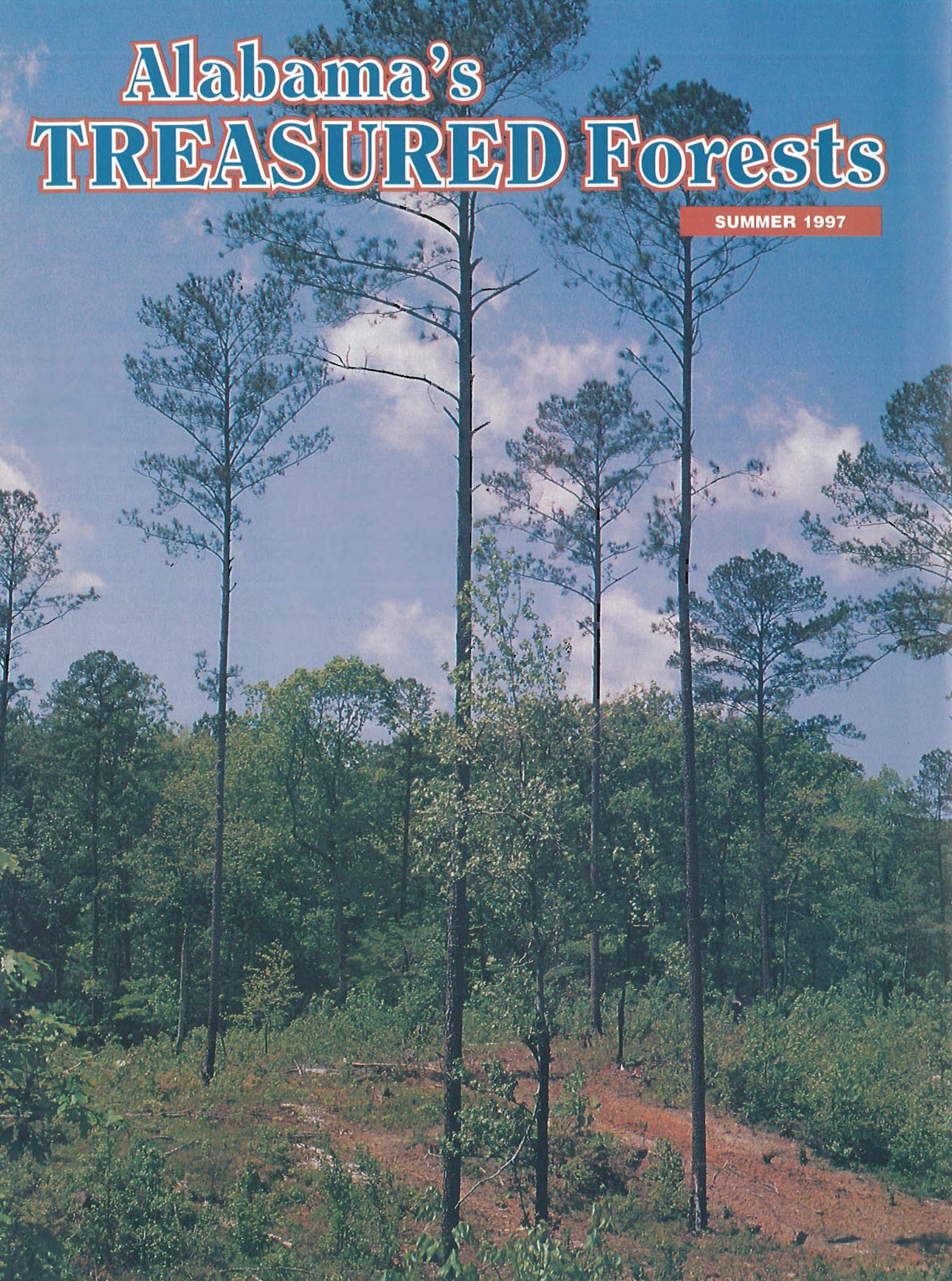


# Alabama's **TREASURED Forests**

SUMMER 1997



# STATE FORESTER'S MESSAGE

by TIMOTHY C. BOYCE, State Forester



Recently the United Nation's Food and Agriculture Organization released a report entitled *State of the World's Forests*, which has some enlightening facts that I think will interest you.

Reforestation continues at a high rate worldwide. There were 350 billion acres of natural forests and plantations in 1995. From 1990-95, there was a net loss of 5.6 billion acres; however, that rate is slowing.

Sixteen percent of the world's forests are in North America. Canada accounts for more than 50 percent of the forests, but only 25 percent of the timber harvested. The United States, on the other hand, has 35 percent of the continent's forests and harvests 70 percent of the timber. Worldwide, North America accounts for 40 percent of the industrial roundwood used. Mexico makes up a small portion but continues to have a declining forest, mainly due to forestlands being converted to agriculture.

The report further states that after two centuries of decline, the forest acreage of the United States stabilized in the early 1990s. It is important to note that the president's 1998 timber sale plan for federal lands calls for 3.8 billion board feet of timber to be harvested. These numbers are down from 4.18 million board feet in 1997.

In a publication entitled *Changes in Private Timberland*, Ralph J. Alig and David N. Wear wrote, "The most significant landscape changes are projected for the South. The majority of the

tree planting, along with the bulk of timberland conversion to other uses, will occur in this region. Even beyond these changes, the South has the potential to add millions of acres to the timberland base, as well as to substantially increase growth and profit on existing timberlands."

It is not difficult to conclude that the private forestlands of the Southern United States, and especially Alabama, will be expected to produce even more forest products for both worldwide and domestic demand while continuing to maintain their ecological integrity. This underlines the importance of our recent undertaking to speed up Alabama's forest inventory analysis process and move to annual updates. It also indicates that the management decisions family forest owners make today will be the key to the prosperity of our forests in the future.

We must find new incentives that encourage more people to replant and manage their forests. Tax incentives in the area of capital gains, reforestation tax credits, and complete deductibility of forest management expenses are some examples. Incentives alone, however, are not the answer for many small forest owners. They need professional, technical assistance to guide them through the sometimes sophisticated process of land management.

Our partnership between private consultants, state and federal agencies, forest industries, universities and private organizations has served us well, and we need to continue to look at ways to strengthen this process. Only by working together can we effectively bring more people to the true understanding of TREASURE Forest management.

Maintaining our existing programs in fire, insect and disease detection, suppression, and prevention will continue to play an important role by reassuring landowners of two things: their investments will not go up in smoke, and they will be able to effectively prevent catastrophic insect infestation through early detection.

We will always face an ever-changing world. The people of Alabama are changing, and so will the forests and landscape of our great state. Our forests have brought great prosperity to all Alabamians through our economy and our environment. Alabama is truly a great place to live, work and raise a family.

Alabamians enjoy hunting, fresh and salt water fishing, hiking, camping and boating. We also have magnificent scenery and many special places to spend our time. Our environmental quality is second to none. No doubt we will always face increasing challenges, but through working together our forests will continue to enrich our lives long into the future.

Sincerely,

A handwritten signature in cursive script, reading "Timothy C. Boyce". The signature is written in dark ink on a light background.

Timothy C. Boyce  
State Forester

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The Alabama Forestry Commission supports the Alabama Forestry Planning Committee's TREASURE Forest program. This magazine is intended to further encourage participation in and acceptance of this program by landowners in the state. Any of the agencies listed above may be contacted for further information about the TREASURE Forest program.

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**COVER:** A seed tree cut removes all but a few trees per acre. These remaining trees will provide the seeds for natural regeneration. This is the method used on the J.C. Harper, Sr. Estate TREASURE Forest in Wilcox County. Read more about this property on pages 4-6. Photo by Kim Gilliland.

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# A Quality TREASURE

by KIM GILLILAND, Editor

**I**f you talk with Jake Harper for any length of time about his TREASURE Forest, you'll hear the word "quality" mentioned more than once. That's because his objective, "to grow a quality product," is foremost in his management plan for the property.

Harper oversees the 2,100-acre J.C. Harper, Sr. Estate—land that originally belonged to his grandfather. "This is family land," he says proudly of the property in Wilcox County. The core of the acreage has been in the Harper family since the early 1800s. There are now three heirs who own the property jointly, Jake and his two sisters, Juliette Harper and Rose Snell.

