the Farm Services Administration, Natural Resources Conservation Service, or the Soil Conservation District office in the county in which you own land.

Federal Tax Incentives

The other main benefit given to landowners who plant trees is a tax deduction for reforestation. For trees planted after 2004, the landowner is allowed a full tax deduction of up to $10,000 per year for any reforestation. This deduction includes costs for site preparation (both mechanical and chemical), burning, buying seedlings, and tree planting, as well as herbaceous weed control done in the first year.

In addition, any costs over the $10,000 per year can be amortized over the next seven years. The amortization deduction allows the taxpayer to deduct 1/14 of the cost the first year, then 1/7 of the cost for the next six years, and the final 1/14 of the cost in the last year. At the end of the cycle, the landowner has deducted all of the cost of the reforestation.

The government is so concerned about keeping forests in place that it has a special tax benefit for landowners who suffer casualty losses from hurricanes, tornados, ice storms, fire, or even southern pine beetles. If the timber is destroyed by one of these events, the landowner should salvage whatever can be harvested. Any income from that sale would normally be counted as capital gains income. However, under what is known as the "Hurricane Frederick Rule," if the money is reinvested within two years into either site preparation and replanting, or into buying new forestland, then the taxes due are rolled over into the new timber and delayed until the next time that new timber is sold.

We all know that our forests are TREASURES. It is nice to know that Uncle Sam thinks so too. So follow Uncle Sam's advice; go out and plant some trees.

Photo by Mildred Owens

Photo by Kelvin Daniels

Loblolly pines, in a stand owned by S. H. Summerhill in Bullock County, illustrate a symptom of beetle infestation.

What's Wrong with My Pine Trees? It's the Ips Engraver Beetle!

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

You received an information packet in the mail from the Alabama Forestry Commission stating that you have beetles on your property. The immediate conclusion is that these beetle infestations are from southern pine beetles. The next response is most likely how to find a method of controlling or eradicating them.

Generally, most beetle infestations *do* result from southern pine beetles, but this year there was a slight deviation from the typical situation. Many infestations, especially detected spots in the southern part of the state, are actually the **Ips engraver beetle.**

Throughout each year, the Alabama Forestry Commission conducts different types of detection flights. For southern pine beetle infestation, four aerial detection flights are completed – one in each region. From these flights, county AFC personnel compile data and maps and send an information packet to the appropriate landowner. Ordinarily, most landowners would assume that the dying pine trees are infested with southern pine beetles. However, given the weather occurrences in 2005 and the drought situation from this year, the beetle culprit is most likely the Ips engraver beetle.

Photo by Gerald J. Lenhard, www.forestryimages.org

An adult ***Ips grandicollis***

At the end of August 2005, Hurricane Katrina devastated the areas around the Gulf of Mexico, especially in Louisiana and Mississippi. Alabama, however, also received damage. Besides the obvious destruction of property, parts of the state

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Above: These pines infested with Ips beetles show no symptoms of infestation except for the browning of the needles. There are no visible pitch tubes.

Photos by Kelvin Daniels

also experienced vegetation damage. In addition to broken limbs and shaken roots, trees in Mobile and Baldwin counties were also stressed from salt deposits, made by salt water from the storm surge and strong winds. By early spring 2006, many of these trees naturally recovered from the effects of Katrina. However, during late spring, some pines in these areas started showing visual signs of infestation.

The symptoms of an Ips engraver beetle infestation are quite similar to the ones of the southern pine beetle and the black turpentine beetle. Pitch tubes, approximately the size of a dime, will seep from the boring holes in the bark. The Ips pitch tubes, however, are generally smaller in size than those created by the other two beetles. Also, these pitch tubes are pink to reddish-brown and are usually located in the upper portion of the tree's bole. The needles will turn yellow, then red, and finally brown. The feeding galleries are small narrow Y and H shaped lines in the inner bark.

The Ips engraver beetle usually infests only a few pines, not causing significant loss to a stand. They rarely spread to neighboring pines. However, 2006 has not proven a typical example of Ips engraver beetle infestation. This year, many pines in a contiguous area were infested and died. This insect generally attacks severely stressed and injured trees, making pines in southern Alabama more susceptible. The drought that per-

A loblolly pine with pitch tubes visible on the bole.


Photo by Kelvin Daniels

Above: Landowner Summerhill and AFC County Manager William Clem take a look at the gallery patterns in the inner bark of an infested pine.


Photo by Kelvin Daniels

Right and below: The small Y and H gallery patterns in the inner bark created by the Ips engraver beetle.

sisted from April throughout the summer created an additional stress factor. For most of the pines infested with this beetle, there were no visible pitch tubes. The drought created a situation where the pines did not produce a lot of sap, therefore, not exuding pitch tubes. The main symptom of infestation was the browning of the needles.

The method of controlling or eradicating beetle infestation is to either salvage the pines and harvest a buffer around the infestation, or treat the pines with a recommended insecticide. With the recent increase in rainfall, perhaps some of the stress will be relieved.

The best solution to prevent or reduce the chance of beetle infestation is to maintain a healthy tree. For pines in residential areas, water them thoroughly once a week during a drought period. In a forest stand, mature pines generally keep their vigor when the basal area is approximately 70 to 100 square feet.

For more information about the Ips engraver beetle and related management recommendations, go to the Commission's website: **www.forestry.state.al.us**, select *Forest Management*, then scroll to *Forest Management Information Sheets*. Also, you may contact your local Alabama Forestry Commission office for assistance or information.


Photo by Michael Kyser

Quality Hardwood Veneer

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

Private forest landowners have long understood that some trees are distinguished as being exceptional. Not every forest contains such rare trees. In the hardwood industry, such trees are termed *veneer*. From veneer trees, come veneer logs; from veneer logs, come veneer sheets. Unlike most logs which are processed into conventional lumber, veneer sheets are thin layers of wood produced by slicing logs.

Essentially any log can be processed as veneer. However, for hardwood trees, normally only those logs of desired species and with finest characteristics are selected. This is especially the case when the finished wood product is used as a face veneer (surface covering) on top of core stock for decorative purposes. Core stock is the underlayment on which the face veneer is placed. Core stock is common and does not require the fine characteristics as does face veneer. For example, red oak cabinets could have side panels with a thin layer of fine oak face veneer overlaid on a thicker layer of common yellow poplar core stock veneer. The focus of this article is primarily on hardwood face veneer and the trees that produce it.

Veneers are erroneously accepted as a somewhat recent development in the timber industry. In truth, the trade originated


Photo by Dr. David Mercker

nearly 3,500 years ago by the Egyptians, evidenced by coffins discovered in ancient tombs. Modernization and expansion in the veneer industry occurred in the 20th century, improving construction and design of furniture, and leading to better utilization of the wood resource.

Veneer Markets

Markets for veneer are classified either as **veneer trees** or **veneer logs**. Forest owners are most concerned with markets for their veneer trees. Many unaware landowners have mistakenly sold fine veneer trees as standard lumber trees, receiving a fraction of full market value. Landowners who are not expert at identifying, measuring, and appraising veneer trees should seek the assistance of professional foresters.

Most loggers, timber buyers, and mill operators are potential markets for standing veneer trees. These individuals normally have direct markets with veneer mills, so for small quantities of veneer trees, these are landowners' best markets. However, when a timber sale has exceptional quality veneer trees, or a large quantity of them, owners should extend beyond these markets and include the veneer mills.

Veneer logs are marketed for four major uses: architectural, secondary manufacturing, profile-wrapped mouldings, and paneling. The **architectural market** is for premium logs only – those without defects, longer lengths, and a narrow, well-centered heart. Architectural veneer becomes wall paneling in executive offices and public buildings. Groups of veneer trees originating from the same forest are especially sought after for this market because their physical traits (color and texture) will be similar and can be bulked and marketed together and used to fill large orders for the same building. The **secondary manufacturing market**, which serves primarily the furniture, cabinet, and flooring industry, is less rigid in quality specification than is the architectural market. Shorter lengths of veneer are used which can be cut between defects. Uniformity in wood color, however, is important. The **profile-wrapped moulding market** fits between the previous two. This veneering is wrapped or glued around reconstituted products such as fiber-board and is then used to substitute for solid wood moulding. The **wall paneling market** is the lowest class and includes 8-foot mismatched wall panels. Because panels do not need to match, some wood defects (if sound) are acceptable.