When his father passed away in 1981, the responsibility for managing the property fell to Jake. "There was a lot of timber to work with," he said, "but it wasn't intensively managed." Both Jake's father and grandfather were in the cattle business. Basically the timber had been allowed to grow, with only a few areas cut to provide income for college tuition and other financial needs.

One of the first things Harper did was to start a prescribed burning program. "We're trying to stay on a three-year rotation for burning," he said. He also started taking out the inferior trees, and in just a few instances clearcut areas where mature trees were starting to die and planted seedlings. A decision was made early on to get some professional assistance with the management of the property. This was done through an agreement with Scotch Lumber Company. This cooperative agreement has worked well for Harper. "A big thing with me is getting the work done on a timely basis." Harper says that Scotch has worked with him in this way by prescribed burning, constructing roads, controlling kudzu in problem areas and helping monitor for the Southern pine beetle.

## Natural Regeneration

Although a few areas have been planted, natural regeneration is the key component of timber management on this TREASURE Forest. "On 90 percent of it we're using natural regeneration," Harper said. The goal is to use long rotations and have high quality products like poles and pilings as the end result.

A strategic system of thinning and burning has been the key to making the natural regeneration process successful. When it's time for a final harvest, a seed tree cut is made, leaving 8 to 10 trees per acre. After a crop of new seedlings appears, usually one or two years later, the seed trees are taken out. Sam Woodson is Division Manager of Outside Land Management for Scotch and has worked with Harper for many years. He points out that the strategy used on this property may not be for everyone. "He's managing his timber on a little longer rotation due to the high site index on the land," Woodson said. The stands are currently on a 60- to 70-year rotation to produce a more valuable product. "Now that's not something you would recommend to every private landowner, but due to the high site index you can do that here," he said. According to Woodson, a site index of more than 100 is common on the property.



▲ **Seed tree cuts are made at the final harvest, leaving 8 to 10 trees per acre.**



▲ **Natural regeneration has resulted in thick masses of young pines.**



▲ **Slopes and coves with mostly hardwoods are being set aside for wildlife and aesthetics.**

If there's been a problem with the natural regeneration process, it would be too many seedlings per acre because of prolific seed fall and germination. "Our problem has been a good problem," said Harper. "We've had a great seed fall every year." The red clay soil is conducive to this type of regeneration. Overpopulated stands have been carefully thinned with fire in a few areas, and then regular prescribed burning and herbicides help keep the hardwood competition down. Woodson says using fire to thin seedlings is a very careful process, and should take place in late winter or early spring before new growth appears. "We don't want to kill them by heat at the terminal bud; we want to kill them by heat at ground level," he explained.

Another difficulty comes at thinning time because there are no rows to follow. The problem is solved by cutting narrow strips of trees so the loggers can get their equipment into the stand and then work off the strips.

## Wildlife Management

Wildlife openings and plantings of clovers, wheat, and grasses are an integral part of the property's makeup. Two



▲ **This food plot is surrounded on two sides by autumn olive and oaks planted in tree shelters. In addition, blackberries are abundant around the food plot.**

hunting clubs are active in helping to plant and maintain the food plots. In addition to the food plots, Harper began planting other wildlife trees and shrubs as a permanent source of food. "Every spot I can find I want to try and plant autumn olive," he says, noting that the berries from the bush are loved by wildlife. The sawtooth oak is another favorite species, and he's had success planting these—as well as the autumn olive—in tree shelters. "It's amazing what they'll do," Harper says of the shelters. The moisture retention made possible by shelters is just one advantage that he feels give the trees a head start.

Just as beneficial for wildlife, though, are the numerous hardwood slopes and coves that have been set aside. These provide corridors of irregular shapes for wildlife to live and forage in. Not only do these areas benefit wildlife, but they are some of the most aesthetically appealing places on the property. Bigleaf magnolias, white oaks and yellow poplars are just a few of the species growing along the cool slopes.

## A Quality TREASURE

In addition to Scotch Lumber, Harper has worked with numerous state and federal agencies who have assisted him with land management. This advice has helped him wisely manage what was given to him, and what he hopes to pass on to his children. Quality management, quality wildlife and quality timber products: for Jake Harper that adds up to a quality TREASURE. 🍷

# Editor's Understory

by KIM GILLILAND, Editor

**J**ake and Pam Harper have several goals for their TREASURE Forest, but keeping it in the family is of upmost importance to them. "I want the children to enjoy and appreciate it and learn how to take care of it," said Pam. Their two boys, Jacob, who is 10, and Morgan, 5, enjoy fishing and playing in the creek best of all. At just over 18 months, daughter Claudia is sure to be introduced to the out-of-doors very soon. "I hope they'll take to it like I have," Jake said. According to Pam, the boys would rather have a birthday party at the creek than anything else. Swimming and picnicking are choice activities during the warm months. "They love to play in the creek," she said.

Jake, Pam and their three children live in a beautiful home just outside Camden that was built in the early 1800s. They added rooms on as the family grew, using old wood from abandoned tenant houses on the property to keep the look consistent. The result is a unique blend of old and new, with high ceilings, heart pine floors, and a modern kitchen.

The Harper family has deep roots in Camden, and in the cattle business. Jake's father and grandfather raised cattle on the place, and Jake has followed in their footsteps. He's now expanded that vocation to managing over 2,000 acres of timberland in addition to the cattle operation. When Jake's father died in 1981, the property was divided among six heirs. Three of those have been bought out, so any income from the property is now divided three ways.

Since he grew up surrounded by the cattle business, majoring in animal science at Auburn was natural for Jake. After graduating in 1978, he spent about a year away from home and decided he wanted to return to Camden for good.



*Jake and Pam Harper with son Morgan and daughter Claudia. Not pictured is 10-year-old Jacob.*

While at Auburn Jake met Pam, who was a pharmacy student, and they married in 1983. They are owners of a pharmacy in Camden where Pam is a pharmacist.

Jake and Pam are no strangers to recognition for their management efforts. In 1983 the Harper family was chosen as the "Outstanding Young Farm Family" in Alfa's forestry division and were featured in *Neighbors* magazine. The J.C. Harper, Sr. Estate property was recognized as a regional Helene Mosley winner in 1996. Several years ago Jake was chosen as a member of the Alabama Agriculture and Forestry Leadership Development Program at Auburn. This two-year program prepares young leaders

in Alabama's agricultural and forestry sectors to become more effective spokespersons and leaders for their industries. Jake is one of several TREASURE Forest landowners who have participated in this valuable program. He is actively involved in agricultural organizations like the Cattleman's Association, the Alabama Farmers Federation and the Soil and Water Conservation District Committee.

The Harpers are also generous when it comes to sharing their TREASURE Forest with others. Tours and training sessions have been used in past years to educate others about forestry.

When he talks about the property, Jake points out that he is fortunate he didn't have to start from scratch. Many people inherit cutover or poorly managed land and must wait for years to realize a profit. The Harper property already contained

mature trees that could provide income and the process of natural regeneration could begin immediately.

Since the management of the property is on his shoulders, Jake feels a deep sense of responsibility when making decisions about it on his sisters' behalf. He says he will continue to manage it to the best of his ability using advice from professionals. In the end, though, Jake wants the Harper decedents to reap the benefits of the groundwork that's been laid. "My goal long term is to keep it in the Harper name," he said. "I want to keep it in the family and grow quality products." ♣



# Camping Green

## Responsible Outdoor Behavior for the Primitive Camper

by TILDA MIMS, Forest Education Specialist,  
Alabama Forestry Commission

**A**lthough camping may mean anything from a few days in a luxurious RV to a week of wilderness survival, the lure of outdoor life continues to attract both young and old. Fresh air, glimpses of wildlife, and the smell of breakfast cooked outside are just a few of the rewards of camping.

Modern campsites offer electricity, restrooms, hot showers, grocery stores and even coin-operated laundries, so campers have most of the comforts of home while enjoying hiking, fishing and other activities. But as our everyday lives become more complex, many people are drawn to primitive camping when they need a holiday. Pitching a tent in a remote area, cooking outdoors and living a simpler life for a few days can be a relaxing alternative to the typical vacation and, for many, provides a healthy mental and physical challenge.

In recent years, "Minimum Impact Camping," "Leave No Trace" and "Camping Green" have become catchphrases of responsible outdoor behavior. This philosophy, once summed up as "Take nothing but pictures, leave nothing but footprints," is now widespread.

The following guidelines are measures you can take to practice low-impact camping on your next primitive camping trip. According to the National Outdoor Leadership School (NOLS), the most environmentally friendly way to select a campsite is to move into an existing one, complete with downtrodden vegetation and a blackened stone fire ring.

If you must start from scratch, be sensitive. Locations that attract primitive campers tend to be highly sensitive environments that deserve special care. For a successful back-to-nature experience, selection and maintenance of your primi-

tive campsite requires careful consideration.

Small streams, picturesque hillsides and moss-lined creek banks are beautiful places to camp but may contain delicate water systems that need protection. You can determine how fragile a body of water is by considering the following factors:

- Cold, clear water is more delicate than warm, cloudy water.
- Small water sources are more sensitive than large ones.
- Slow moving water is more delicate than fast; closed systems more than open; intermittent flows more than steady; and high traffic areas more than low. "The most likely to be damaged," says David Cole, a research biologist at the Aldo Leopold Wilderness Research Institute in Missoula, Montana, "are very small, closed water systems like potholes."
- Obey the "200 foot" rule. Keep your distance from a water source to avoid contaminating it. Do all of your washing—body, teeth, dishes, clothes—at least 200 feet from water or drainages, even dry ones. Staying 200 feet or more from lakes, ponds and streams also improves your chances of seeing wildlife enjoying the water.
- Never use your foot or other hard object to clear the area to set up your tent. Bend down and pick up rocks, stones and limbs, leaving natural forest duff.
- Carry your water. Repeated trips to a water source can trample the shoreline and scare away animals. When you do approach the water, follow an established trail and step on rocks whenever possible.
- Dispose of water properly. When it comes time to dispose of wastewater,

the NOLS recommends scattering it when the ground is porous and you are not in bear country. River disposal is almost always a poor choice.

- Swimming is fine if the water source isn't too small or too fragile. In larger bodies of water the dilution factors are so great that the effects of body contact are probably negligible. To be on the safe side, before you take the plunge, scrub down with a damp sponge away from the water to remove sunscreen, bug repellent and body oils.
- Always walk on established trails, even though they may take longer; avoid shortcuts. Rain water will begin using the newly exposed course and may create long-term erosion problems.
- Limit your group size to no more than 10 people. The more people you have, the greater the risk of damage.

Family camping trips provide parents a unique opportunity to teach their children habits that will help to conserve the land's beauty for future campers. If you show respect for the bounty of nature and the fragile areas of the forest, they will accept this approach as the only way. The Camping Green campaign is not intended as a list of rules, but rather as a description of a way of living that is becoming increasingly important to adopt. ♣

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# High Tech Beetle Detection

## *Coming Soon to Your Forest*

by JIM HYLAND, Forest Health Chief, Alabama Forestry Commission, Montgomery and  
BRIAN BRADLEY, Alabama Forestry Commission, Huntsville

S

outhern pine beetle control starts with detection. You have to find them before you can kill them.

The traditional way of detecting SPB infestations (spots) is two people with a map in an airplane looking for red-top pines, and once spotting them, trying to plot the location of the spot on the map. This is all done as the plane flies at 100 mph, 1,500-2,000 feet above the ground, in the heat of the summer, bouncing around with the air currents with a map in your lap. Even with the best trained observers, it is little wonder people question the accuracy of the spot locations. The recent improvement of the Global Positioning System (GPS) led to the possibility of a better way of detecting Southern pine beetle spots.

The GPS unit communicates with satellites orbiting the earth and by "locking on to" several satellites at one time can print out the latitude and longitude of "where the unit is." With the recent increase in the number of satellites, the accuracy of the latitude and longitude location increased, and this encouraged the Alabama Forestry Commission to investigate the use of GPS for SPB detection. The first testing began in the summer of 1995 in the AFC's Huntsville district.

### How It Works

We mounted a Garmin 95-SL GPS unit on the yolk of the aircraft and the pilot ran the unit. Two observers spotted the SPB spots as the pilot flew directly over them and pushed a button on the GPS unit, locating the latitude and longitude

of the spots. This information was stored in the unit. The observers had no maps and didn't have to know where they were. They simply had to be able to identify red needle pines from normal green trees. They also estimated the number of trees in that spot.

After the flight the spot number and latitude and longitude of all spots were printed. This list of latitude and longitude was used to hand plot

the spot location on a topography map. After the spot was on the topo map, the SPB procedure was normal—determine landowner, notify landowner of spot, give control measures and encourage control. The actual hand locating of the spots took a large amount of time and effort. So even though the aerial part of the detection was fast, the ground part was slow; but, the overall accuracy was increased. Toward the end of the summer we discovered that the Alabama Power Company had the topo maps in its computer. The possibility existed that we

could transfer the spot location in the GPS unit to Alabama Power's computer and that information could be printed out into a topo map. This computer system is generally called Geographic Information System (GIS). Essentially, any information in the computer can be overlaid on to a map and printed out in any size. After a series of trials and computer programming updates, the Alabama Power Co. was able to take the GPS data and print a county map of spot locations and numbers, and also print an 8 1/2 x 11 sized blown-up map of each individual spot. This was done in a one- to three-day turnaround, thereby saving time and increasing the plotting overall.

### Pilot Project Successful

This system of detection (GPS) and mapping (GIS) was tested in 1996 in 17 northeast counties using three airplanes. With a portable GPS unit mounted in the plane, regional pilots flew two-mile electronic flight lines over each county, locking in each SPB spot location (latitude and longitude) with the press of a button. Two AFC observers accompanying each pilot identified the active areas and recorded an estimate of infested trees per spot.

Upon completion of each flight, pilots downloaded the location data from the GPS unit and mailed the disks to the Alabama Power Co. (APC) in Birmingham. The APC's Geographic Information Services Section used their computer workstations and digitized topographic maps to plot each beetle spot based on the GPS reading. Stand-alone plotters printed color topo maps pinpointing all active spots in each county. Individual county SPB data was

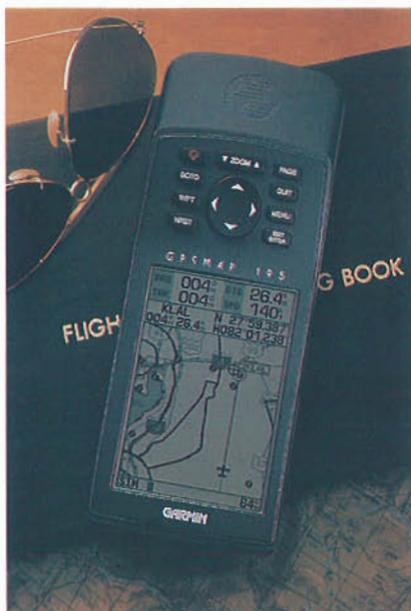


Table 1.

## Pros and Cons of GPS/Computer Mapping

### PROS

- More SPB spots identified.
- More accurate spot location using GPS.
- Less AFC time spent ground checking.
- Quick and accurate plotting of spots onto topographic maps using computer mapping.
- Professional-looking maps produced by APC.
- Increased landowner involvement upon receiving a topographic map of the beetle spot.
- Innovative and positive approach to detect status of forest threats due to beetles.
- Easy determination of percentage of controlled spots.
- AFC reporting simplified.
- Can use inexperienced employees/volunteers as spotters.
- Expenses paid—air hours reimbursed with federal monies.
- SPB flight paths can be printed for documentation.
- Improved accuracy of determining spot ownership.
- Increased landowner confidence in AFC's ability and willingness to control SPB due to improved accuracy.

### CONS

- Requires purchasing GPS unit.
- Requires a contract with APC for mapping services.

stored in APC computers, allowing convenient monthly tracking of spots.

Letter-size topographic maps, with the SPB spot prominently centered on the page, were mailed to respective AFC county personnel. Taking these maps, which were overlain with a forty-acre grid system, to the tax assessor's office, our field people easily identified ownerships. An information packet containing the color map, control measures and potential timber buyers was mailed to each affected landowner.

Monthly flights and a unique numbering system allowed for quick determination of spots controlled. Each county also received a county-wide map showing the spots for each flight, thus providing a quick overall look of problem areas.

The pilot project provided the opportunity to fine tune the process and work through several obstacles. Response from private landowners, forest industry, U.S. Forest Service and Alabama Forestry Commission personnel has been very favorable,

especially for the professional-looking color or topographic maps sent to landowners. The pros and cons of this new system are in Table 1.