Methods of Slicing Veneer

Manufacturing quality face veneer is highly specialized and capital intensive, requiring watchful control on the quality of logs to be processed. Only the finest logs will pay for the cost of processing, a standard that varies with each mill. Two common methods of slicing hardwood veneer are flat slicing and half round.

Finest decorative face veneers are produced from **flat slicing**. With this method, "flitches" are first created. Flitches are pieces of wood produced when a veneer log is halved or quartered. The side of the flitch that has the most aesthetically pleasing face is from where veneer sheets are sliced. To make slicing easier, flitches are first heated in water vats to soften the wood. At the slicing machine, the flitch is held down (or dogged) into place on a metal frame which rapidly moves down against a long, stationary knife, producing thin sheets of veneer. Sheets vary in thickness, but the standard for most domestic uses is 1/32 of an inch (thinner for export markets).

Rotary cutting is a method that is primarily used to manufacture commercial veneers for construction-grade plywood from softwood markets. With hardwoods, it is used to produce core stock for underlayment of finer flat-sliced stock, or it is stained or printed and finished to imitate a more expensive wood. With rotary cutting veneer, the log is turned against a giant lathe, unrolling the veneer into extended sheets as the log turns (much like unwinding a roll of paper).

Veneers are processed in other ways as well, including quarter-slicing, half-round slicing, and with rift-cut. Each method produces a different visual effect, forming unlike grain patterns.

Criteria for Veneer Trees

Criteria for qualifying as a fine veneer tree is condensed into one precondition . . . quality. Quality is related to the amount and extent of grade defects found in the lower trunk of the tree. Typically, veneer logs are only produced on the butt log (first log cut) from the lower tree trunk. Grade defects are abnormalities which lower butt log quality by reducing its utility. Grade defects cannot be removed by adjustments in scaling; they are permanent. Two types of grade defects are recognized: exterior and interior.

Exterior grade defects include abnormalities on the bark surface which can be seen. They indicate interior defects and include bumps, bulges, butt swell, knots, lesions, and sweep (or curve). Holes (both large and very small, including bird beck) are also exterior grade defects, as are seams caused by lightning, frost, or drought. Perhaps the most difficult exterior grade defect to detect is adventitious buds. These are dormant or recessed buds that exist along the trunk from which small sprouts (called epicormic branches) will periodically flush. If logs with adventitious buds are processed into veneer slices, reduced quality will be evident on the surface.

Interior grade defects are abnormalities which are typically not apparent on the exterior bark surface, but which become visible on the surface of the log end when the tree is felled and "bucked" into logs. The most common interior grade defect is discoloration such as staining or streaking of the wood. Interior defects also include double pith (two hearts resulting from two trees growing together when they were young), loose heart (separating of the annual growth

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Quality Hardwood Veneer

(Continued from page 13)

rings), and grease spots, soak or pin worms (all results of poor site quality or mismanagement of the forest).

Internal natural wood characteristics such as texture and color are also factors. Premium veneer logs must have a well-centered heart and an even grain texture, meaning that the annual growth rings are relatively evenly spaced, not fluctuating between rapid and slow growth. The wood color should be consistent, without mineral or fungal streaks. Although, lesser markets for off-colored wood occasionally exist.

Interior grade defects are very difficult to detect – proficiency comes only after years of experience. Seasoned foresters, veneer buyers, and loggers are often surprised at how poorly logs look internally once harvested, when the tree's exterior signals *appeared* safe prior to the harvest. Judgment on interior wood quality must be made based on **characteristics of the forest**. Forest clues can signal poor internal wood quality. Previous mismanagement such as heavy woodlot pasturing or ground fires are examples. A poor site is another. Poor sites typically have shallow topsoil, are prone to drought, are very poorly drained, or are found on south and west slopes. Further, forest stands which are overly-mature are also high risk for interior grade defects. Overly-mature forests have trees with many broken tops, stem holes, or swollen-bases. Sometimes irregular bark pattern will signal caution, indicating a site limitation or that tree growth has been altered by some external stimuli.

A set of specifications relative to **log length and diameter** must also be met. Most markets for quality face veneer logs require a minimum of 8 feet in length (10 to 12 feet for top price) and prefer at least a 16-inch diameter inside the bark (dib) at the small end of the log. This is a general guide. Each veneer mill has its own unique specifications.

Given all these criteria, it's a wonder that any hardwood trees qualify as veneer. And indeed, most do not. Normally only 1-2% of the board foot volume in a hardwood timber sale is veneer. Yet that same volume could account for as much as 20% of the total sale value.

Hardwood Tree Species Commonly Veneered

All tree species can be veneered, but only a few are in sufficient enough demand to develop sustainable markets. Traditional hardwood face veneer markets have favored white and red oaks, as well as black walnut. More recently, sugar maple and black cherry have increased in demand, but these species are not as common in the South. Lower value core stock veneer, used as underlayment for face veneer, includes yellow poplar, sycamore, and sweetgum.

Forest Management for Hardwood Veneer

Normally forests are not managed to specifically grow hardwood veneer trees. Rather, if one is found, it's a bonus. Veneer logs – just as with lumber logs, pallet and railroad tie logs, and pulpwood – are among many products that result when forests are harvested. However, the likelihood of producing more veneer trees increases if proper silvicultural procedures are followed.

To produce oak veneer trees, the following situations must occur: (1) quality seed sources (acorns) must be present, (2) sunlight reaching the forest floor during establishment must be adequate, (3) during early stand development, undesirable competition must be controlled, and (4) stocking during stand development must be regulated while protecting and favoring those trees with veneer potential.

Seed Source - Because of their shape and weight, oak acorns will not travel far from their parent tree. If adequate seed sources are not present, oak will not likely regenerate. Even when seed sources are present, if the genetics are inferior or site is too poor, the potential to produce quality veneer oak trees will be limited.

Sunlight - Oak species are classified as intermediate in shade tolerance, meaning that they do not regenerate nor develop well in shaded environments. Therefore, single tree selection (STS) harvesting is not recommended for oak development because STS does not allow a sufficient amount of sunlight to reach the forest floor. Instead, oaks regenerate best in partial to full sunlight, such as that which results from group selection or clearcut harvests. But even with these harvest methods, if a yellow poplar seed source is present on good forest sites, oaks will typically not grow rapidly enough and will be out-competed by the yellow poplar.

Control of Undesirables - Along with the development of the desirable veneer trees will be undesirable species, too. These undesirables will compete for growth elements . . . slowing, suppressing, and even killing the preferred trees. Through a process called crop tree release, young forest stands can be manipulated to improve the percentage of potential veneer trees.

Regulating the Stocking - Stocking is an indication of available growing space. Producing quality veneer trees requires that a relatively consistent growing space be maintained. Forest stands should be thinned on approximately 15-year intervals to ensure consistent growth. Waiting too long will cause suppression; then when released, will cause trees to grow too rapidly. This sudden increase in growth leads to wider than normal annual growth rings and often epicormic branching, both of which lower the chances of a tree becoming veneer. Only an experienced forester and a conscientious logger should be trusted to select and thin stands having a goal of future veneer production.

Selling Your Veneer Trees

Before selling any trees, seek the assistance of a professional forester. It is normally not recommended to select and sell only the veneer trees from your forest, while leaving the undesirables. Doing so is a practice of "high-grading" or removing the most valuable, highly desired trees, while the undesirables are

left to reseed and perpetuate the future stand.

Instead, select trees for harvest based on their financial maturity. This might include veneer trees which have matured, but should also consist of smaller, inferior trees or those undesirable species whose crowns are competing with future veneer trees. In other words, manage your forest with a constant goal of improving it.