### Cost Comparison

What is the cost of this high tech system and how does it compare with the normal sketch map system? The GPS system has both variable and fixed costs. The variable cost is computer generated color maps. This means a contract with Alabama Power to produce the maps. Their costs are by spot or county, which in 1996 averaged \$175 per county per flight. For the usual six monthly flights per county, an annual cost is approximately \$1,050 per county, or about \$55-65,000 per year for the state. Average airplane time is about three to five hours per county per flight. This cost is approximately the same whichever detection system is used. Therefore, aircraft cost is not used in cost comparison.

Equipment cost of the GPS system consists of purchasing GPS units for all SPB aircraft. A computer capability for pilots to use in downloading GPS data onto diskettes and diskette mailers is also needed. The newly updated model of Garmin GPS unit, Garmin 195 GPS, cost \$1,300 each. This includes mounting bracket, antenna and software. Statewide (10 aircraft) the GPS cost is \$13,000. The AFC pilots have access to computers for downloading, so the other cost of mailers is \$1,000. This brings the total cost for GPS detection to

\$69,000 to \$79,000 per year.

The normal sketch map system costs generally include the map costs (aerial photos) of each county. Statewide this was approximately \$125,000. These are purchased from the U.S. Government and are updated every 5-10 years. These photos become outdated in several years, which adds to the frustration and decreases the accuracy of plotting.

Another benefit is seen in Table 2. The Northeast Region had the most spots detected, the largest percent controlled and the least amount of time spent by AFC employees in the year they used the new system. Table 3 shows a comparison of photo-based and GPS-based detection methods.

In conclusion, this GPS/computer mapping-based method increases detection accuracy and efficiency, increases control, reduces man-hours expended, gives a professional product and allows Alabama to set the standard for other states to follow in SPB efforts.

In 1997, the AFC will use the GPS system statewide to give landowners a quality detection method so that this killer of pines will not destroy your TREASURE. 

Table 2.

### Selected Results of FY96 Statewide SPB Project

	SPB Spots	AFC Man-hours	% Spots Controlled
NE Region	636	5,574	96.1%
NW Region	536	6,120	82.6%
SE Region	237	6,015	61.2%
SW Region	221	7,826	85.9%

Table 3. Comparison of Photo-based and GPS-based Detection Methods

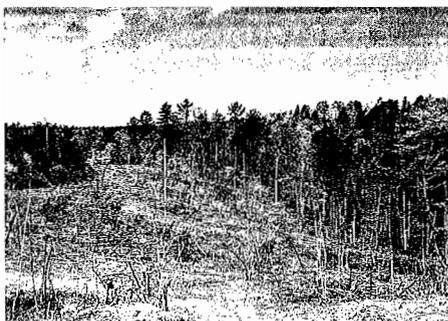
Photo-based	GPS-based
Pilots fly counties with two or more observers.	Same procedure.
Spot locations approximated by observers.	Spot locations pinpointed with GPS units.
Observers record # of trees/spots.	Same procedure.
County AFC people determine spot STR from photos or county road maps.	Alabama Power plots and prints spots on individual topographic maps.
County people locate owners at tax assessor's office.	County people use topographic maps to locate owners at assessor's office.
AFC ground checks to find spots and check accuracy.	Ground checks usually not needed due to GPS accuracy.
Notice sent to owner with STR for owner to find spot.	Packet with color topographic maps pinpointing SPB sent to owners.
County people contact owners to check on spot control efforts.	Monthly flight data used to determine control efforts.

# Timber Harvesting

## A True Story of Multiple Use

by SARA B. BALDWIN, Ph.D., Registered Forester

*Editor's note: The author and her husband, Doug McConnell, are both foresters and managers of a TREASURE Forest in Coosa County. In addition, they operate a horseback trail riding business.*



*The irregular edge of the timber sale area will benefit wildlife.*

It was time for a timber sale. The market was strong, hunting season was winding down, and the trail ride season was months away. In our multiple use forest management scheme, wildlife and recreation are important, but timber production is our primary goal. The forest stands we create and change over time affect habitat and the location and timing of our rides. Thus, our timber management, wildlife management and recreation management become so intertwined that it becomes difficult to tell them apart. The story of this sale is an example of what I mean.

To start, I knew I wanted the harvest to be located on the northeast side of the property. Our management plan for that compartment showed 93 acres of mature mixed pine and hardwoods. Our goal over time was to break up the large acreage of mature timber, diversifying and improving access to more remote compartments. To do this, we planned to harvest the mature pines in stages to capture their value. We would regenerate these areas to provide healthy pine stands of slightly different

ages for income for the next generation of landowners. This would also provide a series of openings that wildlife could use for food and cover in succession. We would leave prime hardwood stands—stream bottoms and rocky upland sites—to protect water quality, leave travel corridors, provide for mast production, and maintain beauty. The diversity would also provide a pleasing trail—riders could have views across openings and different types of woods at each twist of the trail.

### Taking It Step by Step

The first step was to check and clearly mark the property boundary. This gave me a chance to walk the length of the compartment and review where the relative concentrations of pines and hardwoods were located. The natural layout suggested three separate pine sales. The largest pines were in an area that had been thinned 14 years ago. This was adjacent to a 17-acre clearcut that had been replanted. I decided to start here: this would be 1997's timber sale.

The second step was to mark the boundaries of the sale area. I started at the very edge of the prior clearcut. The harvest will create an opening next to the dense cover provided by the now 14-year-old pine stand. I followed this boundary closely. When the site is prepared for planting, a dozier line around the new harvest area will also provide a firebreak for burning the 14-year-old stand in a few years. I turned the boundary at the edge of a steep draw containing a large stream. This would keep the harvest operations off the steep slopes and preserve a scenic stream-side management zone.

As I was marking the SMZ, I ran into a hunter. He told me that two nine-point bucks had been taken in that stream bottom this season. I explained what I was doing, and he was excited at the prospect of hunting a cutover opening between the young pine and the SMZ next year. "But

you're leaving those big white oaks up on the hill, aren't you?" He was referring to a hardwood knoll along the access road.

"Yes," I said. "The loggers will have to clear a loading dock at the edge of the knoll, which means we can put a new food plot next to those white oak." I thought, the loggers will have a level place to work, and the hunters will be happy. I turned the boundary away from the SMZ at the base of the knoll, worked up the hill, across the access road, and back down toward the 14-year-old stand, following a natural break between a hardwood slope and the thinned pine patch.



*Cruising the sale area.*

For my third step, I used a different color flagging to clearly mark the old road and a section of recreational trail that ran through the thinned pines, now the new sale area. These routes would have to be preserved—cleared by the loggers when they finished their work. The road was needed for future work in the 14-year-old stand, and the trail would be developed into a new access road to the south for the next harvest in this compartment (probably five years away), and then stretched further to the next com-

WILLIS FAMILY PARTNERSHIP  
TREASURE FOREST  
1,400+/- ACRES,  
COOSA COUNTY, AL

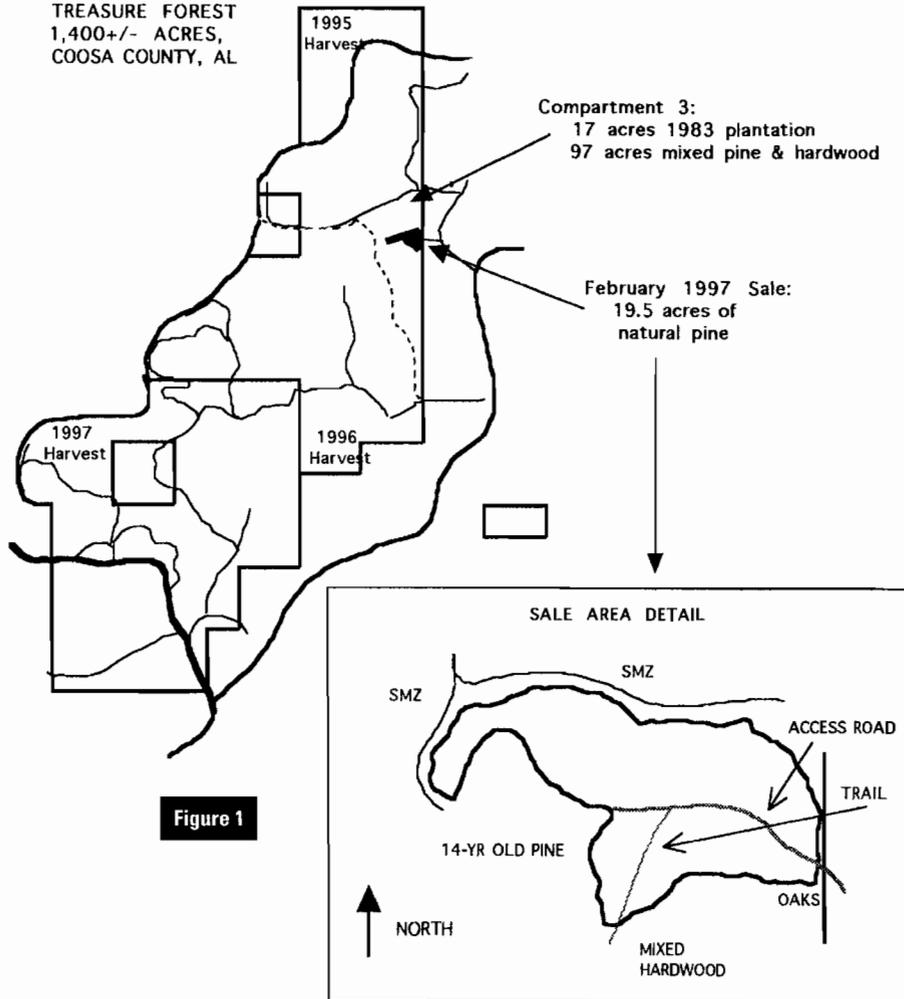


Figure 1

partment west. I decided to abandon another section of trail through the sale area; it had a stretch of bad footing and I will replace it with the planned dozier line around the new harvest.

The next step was to map the sale area. I needed a map to determine the acreage, cruise the timber, and prepare the sale prospectus. I had another chance to talk to my hunter friend.

"How many acres are you going to sell down there?" he asked. "I looked at those boundaries, and I swear, I bet if you spit on a stump it would lay out about like that sale." I told him that this sale was not much worse of a splat than my last two sales had been, and that the irregular shape created edge, which benefits wildlife. I also told him that I had compassed and paced the boundaries and it mapped out to 19.5 acres.

I had been shooting for 20 acres, based on an estimate from the topographic map. It is hard to get a decent price for the landowner with smaller sales. If the sale had been too small, I would have read-

justed further south, sacrificing the hardwood slope and connecting with my next planned pine harvest.

Next, I did an intensive cruise of the sale area, and then prepared the sale prospectus. The prospectus included a map that illustrated the loading area, access road, and trail to be protected. I also included a sample contract which specified the sale conditions and set a performance bond to ensure that clean-up and road work would be completed satisfactorily. I acted quickly, setting a bid date to coincide with the mid-winter peak in timber prices.

Then I waited. But I knew my job would not be over when the deal was made. I was on hand to supervise the work, to meet the loggers and show them what was expected of them. As of this writing I look forward to harrowing and seeding the access road and trail. I will also work on the cleared loading area to prepare it for a summer and fall food plot. In the fall, I will evaluate what type of site preparation is needed and arrange to get it done. Finally, I will contract for planting in the winter.

## Conclusion

The moral of this timber sale story is that even though one use—timber production—dominates our management scheme, I can enhance other forest benefits like wildlife and recreation by making one activity serve several purposes. Multiple-use forestry is like always trying to kill as many birds as possible with a single stone.

Here are the keys to multiple-use:

**Planning:** We have detailed management plans with multiple-use objectives for each compartment. Stands within each compartment have management recommendations that target timber, wildlife, and aesthetics. Yet the plans are flexible enough to allow us to capitalize on unique habitat features or fluctuations in the timber markets.

**Detail:** In setting up this sale, I carefully considered adjacent future timber management work, set-up and ease of logging operations, the arrangement of wildlife habitat (cover, openings, SMZs, the knoll of white oaks, a new food plot) recreational trails, and future timber access. I also communicated specifics to other groups involved: the landowner-client, hunters, prospective buyers, and loggers.

**Follow-through:** Seeding the road, trail and logging deck will prevent erosion and ensure that my wildlife objectives are met. Site preparation and planting will ensure that our future timber management goals are served.

**Patience:** I realize that all my multiple-use goals can't be met at once, or even in a few years. This timber sale was a first step; it will take 15 years or more to achieve the diversity goal for this compartment.

To work toward multiple-use management on your land, I would advise you to start with a plan. It should not be a simple plan, but a long-term, multi-level scheme. Be willing to accept trade-offs. Smaller sales may mean less money now, but more diversity (and more frequent sales) in the long term. Be willing to work hard; this timber sale took a lot more work than mapping off a square 40 and calling the local timber dealer. Multiple-use forestry often requires more intensive, "hands-on" management than does a single scheme. Finally, accept that multiple-use is more complicated. Remember that you are not looking for one right answer, but a combination of answers that feels right to you. ♣

*Editor's note: This is the first in a five-part series on how federal tax laws affect forest landowners. This article will discuss timber sales. Future articles will discuss reforestation, casualty losses, management expenses, and estate taxes.*

### The Scenario

Our fictional landowner, Al McCoy, owns 120 acres of mixed forestland in northeast Coosa County near the town of Goodwater. He inherited 80 acres from his father in 1980, and purchased an adjoining 40-acre tract in 1987. Daddy's tract had been in the family for years and was forested when he died; Al just let it grow until this year. The new tract was an open field that Al had planted to pines in 1988. Al retired last year after a career as a lawyer. He is living off savings of about \$500,000 and his and his wife Jenny's Social Security, but no pension. He paid off the mortgage and owns his house.

### The Timber Sale

Recently Al had been hearing stories about how high timber prices were getting. In fact, he had gotten a few phone calls asking him if he wanted to sell his trees. So last fall he called a consultant forester who had done some work for him in the past and asked him to take a look at the place. The consultant suggested that the trees on Daddy's tract should be sold, so he and Al set up a timber sale. The timber was sold on a sealed bid lump sum basis to Clear Cut Timber Company for a total price of \$240,000. They closed

# A Year in the Life of a Taxpayer

## Part 1

by LOU HYMAN, Resources Planning,  
Alabama Forestry Commission

the deal on December 20, and Al and Jenny had a great Christmas.

### April 15—Tax Day

Al brought all of his paperwork to his cousin Vinnie, a CPA, to get his tax forms done. Vinnie began asking questions about the timber sale. How often did Al sell timber? Was it a "1231 sale" or a "631-b sale"? What was the basis of the trees sold? What were the selling costs? Al had no idea about any of this so Vinnie walked him through it.

The key issue was if the timber sale qualified for capital gains treatment. To do that it had to entail the sale of a capital asset, which usually includes land and timber sales. However, the Internal Revenue Service (IRS) holds that if someone sells timber regularly, they are in the business of selling timber and the sale may be the sale of business assets and may not qualify for capital gains. This is Al's first timber sale, so he might qualify for capital gains treatment. Vinnie then asked Al if he had owned the place for more than one year. Because he had, the timber sale would qualify for capital gains.

Next, Vinnie asked Al about his **basis** in the timber. Basis, Vinnie explained, is the original cost of the trees, plus any improvements. Al asked where someone would get those numbers. Vinnie explained that when someone buys a tract, the cost of the property becomes its basis. The basis is spread out over all the items of value on the tract—the land, the timber, and any structures. But Al inherited his land, he did not buy it. Vinnie said that when land is inherited, the basis is "stepped-up" to the fair market value of the property at the time of death, or when the estate tax is filed. So Al's basis in the timber sold is the value of the timber on the date his father died.

Al did not have an appraisal back then, so he had no idea what the place was worth in 1980. Vinnie suggested that he call his consultant forester and ask for help. The consultant calculated a value for Al by first "growing the trees backwards," using average growth rates to

### Types of Timber Sales

In the story, Al McCoy uses the simplest type of timber sale, a lump sum clearcut. In this type of sale the buyer gives the landowner all the money up front and can cut down all the trees in the sale area. Al could have sold just part of his timber using a marked selection harvest. Here the consultant would have chosen selected trees to be removed so as to produce income and also improve the overall quality of the forest. A selection sale can also

be sold as a lump sum sale, with the buyer paying all the money up front. For tax purposes, any sale that is a lump sum payment is referred to as a "section 1231 sale."