Your professional forester is trained to understand selection of trees for harvest based on these criteria. Trees for harvest should be marked with paint, measured to estimate volume, and appraised to arrive at a fair market value. A separate listing of your veneer trees should be kept. Then, through proper marketing, which exposes your trees to all potential regional markets, bids are accepted and the contract awarded. For a list of professional foresters serving your area, contact your county Forestry Commission office.

Be patient. Your trees took decades to grow. The decision to sell them and the procedure to accomplish the project should also be thorough.

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Photo by Dr. David Mercker

Postcards from Oregon

By *Coleen Vansant*, Public Information Manager, Alabama Forestry Commission

Foresters and Forest Rangers with the Alabama Forestry Commission have a huge task - protecting and developing the forest resources of our great state. But aside from fighting fire here in Alabama, writing forest management plans, assisting landowners, working with rural volunteer fire departments, as well as the many, many other jobs they do, they also wear the hat of emergency response team members.

Very few natural disasters and emergency situations occur in our state that our associates do not respond to. Not only on their individual county levels where they always assist the local governments and citizens, but statewide as well. The Alabama Forestry Commission (AFC) sent crews to assist after Hurricanes

Frederick, Opal, Ivan, Dennis, and Katrina just to name a few, as well as ice storms, tornados, floods, snow storms, airplane crashes, automobile accidents, search and rescue, even cleaning up after an ice storm that destroyed hundreds of chicken houses in north Alabama . . . an assignment that will forever be referred to as "the chicken detail."

However, in addition to providing aid and assistance in our own state, the Commission also has crews trained and certified to respond to natural disasters and fire emergencies across the nation. Several AFC wildland firefighters were dispatched to Texas and Oklahoma to help fight wildfires in late December 2005 and early January 2006. Then in May of this year, a team was sent to assist with firefighting in Florida.

This past summer the Commission sent two crews to Oregon to assist the USDA Forest Service in battling wildfires. The further west you go, the greater the difference in firefighting as compared to Alabama. These firefighters were on a mountain in the wilderness areas of Oregon . . . sleeping in tents, eating MREs ("meals ready to eat") dropped from a helicopter, and going as many as ten days with no bath . . . with grueling terrain, shivering temperatures at night, and "boot bite" (sore feet.) They were transported into the fire zone and then transported back out again several days later.

And to top it all off, they *volunteered* to go. All of the Commission's emergency details are filled by foresters and rangers who volunteer for the assignment. Each one must meet the strictest training and physical fitness standards.

This photo feature is comprised of pictures taken by the two AFC crews while on fire detail in Oregon this summer (thanks to Ken Colburn, Joey Donnelly, Brigetta Giles, Jason Gillikin, Brandon Hunnicutt, Brian Smith, and Shane Woodham). We have also included comments from a few of the firefighters about their experience out west.

(Continued on page 18)

Our trip to Oregon was great. We had a really good crew, and our morale was up the whole time we were assisting these people in their time of need. Our crew name was "ALABAMA #1" and as you can imagine, we had to live up to that name. (I have enclosed a couple of photo highlights from the trip.) When we first arrived, we met our bus driver whose name was Shaun, probably the coolest guy you could have as a driver, with radio and TV on his bus for our entertainment. As we boarded the bus, what did we see but a HULA GIRL and the words of "SWEET HOME ALABAMA" blaring on the radio. Then it was off to do the job we were there to do.

After we checked in, we went to set up our tents at the base camp. Of course, everyone was doin' just fine until Jimbo Robinson and I both opened our tents, and yep, you guessed it, they were "broke." So, we fixed mine by "MacGiverizing" it with our Southern know-how, and from doin' it a time or two ourselves. But Jimbo had to sleep under the stars because Supply had no extra tents. Then on Day 2 we went to the "BLACK" and learned we were being "SPIKED OUT" (a form of camping with no tents, just you and the stars). This is where we spent our next four nights and five days. We got back to base camp to get a hot shower and hot meal, only to learn that we may have to do it all over again the next day.

As planned, we got SPIKED OUT again, this time for two nights and three days. By this time, I became much smarter about the sleeping arrangements and got myself a "COFFIN" (what everyone called it), and everybody was jealous that I thought of this idea before them. However, those nights were quite "comfy" for me, as everybody else had to fight the wind and coolness of the mountain air. After we finally got back to base camp, we stayed there the rest of our tour, which was only a couple of days before we got to come home to SWEET HOME ALABAMA.

I really enjoyed my tour in Oregon and hope to go somewhere else this coming year to help others in their time of need.

– Shane Woodham
Forestry Specialist,
Cherokee County

It is a journey not many people will ever take or even ***want*** *to take part in. Long hours, strenuous weather conditions, and six nights/seven days on the side of a mountain with no shower or bathroom. One might call it crazy, but I call it an adventure. I enjoy and appreciate getting to go on these western fire details.*

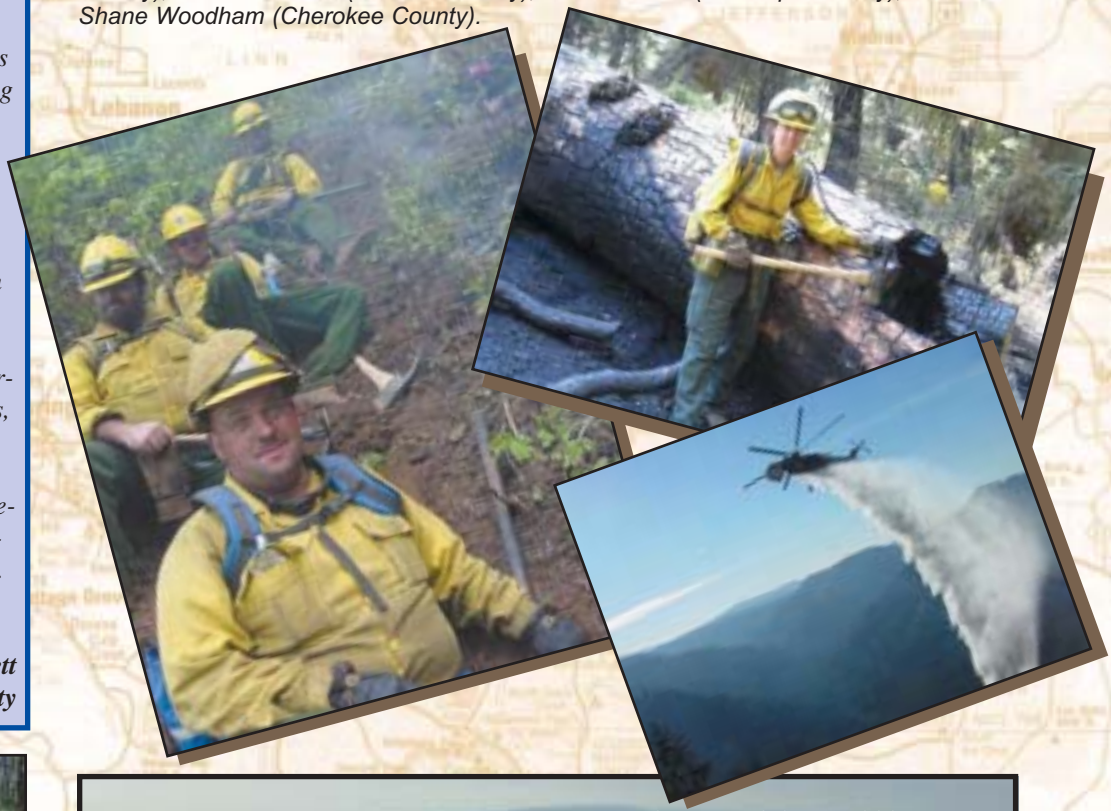
Working along with crews from Alberta, Canada and Victoria, Australia, we used hand tools to "mop up" the fire, meaning putting out hot spots and holding the fire inside the fire line.