The other main way timber is sold is on a "per unit" basis, often called a "Section 631-b sale." In a 631-b sale, the buyer pays the landowner as the trees are cut and brought to the woodyard. He pays the owner so much "per cord" or "per MBF" or "per ton." Payments are based on the amount of wood delivered and recorded on "load tickets" or

scale receipts.

The main difference between the two types of sales, beside the method of payment, is how the ownership of the trees is transferred. In a lump sum sale, all the trees are transferred to the buyer at the time of the sale. If anything happens to them (storms, pine beetles), it's the buyer's problem. In a per unit sale, the trees belong to the landowner until they are actually cut and hauled out. So if the beetles get into the wood, the logger only has to pay for pulpwood.

## Basis of a Purchased Tract

In the story, Al inherited the tract from his father. If he had purchased it instead in 1980, the basis would be determined from the purchase price of the property. If he had paid \$64,000 for 80 acres, he would deduct the value of the land (about \$275 per acre) to get what he paid for the timber, about \$42,000.

The IRS test for this calculation is "reasonableness." Are the values reasonable? Setting the land value very low (\$50 per acre) to get a high timber value to reduce your capital gains tax would be using "unreasonable" values, and may be challenged by the IRS.

## Basis Allocation for a Partial Sale

In the story, Al sold the timber as a clearcut. How would he handle the basis if he had used a selection harvest and partial sale of the timber? Al and his CPA would have to calculate a **Depletion Unit**, and use that to allocate part of the basis to the part of timber sold. To do this, they would take the total basis (\$42,000), allocated to product types in the forest at time of acquisition, and divide each allocated amount by the total volume of each product in the stand. This would generate a depletion unit of \$/cord and \$/MBF. These unit "costs" would be multiplied by the number of units sold to get the basis of the timber sold. The unused basis would stay attached to the remaining trees and be recovered when they are sold later.

calculate how much timber volume would have been on the place in 1980. He came up with an estimate of 3 MBF and 10 cords per acre. He then looked up a historical price estimate from Timber Mart South, a trade publication that lists timber prices for locations around the South since 1977. From Timber Mart South he found that the average price of pine sawtimber in central Alabama in 1980 was about \$125 per MBF, with a pulpwood price of about \$15 per cord. The consultant estimated that the original value of the timber was \$525 per acre, or \$42,000 for the 80-acre tract. Since they clearcut the tract, all of the basis can be used against the timber sale. So Al's basis in the sale was \$42,000.

The next question Vinnie asked was about Al's **selling costs**. Al said the consultant handled the sale so he did not spend anything. Didn't he pay the consultant, Vinnie asked? Oh yeah, Al paid the consultant to do all the work, 10 percent of the sale, or \$24,000. Did he have to do anything to get the place ready for the sale? Al did have the lines remarked, and that cost about \$800. Al was surprised to learn that the cost of marking the lines for a sale can be deducted against the sale income. What about any costs after the sale, to clean things up? He did have to rerun the front fence and fix the gate, but that only cost about \$215. Vinnie added the figures and told Al the selling costs totaled \$25,015.

This seems like a lot of hassle, Al felt, but Vinnie then showed him how using

## Selling Costs

In calculating capital gains, a taxpayer can deduct normal selling costs from the sales proceeds. A partial list of items that can be counted as selling costs includes the following:

- Sales commissions to consulting foresters.
- Surveying to mark out property to be sold.
- Property line marking.
- Marking out streamside management zones.
- Roads built to give access to sale area.
- Presale prescribed burn or timber stand improvement.
- Road, bridge, and fence repairs.
- Streamside clean-up.
- Any costs incurred to get the property ready for the sale or to clean up after the sale.

capital gains can save a lot of taxes. Under capital gains rules, Al only pays taxes on his "profits." So instead of having the entire \$240,000 taxed, he only has to pay taxes on the sale (\$240,000) less the selling cost (\$25,015), and less the basis (\$42,000), or \$172,985 (net gain). The \$172,985 is added to his other income to figure his taxes, but doing that will boost Al from \$30,000 gross income (from investment interest) to \$202,985. It also raises him from the 15 percent tax bracket to the 36 percent bracket. Vinnie pointed out that capital gains has a tax rate cap of 28 percent, so that the tax on the sale of his timber would be just \$48,435 above his normal tax payment. In addition, Al owed the state of Alabama income taxes of 5 percent of the net gain, or \$8,650.

## Why Use Capital Gains?

In the story, Al felt that developing the documentation for capital gains was a lot of hassle, and he wondered if it was worth it. Vinnie, his CPA, developed this scenario if Al just counted his timber sale as ordinary income.

First, he would have to report the entire amount as income and not be able to use the basis deduction of \$42,000. The IRS has ruled that ordinary income of this type is Self Employment Income and is subject to other taxes. The \$25,015 of selling costs would be a miscellaneous itemized deduction, subject to a floor of 2 percent of total taxable income (\$5,400), leaving a deduction of \$19,615, for a total taxable income (assuming no other deductions) of \$250,385. His total tax bill would be as follows:

Total income tax due (36% tax bracket).....	\$ 74,633.60
Self employment tax .....	\$ 14,734.80
Penalty for not pre-paying taxes (20% of taxes due) .....	\$ 17,873.65
Alabama state income tax .....	\$ 12,519.25
<b>Total taxes and penalties</b>	<b>\$119,761.30</b>

In addition, Social Security rules state that for every \$3 in earned income over the legal threshold, Social Security payments are reduced by \$1. With \$240,000 in earned income, Al and his wife's Social Security payments are cut off for the next year, a loss of about \$20,000.

By using capital gains treatment, Al would still owe \$57,085 in taxes, but using capital gains has saved him \$82,676.30. So using capital gains does pay for anyone selling timber.

## Net Profit

Paying the tax hurt a lot, but Al looked back at the transaction to see what he had left. He sold the timber for \$240,000, paid the consultant forester \$24,000, spent another \$1,015 in out-of-pocket expenses, and paid \$57,085 in taxes. That left him with \$157,900 cash profit on the deal.

The next day his consultant forester called him and began to talk about reforesting the tract...but that is the next story. ♣

*To Be Continued*

# Southern Annual Forest Inventory System: A New Partnership

by STEVE NIX, Forest Resource Analyst, Alabama Development Office

**T**he Alabama Forestry Commission is taking the lead in assessing Alabama's forests. Very real questions are being asked about the AFC's involvement in a timber resource survey. What is the new Southern Annual Forest Inventory System (SAFIS)? Why should the Alabama Forestry Commission be involved and why is this an important function for state government? Let me try to answer some of these questions.

AFC personnel are now measuring plots which, for the last 60 years, have been measured by the U.S. Forest Service Forest Inventory, Southern Forest Experiment Station. The state forester has made a commitment that the next forest assessment will be done by state employed foresters and rangers. These foresters and rangers are taking extensive training and passing exams to qualify as approved USFS crew leaders and surveyors.

## What is SAFIS?

The Southern Annual Forest Inventory System is a major shift from the old Forest Inventory and Analysis (FIA) survey every 8 to 10 years to a continuous annual inventory that measures a percentage of established forest plots each year. This would mean that some new data would be available about Alabama trees every year and a cycle for the entire state would be completed, hopefully, every five years.

The change to SAFIS is needed because of several factors. The old FIA

method provides accurate data for the first two or three years out of a 10-year cycle but quickly becomes dated. The new SAFIS method will provide reliable data on an annual basis and will limit speculation and better focus on modeling efforts. The entire forest will be surveyed (depending on each state's commitment) on a shorter cycle and some data will be forthcoming each year.

SAFIS will be used to gage damage of destructive events better, changes in land use, or harvest and growth. Timeliness has been a key issue with past assessments of FIA. SAFIS will help to address that issue.

In the wake of rapid changes in the Southern timbered resource, continuous and reliable data is of great importance. This data will be designed for uniformity throughout the South and from state to state. Until recently, each Forest Service region had differing survey methods and data formats. There will now be a national standard.

## The SAFIS Partnership

SAFIS in Alabama is a partnership of the Southern Research Station, Region 8 State and Private Forestry, the National Forests in Alabama, the Alabama Forestry Commission, forest industry and Auburn University. This is a collaborative stewardship effort of sharing labor and costs toward a new national direction in areas of resource management. This is also part of a national change from the

traditional approach to Forest Inventory and Analysis state surveys that are on 8- to 15-year cycles.

The list of contributors and their commitments are as follows:

- **USFS Southern Research Station**—Research on critical issues, technical support, administrative support, program guidance, sampling design, remote sensing, data management, maintain quality control.
- **Alabama Forestry Commission**—Administrative support, hire crews and crew leaders, provide a state coordinator, provide vehicles, provide equipment, collect inventory data, assist in quality control.
- **USFS State and Private Forestry**—Financial support, information management, training support, quality control, personnel.
- **Industry and Forest Associations**—Support for the program, financial support, personnel.
- **Auburn University**—Research on critical issues, technical support.

## Who wants the SAFIS Survey?

The Alabama forestry community overwhelmingly supports a forest survey. Forest industry, forest academia, and state and federal forestry agencies need to know what our forests look like. What is the timber inventory? Is the inventory growing? What is being taken from the inventory? What types of species and

products can the inventory provide and what is the health and condition of the forest?

Others want this information as well. Conservation groups are asking for resource data. Pat Byington of the Alabama Environmental Council explains that "a new state inventory is vital to environmentalists. How can Alabama's health, the realities of endangered species, and unique habitats be determined based on old data and projections?" He also states that "a well-done forest inventory/survey would be common ground that all our groups could join forces on to work toward bettering the quality of Alabama's environment."

Alabama forests are the envy of the world. A large number of companies and prospective companies call on state government for information to purchase or process Alabama wood. In the very least the state should be able to steer requests toward available resources or keep away from areas of pressure.

Alabama Development Office Project Manager Nexton Marshall says that a survey "provides convincing evidence to prospects regarding the quantity, quality, and location of wood resources." He and other project managers are asked many times each year about the forest resource and its ability to supply new sources of wood.

Marshall also realizes that the "inventory is a tool that will assist industrial developers in determining what value-

added industries we should attempt to recruit to various locales in Alabama." Alabama raw lumber providers should have Alabama markets of secondary manufacturers. The Alabama Development Office mandate for forest products is to bring secondary manufacturers closer to primary resource providers.

Dr. John Gamble, Director of Marketing and Economics for the Department of Agriculture and Industries, sums it up. "Maintaining an accurate inventory of 'what we have' is critical to agriculture. At a time of gyrating prices and a national policy shift to a market-driven pricing system, accurate survey information is becoming an increasingly critical element in the price equation. Whether we are talking cattle, hogs, cotton, timber, or paper, inventory numbers that reflect the actual on-hand resources are knowledge and knowledge is the key to inventory controls and price parameters.

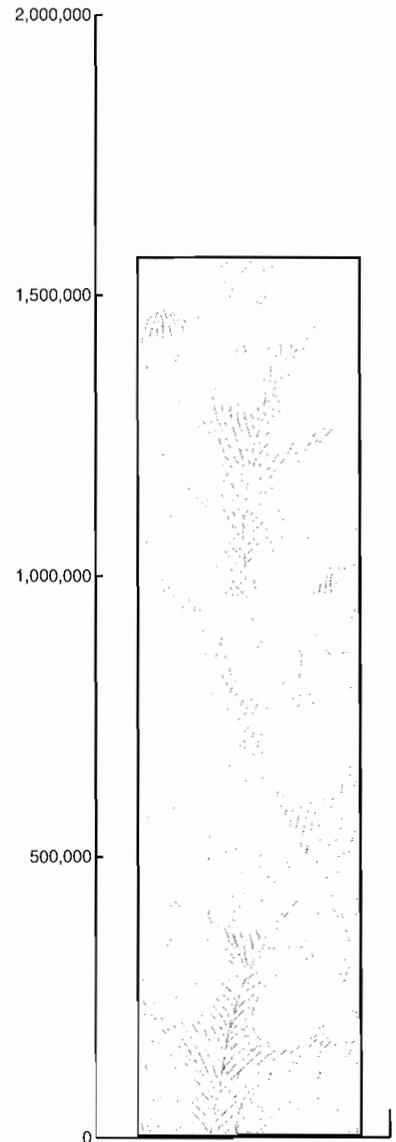
"The State of Alabama has a very real responsibility to monitor its timber resources so that economically sound growing and harvesting decisions can be made. This monitoring system enables the various factors of a sound business plan to be formalized and carried out.

"Bottom line...accurate knowledge relating to the availability of wood to supply an ever increasing cost-sensitive worldwide market sector is a critical variable that can best be accomplished via localized measurement and survey activities." 



## UPDATE

The TREASURE Forest Program has set a goal of having 2 million acres in the program by the year 2000. The chart below shows the number of acres currently enrolled in the program.



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# LANDOWNERS



## LEGISLATIVE • ALERT

### NATIONAL

by PAIGE LEWIS, Washington Office, National Association of State Foresters



**D**espite promises of bi-partisanship and cooperation, the 105th Congress

has seen little substantive action with regard to natural resources legislation. Republican lawmakers have been particularly reluctant to tackle controversial environmental laws after being harshly criticized for their attempts to overhaul such provisions during the 104th session. As a result of this legislative caution, much of the forestry community has shifted its attention to the appropriations process and to the judicial arena, where recent court rulings have altered agency implementation of wetlands regulations and the Endangered Species Act (ESA).

#### Endangered Species Act

The Supreme Court gave a boost to private landowners in a March 19 ruling that affirmed the right of ranchers, farmers and developers to sue for economic injury under the ESA. The Court's unanimous decision overturned a Ninth Circuit Court ruling which said that only people interested in *preserving* an endangered species or its habitat could use the act to challenge federal regulations.

Sens. Dirk Kempthorne (R-ID) and John Chaffee (R-RI) revived their efforts to rewrite the ESA in February by circulating a discussion draft aimed at garnering bipartisan support. The current draft does not contain a "takings" provision, but Kempthorne is expected to release a companion bill to address private property compensation.

Frustrated lawmakers in both the House and Senate attempted to address problems with the ESA by attaching riders to an emergency supplemental bill

meant to aid flood victims in California, Oregon and North Dakota. As proposed, the riders would have exempted nearly all flood control and levee maintenance activities from ESA regulations. After lengthy, emotional debate, the riders were either dropped or substantially modified in both versions of the bill.

#### Wetlands Regulations

Judicial and regulatory rulings have also spawned a flurry of activity around potential revisions of national wetlands regulations. Sens. John Breaux (D-LA) and Kit Bond (R-MO) circulated a letter in March advocating moderate wetland reform legislation. Among provisions the legislators said they would consider are single agency administration of wetlands and increased state responsibility for regulatory administration.

Rep. Sherwood Boehlert (R-NY), chair of the House Water Resources and Environment Subcommittee, has also expressed interest in pursuing wetlands reform once reauthorization of the Intermodal Surface Transportation Efficiency Act is complete.

#### Federal Forest Policy

With regard to federal forests, Western legislators such as Sen. Larry Craig (R-ID), Rep. Bob Smith (R-OR) and Rep. Helen Chenoweth (R-ID) have taken advantage of their committee chairmanships to spotlight forest health issues and advocate for active management on public lands.

Smith made his interests clear early in the session by taking the House Agriculture Committee to Sunriver, Oregon for a field hearing on Democratic Gov. John Kitzhaber's locally designed manage-

ment proposal for national forests east of the Cascades.

In the Senate, forest-related discussions have centered on Sen. Craig and his draft bill to amend the nation's public land management and planning laws. Among the draft's provisions is a mechanism for transferring management authority over limited sections of public land to the states. Craig held six workshop-style hearings on the draft and is expected to release a final version in mid to late summer.

#### State and Private Forestry

The state foresters have focused their legislative efforts on the FY 1998 Forest Service budget and proposed appropriations for State and Private Forestry. Representatives of NASF provided testimony to both the House and Senate regarding the Association's priorities in cooperative fire, forest health, stewardship and urban forestry.

NASF placed particular emphasis on the need for increased wildfire prevention efforts to combat record fire seasons such as that of 1996. Both NASF and the Clinton administration are also supporting substantial increases for the Stewardship Incentives Program. SIP provides financial assistance to private landowners for implementing their stewardship plans.

The arrival of new Forest Service Chief Mike Dombeck bodes well for State and Private Forestry, as Dombeck has repeatedly stated his support for cooperative efforts to improve forest health on all ownerships. Dombeck has already talked with several state foresters and participated in a spring field tour highlighting Maryland's landowner assistance and urban forestry programs.