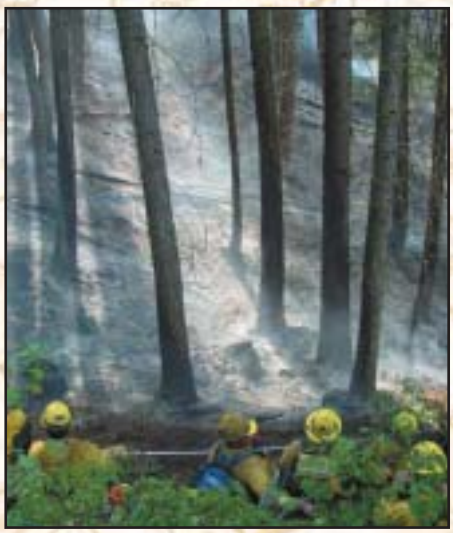
The one thing that stands out most about this trip is the high morale level of the crew. We all got along and worked well with each other during our 18-day tour. Our crew boss, Derrick Heckman, did a great job. I worked under James "Moto" Williams in Squad Three. He and Derrick, along with the other squad bosses and crew members, showed great leadership and character, representing the Alabama Forestry Commission to the highest standards. It was a privilege and an honor to work along side each and every one of them.

In closing, here are the Task Force Leader's remarks on our crew's performance rating. "After 20 years on fires, this is the crew I've had the most fun with. The best attitude dealing with unfamiliar conditions I have ever experienced. If all the crews were this personable, everyone would want my job. Worked hard and did their best every day. Thanks."

– Joel Bartlett
Forestry Specialist, Marion County

The first Oregon crew *from Alabama was comprised of USFS employees, Pelham Fire Department members, and the following AFC associates: Jason Berry (Walker County), Billy Carlisle (Marengo County), Jason Gillikin (Baldwin County), Brigetta Giles (Autauga County), Ashley Haden (Russell County), Jason Keown (Baldwin County), Justin Kinney (Marshall County), Jarred Kornegay (Bibb County), Cary Rhodes (Shelby County), James "Jimbo" Robinson (Chambers County), Gary Thompson (Covington County), Lester Williams (Geneva County), Charles Wise (Randolph County), and Shane Woodham (Cherokee County).*





My trip to Oregon was a very rewarding experience. I was quite proud to be on the Alabama crew. We had a great crew boss and a hard-working crew. It was not easy work, and at times we were building direct attack lines. No one complained and the Forest Service praised us for our work.

I was able to see places I would have never seen otherwise. At the first spike camp we were assigned, I awoke to a beautiful view of Idaho on one side of the Snake River, and Oregon on the other side. I don't believe there were any guides around that could have taken me to such a spot on any vacation . . . there were NO trails.

I was glad that everyone worked well together and we all had a good sense of humor. I have several good memories and stories I can tell. I met co-workers from all over the state that I had not met before. I enjoy seeing them now at various meetings, and I look forward to working with them and other AFC associates on future details.

– Brigetta Giles
County Manager, Autauga County

This was my first trip out West to participate in a fire detail since I have been with the Forestry Commission. I have to say that the whole trip was a very positive learning experience. I had the opportunity to see a large fire operation of this kind, not as a spectator, but a participant. The work was hard but very rewarding. I can't say enough good things about the people on our crew and what a pleasure it was to work with them. It made me proud to be part of this organization.

– Brandon Hunnicutt
County Manager, Jackson County

AFC associates making the second trip to Oregon: *Joel Bartlett (Marion County), Ken Colburn (Chilton County), Gary Coleman (Coffee County), Joseph Donnelly (Baldwin County), Jason Gillikin (Baldwin County), Crew Boss Derrick Heckman (St. Clair County), Victor Howell (Conecuh County), Brandon Hunnicutt (Madison County), Assistant Crew Boss Bobby Matthews (Cullman County), Cary Rhodes (Shelby County), Brian Smith (Chilton County), Barry Snow (Randolph County), Gary Thompson (Covington County), and James "Moto" Williams (Chambers County).*

The second crew that worked on the "Puzzle Fire" in the Cascade Complex just outside Sisters, Oregon, came back with a good understanding of teamwork, commitment, and dedication. We all worked very long days under especially poor conditions, yet most of us never complained, and we kept a positive spirit about the operation and our leadership. At the end of every day we made a point to reflect on what we had done that day, and what tomorrow might bring. "Tomorrow" didn't always work out the way we had it planned, but each and every day we knew what our job was going to be . . . and we could stop, look behind us, and see what we had accomplished. As a boss and *as a crew member, knowing what your job is, and being able to see what you have accomplished, makes a huge difference.*

Crew #2 already knows that I appreciated their efforts and dedication, but I would like to publicly commend each of them, ***and*** *the staff here at home that held things together to afford us the opportunity we appreciated in Oregon. And although the five crew members from Kentucky and Tennessee may not see this story, their efforts were quite commendable as well, and we would love to work with them again.*

I cannot over-emphasize the great benefits that we as an organization reap from western fire detail through training and exposure to different ways of operating in collaboration with other agencies and states.

– Derrick Heckman, Crew Boss, Crew #2
County Manager, St. Clair County

Is There a Jewel in Your TREASURE Forest?

by *Robert W. Hastings*,
Alabama Natural Heritage Program

Male red-cockaded woodpecker nestling.

Alabama landowners who take pride in their certification as TREASURE Forest stewards may also take pride in possibly providing ideal habitat for one of nature's avian jewels, the red-cockaded woodpecker *(Picoides borealis)*. This small, black and white bird endemic to the open, mature, and old growth pine forests of the southeastern United States is a special part of our natural heritage. Forestlands managed according to TREASURE Forest principles may also enhance the survival and population of this rare woodpecker, as well as other desirable wildlife.

The nesting and foraging habitat of the red-cockaded woodpecker (RCW) is distinctive, and part of the reason for its population decline. It is the only North American woodpecker that creates nest cavities in living pine trees, especially longleaf pine but also loblolly, shortleaf, slash, and pond pine. Nesting and roosting cavities are excavated in mature pines large enough to have sufficient resin-free heartwood for the cavity to be sap-free, generally in trees over 80 years old. The flow of sap around the entrance hole is encouraged by removing the bark and by "resin wells" chipped through the bark. The resulting flow of sap around the entrance helps protect the nest from predators such as rat snakes, and also gives the RCW cavity a distinctive candle-like appearance. Forests where all mature pines are removed will not provide suitable nesting habitat for red-cockaded woodpeckers.

The birds do not migrate, but are territorial, living in groups of two to six birds, including a breeding pair and several male offspring from previous years, which help care for new eggs and young. Each group uses an area of mature pine forest 75-200 acres in size for feeding, and each individual roosts in a separate tree cavity. Their foods consist mostly of spiders and insects, including beetles, ants, roaches, and other insects that occur in or on pine trees. The foraging area must be open, with scattered mature pines and little or no midstory vegetation. Thus, their habitat must include several large mature pine trees, and be open park-like or savanna. Where hardwood trees or other midstory vegetation is not controlled by fire or other methods, an area will be abandoned by the woodpeckers.

Due to loss of suitable habitat, the red-cockaded woodpecker has experienced a drastic decline. This prompted the listing of the species as endangered in 1970, entitling it to federal protection under the Endangered Species Act (ESA). Its habitat has been reduced to about 3% of its former size due to intensive timber harvesting, agriculture, development, and sustained fire suppression over the past two centuries. This has resulted in a decline in numbers of RCWs of approximately 99%.

Some landowners consider the presence of this "jewel" undesirable because of its endangered species status and the land management restrictions that it may require. However, with a few relatively

Photo by Derrick Hamrick

minor compromises, the landowner can continue to manage forest lands using most types of timber management activities.

In order to encourage landowners to protect habitat for this endangered species, Alabama and other states, in cooperation with the US Fish and Wildlife Service, have implemented programs called "Safe Harbors." Under a Safe Harbor agreement, the landowner agrees to manage his land in such a way as to ensure the survival and enhancement of RCW populations, but will not incur any new restrictions if the population expands beyond the baseline level existing when the agreement was signed. That baseline level may even be zero if potential RCW habitat is present but RCWs do not actually occupy the land.

These agreements have been very popular with forest landowners in other states, and are considered a "win-win" program. The RCW population is protected while the rights of the landowner are also respected. The adjacent table provides information regarding the current success of the program. The Alabama program has only recently been approved, so data are not yet available regarding its success.

For additional information regarding the Safe Harbor agreement or to enroll property in the program, contact:

Photo by Bob Hooper

Active RCW cavity.

Photo by Derrick Hamrick

Red-cockaded woodpecker bringing food to nest.

Alabama Natural Heritage Program
Huntingdon College, Cloverdale Campus
1500 East Fairview Avenue
Montgomery, Alabama 36106
Phone (334) 833-4064
or

Alabama Department of Conservation and Natural Resources
Division of Wildlife & Freshwater Fisheries
64 North Union Street, Suite 584
Montgomery, AL 36104
Phone (334) 242-3469.

Photo by Stan Stewart

Pine forest providing ideal foraging habitat for RCW with pine basal area of 60 square foot per acre.

State	Date Signed	Baseline RCWs (# of Active Clusters)	# of Landowners	Acres Enrolled	Safe Harbor RCWs (# of Active Clusters Above Baseline)
North Carolina	1995	56	97	51,582	8
Texas	1998	31	23	15,232	4
South Carolina	1998	278	102	396,980	17
Georgia	2000	103	18	129,906	22
Virginia	2000	5	2	2,986	0
Louisiana	2005	13	3	14,192	0
Totals		486	245	610,878	51

Red-cockaded woodpecker Safe Harbor data (as of January 2005)

HIDDEN TREASURES

Leading by Example

By *Joel D. Glover*, Wildlife Biologist,
Alabama Department of Conservation and Natural Resources

Having worked with the TREASURE Forest program for almost 20 years, I have often stated that a landowner's actions, more than advice from agency personnel, are more likely to influence their neighbors' land management decisions. I heard this "mentoring" message at a landowner conference many years ago. I must admit that at the time, I did not give it much credence. However, many years and even more TREASURE Forest certifications later, I have come to realize the importance of mentoring. Although I have a good understanding of mentoring, I recently received a refresher course during a TREASURE Forest inspection.

I have long held that most TREASURE Forests are developed over time, through a relationship with a landowner, rather than a property being "found ready" for certification. However, during a recent inspection I learned once again that both methods are possible. My first contact with the property owned by Mike Sanford was at the request of AFC County Forester Blake Kelley. Blake told me that he had been working with Mr. Sanford and things were progressing well on the timber management front; however, he needed a few wildlife management recommendations. We soon made a visit and once there, I found that a prescribed burning program was in place, a harvested area had been reforested, and a lake built and stocked with fish. As Blake had suspected, the tract did need more open area for wildlife. This and other recommendations were given to Mike who quickly went to work to implement them.

Mike Sanford (left) with his grandparents, Ozeal and Reedy Patterson.

Within a few months, Blake contacted me to schedule an inspection of the property. The landowner had requested that we meet him at 6:00 p.m. if possible. Seeing how the temperature was averaging around 96 degrees everyday, I had no problem with the evening inspection. AFC Regional Management Specialist Alan Williams and I arrived at the property a bit early and while waiting for Blake and Mike, we conversed with Mike's grandfather. I had known Mr. Reedy Patterson for several years, but I had never visited his property. I found it interesting that Mr. Patterson, who is 90 years old, stated that he just couldn't work like he used to and with the weather as hot as it was, he could only work outside until about noon. I nodded my head as if it were the same for me; however, inwardly I was thinking I wish I *could* work in this heat until noon!

Mr. Sanford arrived and after introductions we climbed on golf carts and began the inspection. I was very impressed with the many accomplishments he had made on the land, although I was even more impressed with what he had to say concerning his motivation for managing the

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PROTECTING THE FORESTS FROM FIRE:

A Brief History of Wildland Fire Protection In Alabama

By *Tim Jones*, Athens State University

To most people, the term "fire protection" probably conjures images of the operations of modern urban fire departments. But it must be recognized that early America was primarily rural; and today, many Alabamians still live in rural and suburban areas where fire protection is typically delivered through rural volunteer fire departments. Indeed, the origins of fire suppression in significant portions of rural America are linked with the development of forestry agencies and rural-based fire departments.

Evolution of Wildland Fire Policy

Today's rural and wildland fire protection is the result of devastating fires in our history, and the mechanisms and agencies developed to combat them. In 1871 a massive forest fire, part of a wide swath of fires which extended westward from Ohio, killed more than 1,500 people as it swept over Pestigo, Wisconsin. (Coincidently, this disaster occurred on the same day as the Great Chicago Fire, which killed 300 people.) The next major rural fire complex after the Pestigo Fire was the "Big Blowup of 1910." Eighty-five men died battling these fires, some of them because they panicked and committed suicide as the fire lines were overrun. In the end, about five million acres were burned.

In 1898, Gifford Pinchot, Chief of the Forestry Division of the U.S. Department of Agriculture (this division became the U.S. Forest Service in 1905) catalogued more than five thousand forest fires to determine the danger to people and natural resources from wildland fires. This study convinced conservationists of the need for fire prevention and suppression, and also led many to believe that the use of fire for clearing land was destructive and should be eliminated. Even the burning of undergrowth in the South (which had taken place for centuries) was likewise condemned.

Ultimately, the chief of the Forest Service would be led to declare fire prevention the best policy to protect America's forests, and urged state cooperation so that all forestland would have adequate protection. Forest Service officials began to view fire prevention as a "mission" and requested more money to support their agency's efforts. Congress responded to their requests by approving the Weeks Act in 1911. Section 2 of this law authorized federal matching funds for states with forest protection agencies that met federal standards. In 1924, Congress passed the Clark-McNary Act, encouraging closer federal, state, and private cooperation for fire control.

A series of fires in the Selway Mountains of Idaho in 1934 focused debate about wildland fire policy. A Forest Service review board outlined various possibilities for wildland fire policy, ranging from aggressive firefighting to total withdrawal from fire suppression in the backcountry. Public opinion, greatly shaped by two decades of Forest Service policy, was opposed to a "let-burn policy." The Forest Service would continue to advocate vigorous fire suppression and prevention until the 1970s, and would take the lead in federal forest fire suppression efforts.

In 1965, the U.S. government established the Boise Interagency Fire Center to coordinate the three federal agencies that would be engaged in wildland fire suppression: the Bureau of Land Management (BLM), the Forest Service, and what was then known as the Weather Bureau (today's National Weather Service). The Bureau of Indian Affairs, the National Park Service, and the U.S. Fish and Wildlife Service were added later, and the name was changed to the National Interagency Fire Center.

The debate about policy intensified as a result of on-going research, initiated as early as the 1940s. The research indicated that properly applied, fire benefited longleaf pine forests in the South. A few foresters had been suggesting that controlled "light burns" in southern landscapes had a positive role, but their

(Continued on page 24)

Photo by Jeff Carr

(Continued from page 23)

opinions had often been suppressed. Some boldly argued in favor of letting many naturally-caused backcountry fires simply burn themselves out.

Forests that had not been allowed to burn under the previous fire suppression policy had become diseased and were dying, making the forests susceptible to catastrophic fires. The exclusion of fire had allowed the continued accumulation of fuels, and fire-intolerant species functioned as "ladders" enabling flames to climb from the forest floor to the crowns of mature trees. This lead to hotter catastrophic fires which also damaged soils, caused erosion, and endangered human communities.

In 1968, the National Park Service began advocating ecosystem management by restoring fire to the landscape. The Forest Service modified its policies and adopted a program similar to that of the Park Service. Beginning in 1978, natural fires were allowed to burn in wilderness sites, and controlled burning was permitted in order to reduce fuels and improve habitat.

The now famous Yellowstone Fires of 1988 as well as catastrophic wildfires which occurred in 1994 – that killed thirty-four firefighters, burned two million acres of forest, and consumed $965 million in emergency fire funds – may have been enhanced by the accumulated forest fuels resulting from a hard-line "no burn" policy. A revised fire control policy employing prescribed burning and non-suppression of "natural" fires would now come to be more readily accepted by the public.

Utilizing fire prevention methods such as prescribed or controlled burns contain risks to people and natural resources as well. "Controlled" burns sometimes get out of control, such as the one set by the National Park Service near Los Alamos, New Mexico, which eventually burned nearly forty-seven thousand acres in May 2000. However, these risks pale in comparison to the damages and dangers associated with wildfires.

The wildland fire situation remains as critical as ever. Since 1900, over 700 people have died on wildfires in America, of which the vast majority of

Photo by Gib Burke

them had been employed or volunteered to fight the fires. In 2000, a disastrous fire season produced 85,000 wildfires which burned nearly seven million acres. These fires resulted in the death of sixteen people, and fire suppression costs were also in excess of one billion dollars.

Origins of The Alabama Forestry Commission

In 1907, John Wallace, a state representative from Madison County, was instrumental in establishing the first Forestry Commission. This commission was a natural outgrowth of a growing demand for forest and wildlife protection in Alabama. The law which created the commission authorized the counties of the state to appropriate a sum not to exceed $250 annually to pay for forest protection, and directed that all money collected from penalties for "firing the woods without five days notice to adjacent landowners" be placed in a forest reserve fund. Wallace reported in the yearly Commission Report in 1908 that the new Forestry Commission had made progress toward discouraging annual burning of forested lands. The commission suffered from a lack of funds, which seriously limited its effectiveness.

In September 1922, I.T. Quinn, Alabama's Commissioner of Game and Fish, headed a statewide conservation congress in which the attendees made recommendations for new state conservation laws. This group recommended that, "the Legislature of Alabama be called upon to enact such laws as necessary for the protection, conservation, and perpetuation of our forests." This effort led the legislature to establish a new State Commission of Forestry that began with the passage of the Forestry Act of 1923. Additionally, the law provided for all law enforcement officers of Alabama to be declared "forest wardens" and to report all violations of state law to local district attorneys.

In the 1930s, the State Commission of Forestry, in cooperation with the National Park Service and the U.S. Forest Service, secured the assistance of the Civilian Conservation Corps (CCC) for constructing fire control improvements. Ultimately, the state forestry program would benefit from the construction of 49 "fire towers" which provided for detection of forest fires, until airplanes began to be utilized for this purpose approximately 30 years ago.

The Acts of Alabama of 1939 contained several provisions affecting the ability of the state commission to do its work. The Commission was directed to establish and designate forest protection areas, and county commissions were to levy a tax to be placed in a "forest protection fund" and expended by the Forestry Commission for forest fire pro-

tection. Additionally, all forest law enforcement officers appointed by the state forester were given statewide jurisdiction and allowed to enter on any lands and to "do any and all necessary work" to suppress and prevent forest fires.

The State Commission of Forestry managed the state parks until 1939 when the Alabama Department of Conservation was created. Following the enactment of the Department of Conservation Act of 1939, a Division of State Parks, Monuments, and Historic Sites was created. The forestry program was placed in the newly created Division of Forestry of the Department of Conservation.

The calendar year 1950 marked an important time in the history of organized fire protection in Alabama. For the first time, Alabama was able to provide statewide protection for the 18 million acres of forestland in state and private ownership. In that year, there were 9,947 fires which burned a total of 415,000 acres, or 2.3% of the protected area. This was a significant drop in the number of fires on lands that had previously been unprotected.

In 1955, Alabama authorized the governor on behalf of the state to join the Southeastern Interstate Forest Fire Protection Compact. The Compact's purpose was "to promote effective prevention and control of forest fires in the southeast region by the development of integrated fire plans, the maintenance of adequate forest fire fighting services by the member states, and to provide mutual aid in fighting forest fires among the compacting states of the region." Alabama has supplied firefighters to other states and to the U.S. Forest Service on several occasions to participate in fire suppression on multi-jurisdiction wildfires.

The Division of Forestry was removed from the Alabama Department of Conservation, and the Alabama Forestry Commission was created in 1969 to take all reasonable and practicable measures to prevent and suppress forest fires. Since 1980, the Alabama Forestry Commission has provided a mechanism whereby counties are able to obtain assistance for the establishment and management of volunteer fire departments, thus providing statewide fire protection for rural lands and unincorporated areas of Alabama.

The Fire Threat Today

Although great strides have been made in regard to wildland fire suppression in the South, the threat of wildfire is very real today. In fact, the thirteen southern states lead the nation in the number of wildfires, averaging about 45,000 fires each year. Approximately 93% of these wildland fires are the result of the actions of people rather than natural causes. The fires that threaten our lives and property are likely the result of where we live and how we live in the South today.

Photo by Jim Wade

Since the 1970s, a pattern of migration of Americans took place away from urban areas toward suburban or rural areas. This type of migration has occurred in Alabama as well, resulting in areas being developed in such a way that more homes are located where the fuels feeding a wildfire change from natural (wildland) to man-made (urban) fuel. This expansion in the number of homes being built in suburban and rural areas has seriously complicated the duties of both urban and wildland firefighters in several ways: by increasing the frequency and severity of fires, by making the traditional firefighting tactics such as prescribed fire and plowed firebreaks more difficult to employ, and by logistical difficulties required by a multi-jurisdictional fire attack. This wildland-urban interface problem is largely responsible for the destruction of more than 1,400 homes and the loss of 44 lives in the 1985 California wildfires.

State agencies are responsible for wildland suppression on 94% of the South's 214 million acres of land. The greatest portion of this land is owned by private landowners. With the rapid growth of suburban communities in recent years, state forestry agencies are greatly concerned with the potential for catastrophic wildland fires. Additionally, these agencies would likely be overwhelmed in their attempted response to these fires when they occur. Homeowners must increasingly accept some responsibility for taking actions to protect their homes before a wildfire occurs. For this reason, the Alabama Forestry Commission currently participates in a program called "Firewise," a cooperative effort among federal, state, and private agencies which enables landowners to plan and execute fire prevention in the wildland-urban interface.

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Photo by Coleen Vansant

Sunflowers: A Wildlife Bistro

By *Coleen Vansant*, Public Information Manager, Alabama Forestry Commission

Most everyone has watched a televised baseball game at one time or another. As the camera pans the field and zooms in on the dugout, you can't help but notice that most all of the players are working something in their mouths. For some it's tobacco, for others it's bubble gum, and then there are those who have a mouth full of sunflower seeds. Over the years, sunflower seeds have become a very popular and nutritious snack food. But humans are not the only ones who enjoy the wonderful nutty flavor provided by the small seeds. They are also a favored food for many species of wildlife.

The sunflower (*Helianthus* of the *Asteraceae* family) has been around for a long time, and this native, warm season, tap-rooted annual has a long history of association with people. Around 1000 B.C. it was used and domesticated by pre-Columbian Indians in central North America not only as a food and oil source, but also for dye and thread. Francisco Pizarro found the Incas hailing the sunflower as an image of their sun god. The use of the plant spread eastward and in 1510, the Spaniards along the Atlantic coast areas were introduced to the plant. They liked it so much they carried seeds back to Europe where it was grown in gardens as curiosities. Lewis and Clark also made mention of its use by Native Americans in their journals. Pioneers planted the wild sunflower near their homes to repel mosquitoes and used the blossoms in bathwater to relieve arthritis pain.

Some time before 1800 the sunflower reached Russia where it was raised for

food and later, through selective breeding, the giant one-headed, large-seeded plants we know today were developed. Since then, dozens of varieties of the flower have been developed in all colors, heights, and sizes.

Although we consider the sunflower as a "single" flower it is actually two different types of flower – the ray and disk. The ray flowers have the big, ray-like structures around the edge of the flower while the disk flowers occupy the middle of it where the seeds are located. There are many combinations of the two, and it is possible to have the total absence of one or the other. Ray or disk flowers may be male, female, or both, and either fertile or infertile. Usually the ray flowers are female and infertile, while the disk flowers can be both male and female and fertile.

When you look closely, you can see that the disk flowers grow in a mesmerizing pattern of two opposite spirals. It can best be seen either before the disk flowers open up, or after the seed has set and all of the flower parts have fallen off. Sunflowers are very adaptive and can grow on most well drained soils. They are drought tolerant and can be planted in rows, or broadcast in small or large acreage.

The leaves are sticky, dark green and alternately arranged on the stalk. Native plants have multiple heads, while hybridized can have single or multiple heads. They can grow from 1 to 14 feet in height. With natural varieties, the seeds can remain viable in the soil for many years until conditions are optimum for germination. Depending on the variety and growing conditions, five pounds of planted sunflower seed can produce from 800 to 1200 pounds of seed per acre.

The hybrid black oilseed sunflower (*Peredovik*) is probably the most popular seed for wildlife, although almost any variety will attract wildlife of some type or another. The black oilseed is an improved variety of the native annual sunflower and is very nutritious, high calorie, and high in protein. Over 40 species of birds are known to eat black oilseed sunflowers including chickadees, nuthatches, titmice, goldfinches and house finches, redbirds, blue jays, sparrows, and buntings. The softer outer shell makes it easier for smaller birds to consume. The seed also has a high concentration of oil which is especially important in winter. Birds use their oil glands to spread the oil over their feathers to keep them buoyant, dry, and warm.

Sunflowers are also favored by mourning doves, turkeys, pheasants, and quail. Although not a preferred forage plant for deer, they may eat the young tender leaves and developing seed heads. Evidently, the flowers become less palatable as they mature. Other small mammals like gophers, squirrels, rats, and mice also eat the seeds. Butterflies, beetles, and bees are attracted to the flower because of the nectar.

If you are growing sunflowers on a large scale, you should mow or cut random areas to allow the seed to drop to the ground for easy access of ground-feeding birds and animals, while leaving other plants standing for the "swingers and hangers" species. By cutting a few and allowing others to stand and drop naturally, you also provide cover for species like quail.

Sunflowers should be planted in a well-disked seed bed. They are so versatile that you can plant just a few in your back yard, a row in your garden, or by the acre. They can be planted anytime between April 15 and June 15. If you are planting for that September dove shoot, you should plant before May 15 to ensure the seeds are mature in time for opening day.

The sunflower is such a popular wildlife seed that *Quail Unlimited* includes it in the National Seed Program. In 2004 they distributed 73,585 pounds of seed which planted approximately 24,500 acres of dove fields. If you want to plant sunflowers as a game food, your local farmers' cooperative will probably carry the seed. For backyard or garden planting, dozens of varieties can be purchased from your local garden shop or your annual seed catalogues.

If you wish to attract wildlife to your home or property on a small or large scale, sunflowers are a very easy plant to grow. Try some this spring and just see who drops in for a snack.

For current information on the Southern Pine Beetle situation in Alabama, visit the Alabama Forestry Commission web page at:

www.forestry.state.al.us

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Prescribed Burning —

It's Your Right and Your Responsibility

By *Julie A. Best*, Public Affairs Specialist, USDA-Natural Resources Conservation Service

Landowners have been using fire as a land management tool for centuries. It's a great tool that produces multiple benefits, such as site preparation for reforestation, hardwood control in pine stands, wildfire hazard reduction, improved wildlife habitat, as well as threatened and endangered species management. But, with that right also comes responsibility.

Recently, 66 private landowners participated in a burn certification course, sponsored by the Alabama TREASURE Forest Association (ATFA), in partnership with the USDA-Natural Resources Conservation Service (NRCS) and the Alabama Forestry Commission (AFC). The program, which was held on landowner Smokey Davis's property in Mobile County, included sessions on fire behavior, environmental effects of fire, and smoke management. Those who successfully completed the training became certified "Alabama Prescribed Burn Managers."

Photo courtesy of NRCS

Prescribed burning, when done properly, is a good management tool that can be beneficial to timber producers.

Prescribed burning is the deliberate use of fire under specified and controlled conditions to achieve a resource management goal. Hurricane activity in the past few years has put acres of timber on the ground in Alabama. Because of this debris, the fuel load in Alabama forests is extremely high in the Southern part of the state. At least 15-20% of the downed timber is not salvageable. Downed timber that was not salvaged after recent hurricanes has turned into a real fire hazard. A prescribed burn is one management tool that landowners can use to decrease the heavy fuel load.

This year ATFA, NRCS, and the AFC partnered to bring a burn certification school to the private

landowners – the people who own the land – so that they can become burn managers, capable of caring for the forest problems on their land. Routinely, the AFC offers this program once a year. While private landowners are welcome to participate, the participants have usually been "professionals" who conduct prescribed burns. However, because of the increased fuel load, the course was offered several times during 2006 with private landowners as the targeted participants. According to Louis Hyman, Assistant Division Director of the AFC's Fire Division, "The goal is to give landowners the tools they need to safely use fire in land management. The purpose of the course is to teach people how to do it right so that the fire and smoke will stay where they want them."

The overriding theme in prescribed burning should be safety and control. There are three issues to be considered when conducting a prescribed burn:

- How to keep the fire where it is supposed to be
- How to keep the smoke away from people
- How to keep the smoke away from smoke sensitive areas

The first step in a prescribed burn is to develop a plan – what is to be accomplished with the burn, what type material will be burned, how much area will be covered, where is the area located, how will the burn be conducted, and finally, what equipment is needed/available to conduct the burn. Every aspect of the burn should be planned well in advance to prepare fireguards, gather and repair equipment, organize labor, and obtain permits. Before the burn, the plan should be notarized or signed by witnesses. This is a legal precaution for the landowner.

Atmospheric conditions are extremely important in conducting a prescribed burn. As the burn plan is developed, these conditions will help the landowner determine when it is safe to burn. On the day of the burn, these conditions should be monitored closely.

State law requires that a landowner secure a permit from the Alabama Forestry Commission before burning any woodland, grassland, field, or new ground that is over ¼ acre in size or lies within 25 feet of natural fuels, such as woods or grass. There is no cost for the permit. The "permit" is really a notification so that the AFC will know *who* is burning *where*; when their fire spotters see smoke, they can determine if it is a controlled burn or a wild fire. In addition to notifying the AFC, common courtesy dictates that local fire departments and neighbors also be notified.

Photo courtesy of NRCS

Dr. John Mims, 86-year-old landowner, witnesses the fire plan on the controlled burn demonstration plot.

Those attending the ATFA burn certification course were a cross section of Alabama private landowners. There were young landowners as well as more experienced landowners – Dr. John Mims, an 86-year-old landowner from Colbert County was the oldest participant. Several women also participated in the course; some in order to be an informed member of a husband/wife team, and others as the primary landowner. No matter what the age or gender, they all had a common goal, and that was to become informed about the right way to conduct a prescribed burn.

There are many details involved in planning a prescribed burn. After attending the Alabama Prescribed Burn Manager Certification course, Alabama private landowners have a better understanding of how to do the process correctly.

Extension System/ Auburn University Announce LEADERS Class

Auburn University and the Alabama Cooperative Extension System announce plans for Class IX of the Alabama Agriculture and Forestry Leadership Development Program. Called "LEADERS" for short, the up-to-50 days of training is taken over two years and involves a half dozen or so sessions around the state and both national and international study tours. The target audience is up-and-coming adults 25 to 40 years of age who are involved in the state's food and natural resources industries. Objectives are to improve leadership skills, broaden appreciation for the greater industry, and better understand public policy issues.

The newest class of this unique executive development program is slated to begin early in 2007. Up to 30 individuals will be selected. For further information contact Dennis Evans at Auburn at 334.844.5552 or e-mail him at **evansda@auburn.edu**.

Wildlife Hotel:
The Art of Building a Functional Brush Pile

By *Coleen Vansant*, Public Information Manager, Alabama Forestry Commission

For those of us who don't actively participate in hunting activities, attracting wildlife can still be an important objective on our property. Whether you enjoy watching their antics, wildlife photography, or you just have a tender heart and want to provide a safe habitat, there is a very simple and inexpensive thing you can do to guarantee something will move in. Build a wildlife brush pile.

Whether on a small or large scale, a carefully constructed brush pile will attract a variety of critters to your place. A brush pile can provide supplemental cover from predators like dogs, foxes, coyotes, etc.; a resting or loafing place; and a place to raise young, while allowing safe access to a food source.

Photo by Coleen Vansant

The first step is to decide the best location for your brush pile. A functional wildlife brush pile is a little more than just piling up limbs and debris – it takes a little planning. It should be constructed away from traffic zones, along a field edge, adjacent to a food plot, and close to an open natural food source and water. Placing it near a grassy area or field edge will supply a nesting place and food source, along with cover. It should be situated away from the tall edge of the woods to keep predators such as hawks and owls from perching in a nearby tree, waiting on an unsuspecting meal.

A well constructed brush pile will accommodate a variety of wildlife and starts with (as most all building projects) a firm foundation. The basic brush pile has a foundation formed by building a base of larger decay-resistant material that will support the weight of the pile. Large logs, field rocks, cement blocks, old pipe or tires can be used for this. The base materials should be about 6 inches in diameter and placed about 10 to 12 inches away from each other, wide enough apart to provide easy access within the interior of the pile.

Naturally, the larger the pile of brush, the larger the wildlife you will attract. Depending on your space and available materials, the pile should be 4 to 10 feet tall and 10 to 20 feet in diameter. It should be dense enough in the center to provide adequate shelter, but loose enough around the edges to have easy access. A good rule is that if a person can kick it over or a dog can burrow though it, it is too small.

After the base is established, begin placing larger logs and limbs in a crude crisscross or log cabin fashion. Continue piling on debris, graduating from large to small-diameter material (the opposite of building a campfire). The last layers should be made up of small limbs, vines, small brush, pine tops, etc.

On the average, brush piles last three to five years. New material can be added to the top as needed. Depending on the size of your property or site, you can have one or several. Brush piles can be linked together in the interior of a field to provide a safe travel lane for wildlife. Three to four brush piles per acre can be constructed in places where cover is lacking. For those landowners with smaller space, one brush pile on the back side of the garden plot can be beneficial. It will house lizards, turtles, and toads that will help keep down the insect populations in and around your garden.

Usually winter is the best time to build brush piles because of the availability of building materials from trimming, pruning, and cleanup projects. It is also a great alterative to burning or loading and hauling.

Once you have your brush pile completed, step back, be patient, and wait. Something will find it very soon. Depending on where you live, you can expect such visitors as rabbits, red and grey foxes, raccoons, chipmunks, weasels, quail, lizards, turtles, toads, and a variety of songbirds. Regardless of what kind of brush pile you construct, you are almost guaranteed something will call it home.

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Leading by Example

(Continued from page 22)

property. As we viewed the combination fishing lake/swimming park with the nice pier and floating trampoline, Sanford explained that when he was growing up his deepest desire was to spend time with his grandparents at their place in the country. He talked about the many days he spent working on the property with his grandfather and how those times had nurtured his love for the land. It was a dream-come-true for him when he was allowed to purchase a portion of the property. Mike went on to say that his goals were two-fold in nature: he obviously wanted to improve the property, but his number one objective was to foster a love of the land in his own family. He further explained that he felt that he has made progress with his youngest daughter who has developed a passion for the property, and his wife who has also come to greatly enjoy the trips to the woods.

As we finished the inspection, we told Mike that things looked good and we would submit a nomination to the subcommittee. We explained that certification was important since it was one of the best ways to mentor others concerning proper stewardship. At this point, Sanford stated that he had a request for us. He went on to explain that his mentor had been his grandfather. He began to tell about all the things his grandfather had done on his property, and how his granddad had made it clear that proper management was a prerequisite before he would agree to sell it to him. Mike stated that if his own property was good enough for certification, he was certain that Mr. Patterson's land would also qualify. He then asked that we consider performing an inspection on his grandfather's property. We had not at all anticipated this request, but agreed to perform the inspection.

After discussing objectives, we started out across the property. Mike pointed out that the trails we were riding were developed and maintained by Mr. Patterson, so that he could "keep an eye on things." We traveled through an area of pines where prescribed burning had been completed and through several wildlife openings. Some of the openings contained fruit trees that Mr. Patterson had planted "to give the deer a little something." We then viewed an open field that had been burned "to keep it looking decent." We also noted numerous birdhouses and feeders, not to mention many aesthetically pleasing practices.

By the end of the inspection, it was easy to see how Mike had been influenced, and it was also obvious that both properties were worthy of certification.

Although coming up with a management plan on short notice put Blake in a bit of a bind, he felt, as did Alan and I, that this situation was worth a little extra effort. The plan was completed; both nominations were submitted and approved. It was my honor to present the grandparents and their grandson with their TREASURE Forest certifications.

While working in the wildlife profession for the past twenty years, something that stands out like a sore thumb is the paucity of young people involved in the outdoors. It is unfortunate that the one thing missing in the lives of many young people today is someone to develop their love of the land; someone who will pass on a land ethic. In today's fast paced high-tech society, many young people view nature as something slow and boring. This is likely due to the fact that they have never chased tadpoles or heard a gobbler shatter the morning calm. Maybe they've never had anyone tell them to go outside and "don't come back until you are filthy!"

If you have the opportunity to mentor a child – whether it is your child, a grand child, or the kid down the road, do your best to pass on a love for the land. The future of our natural resources may very well depend on it!

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Pawpaw

(Asimina triloba)

By *Fred Nation*, Educator and Environmental Services, Baldwin County

Pawpaw is a small deciduous tree to about 25 feet tall. It is sometimes seen as a large colonial shrub that reproduces by root sprouts to form thickets. The range is throughout most of the eastern and midwestern United States, from New York, west to Nebraska, south into Alabama and Georgia, with a few isolated pockets in northern Florida. In Alabama, pawpaw is usually found in the understory of moist, fertile, wooded sites, in the northern three-quarters of the state. The similar but smaller dwarf pawpaw, *Asimina parviflora* is the only species found in southwestern and extreme southern Alabama.

One of the first native plants to be documented by Europeans in the New World, pawpaw was described by the DeSoto expedition in the American Southeast in 1541. Later, in the eighteenth century, William Bartram mentioned pawpaws several times in his *"Travels,"* and he described the ripe fruit as having "a very delicious yellow pulp."

The bark of *Asimina triloba* is dark brown and thin, eventually developing shallow vertical cracks. The strong, fibrous inner bark was used by the Indians and early settlers for fish stringers, and the fibers were braided into cordage. The leaves are pointed at both ends, to about 10 inches long, 3 inches wide, broadest above the middle. They superficially resemble the foliage of several other native trees and shrubs, including tupelo trees, in the genus *Nyssa*, but a simple field test may be used to reliably distinguish pawpaw from other species. When crushed, the aromatic leaves of pawpaws have the strong, distinctive odor of green peppers or green tomatoes! *Asimina* foliage is the only larval host for one of our most beautiful insects: the spectacular zebra swallowtail butterfly. Historically the leaves have been used medicinally, as a poultice to treat wounds and abscesses.

TREES OF ALABAMA

The flowers, opening in early spring as the new foliage develops, are an inch or so across, brownish purple, with six petals in two rows of three. The unusual fruits are cylindrical, 2 to 5 inches long, sometimes curved, "peanut-shaped," or resembling small blunt bananas. When ripe, in late summer, the fruits are usually yellow, sometimes brownish or purple, and they are sweet and edible, with the flavor and fragrance of bananas or pineapples. The large, hard, brown seeds are reported to be toxic, and they have been powdered and used as an insecticide for fleas and head lice.

Ripe pawpaws are hard to find in the woods, because they are eagerly foraged by wildlife including possums, squirrels, foxes, raccoons, and many bird species. Research is underway to develop marketable pawpaw fruits, and recent studies indicate that the compounds may eventually prove useful as organic insecticides and pharmaceuticals.

The nursery trade occasionally offers pawpaw trees for sale. They are sometimes seen in landscapes as small specimen trees, and they are planted in butterfly gardens for the benefit of the zebra swallowtails. The Alabama state champion *Asimina triloba* is 30.8 inches in circumference, 57 feet tall, with an average crown spread of 22 feet, located in Randolph County.

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