## International Focus

Nonindustrial private forestlands and landowners received international attention at a recent State Department symposium on sustainable forestry. Several speakers at the event noted that private forests supply a majority of the nation's wood and fiber needs. Long-term manage-

ment of these resources will be crucial if the United States is to meet its global commitments on sustainability. ♣

## ALABAMA

by FRANK SEGO, Legislative Liaison, Alabama Forestry Commission



**F**or a writer who has faced deadlines from his hometown *Tuskegee News*, to the collegiate *Auburn Plainsman* to the metropolitan *Birmingham Post-Herald*, it was no surprise to be faced with one from *Alabama's TREASURED Forests* magazine.

This deadline was quite different because it came one week before the final day of the 1997 regular session of the Alabama Legislature and nothing of any significance had been done prior to that time. Gaining a reprieve on a deadline was no easy task as the magazine had to go to press.

Even with borrowed time, the legislative story was not complete. We had to print the final details of the session. True, the General Fund and Education budgets did pass—so did our deadline—but on the ninth day following the session the governor had yet to sign or veto either budget.

The Alabama Constitution plainly states that any bill presented to the governor within five days before the final adjournment may be approved by the governor any time within 10 days after such adjournment. Failure to get the governor's approval within this time constitutes a pocket veto, and for such a bill to be successful, it would have to be reintroduced in the next session.

### Governor Vetoes Budgets

Then came the tenth day and the governor called a special news conference at the Capitol to announce his veto of both budgets. In doing so he doused the flickering light of a \$954 million General Fund and a \$3.7 billion Education budget.

"Pork," he said, was the central element in his decision. He also cited insufficient funding for children's programs as well as funds he felt were needed for the completion of a prison in Brent.

Pork is a term long familiar to legislators as their source of funding for pet

projects in their respective districts. The practice is as old as politics itself and is not ever likely to change.

The governor's veto thus signals a return of lawmakers for the first of perhaps several special sessions. He did not announce a specific date but did say he would call them back in mid or late August to consider the budgets.

In this writer's memory there has been no other instance where a governor killed both state budgets in one stroke of the pen (or the absence of a pen with which to sign them). The Legislature did come back into special sessions in 1971 and again in 1988 because both budgets failed to pass in the regular sessions. The 1988 session is well-remembered for its failure due to a Senate filibuster on the last day. The reason: an excess of pork barrel projects.

### AFC Had an Increase

The General Fund was precisely more critical for the Forestry Commission since it emerged on the final day of the 1997 session with an increase for fiscal 1997-98. Realizing the necessity for more funding after several years of level appropriations, the governor recommended an addition of \$456,000 over the current AFC budget. Later in the session, the House and Senate gave approval for an additional \$700,000 for fire protection. Then, in the final week of deliberation by the Conference Committee, another \$250,000 was added, allowing the Forestry Commission an increase of \$1,406,000 over its budget for fiscal 1996-97.

In his prepared statement, Gov. James emphasized that the taxpayers expect their money to be spent wisely and he didn't think this Legislature considered that. Therefore, he said, "In good conscience, I cannot sign these budgets as they came to me on the final day of the session."

### Key Bills Fail

The governor also cited the Legislature

for failure to vote on a \$700 million road and bridge bond issue, which he said would have allowed the state to proceed with much-needed projects that would make the same construction much more expensive in the future. It passed the House but never came to a vote in the Senate. Two other bond issues backed by the governor also failed. One dealt with the renovation of state parks and the other for new technology in the schools.

Still another issue biting the dust in the 1997 Legislature was its refusal to consider a voter identification bill hailed strongly by the governor but which died on the calendars of the House and Senate. The measure also failed in a 1996 special session.

The ever-present issue of tort reform again died in the Senate after being passed by the House. The Senate simply refused to associate itself with tort reform as has been the case in every preceding session.

### Official State Tree

One bill that did get through the regular session was HB 533 by Rep. Gerald Willis of Piedmont. This switches the official state tree from the Southern pine to the Southern longleaf pine. The longleaf pine, technically known as *Pinus palustris* Miller, is the species that flourished in most of the state when Alabama was inhabited by Indians.

As all foresters know, the longleaf pine is a tall and stately tree long tied to romantic tales of the Old South. In recent years, however, timber companies have leaned toward other types of pine that grow faster than the longleaf.

Sen. Doug Ghee of Anniston sponsored the companion bill and, along with Sen. Bobby Denton of Tusculumbia, steered it through the Senate on the final night of the session. The governor's signature made it Act No. 97-548.

When next you read this column, we are sure to be knee-deep in special sessions, 'til then . . . ♣

## Renaissance Man Enjoys Challenge of Forest Management

by TILDA MIMS, Forest Education Specialist, Alabama Forestry Commission

To say that Dr. John Mims of Tusculumbia has enjoyed an interesting life would be, at best, an understatement. A WWII pilot, a medical doctor, a medical missionary to Africa, proud father and grandfather, TREASURE Forest landowner and—the finder of Amelia Earhart?

Mims earned national recognition several years ago when a puzzling wartime experience took on new significance while he was viewing a television documentary about TIGHAR's (The International Group for Historic Aircraft Recovery) investigation into the disappearance of Amelia Earhart in 1937.

Mims was studying agricultural science and soils chemistry at Auburn University when WWII broke out. His entire ROTC unit joined immediately, with Mims choosing the Naval Air Corp. "I signed up for hazardous duty because it paid \$500 extra a year. I would have shot my grandmother for \$500 back then," he jokingly says. Already certified as a private pilot, he was soon ready for duty as a naval aviator. He flew in the Pacific, Africa, Europe and Asia before the war ended. After the war, he flew in several experimental projects, including hurricane tracking and flying at night without lighted instruments.

In 1944 Mims and his navigator were on the beach at Gardner Island admiring a huge fish caught by the natives during the night. A homemade aluminum hook as big as Mims' arm was stuck in its mouth and connected to a 25-foot leader made of airplane control cable. The only native that spoke English told them that the metal had come from the wreck of an airplane which had been on the island when his people first arrived in 1941.

As the only search and rescue aircraft on that part of the Pacific, Mims was aware of no missing plane that could account for what they had just seen. They asked around during their flights to see if anyone recalled any earlier unaccounted

for flights. The only possibility anyone could think of was Amelia Earhart in 1937, but they dismissed the idea because she had been headed for How-



*Dr. Mims feeds the catfish in one of his ponds.*

land Island far to the north. When his tour of duty ended he brought home souvenirs of Gardner Island—finely crafted wooden boxes and canoe models in which were inlaid, as decoration, small pieces of polished aluminum from the crashed airplane.

Mims wrote TIGHAR's Earhart Project team after the television documentary and they were fascinated. They interviewed Mims and found that U.S. Navy records agree with his memory. TIGHAR recovered several objects made of aircraft debris on the island and, in short, found their experience remarkably similar to that of Dr. Mims.

Recent assay tests by the Smithsonian revealed that the aluminum from the souvenirs was from an airplane considerably smaller than the types that frequented the area during WWII—in fact the same metal as Earhart's Lockheed Electra plane. Mims is convinced the plane belonged to her. "If not our plane and not a British

plane, where did it come from?" he asks.

Although the mementos and the stories that accompany them are the stuff of family history, the Mims TREASURE Forest will clearly ensure the greatest legacy to the children and grandchildren of Dr. John Mims and his wife Mary.

After the war John Mims finished medical school and moved to Tusculumbia where he enjoyed a long and rewarding career as a general surgeon that practiced family medicine and gynecology. He delivered 3,500 babies and performed 20,000 operations before he retired.

He bought his first forestland in 1961. "I wanted to reclaim some wasteland and do some experimenting with soils and trees." His early training in soils science at Auburn left him with an interest in experimenting with various species and comparing cropland, pastureland and forestland.

The key to this successful TREASURE Forest is management and common sense, Mims said. "This place is a hobby to me. I love the soil, I love watching things grow. I was a conservationist and an environmentalist before it was popular." His love of this land is evident. He enjoys experimenting with various species including slash pine, walnut trees and a cherry grove. He has established duck houses, bluebird boxes and wildlife food plots featuring sericea lespedeza, clover, oats and wheats.

Today the Mims TREASURE Forest is a beautiful place featuring creeks, catfish ponds, and wildlife openings. A rustic cabin and picnic area is a favorite gathering place for the entire Mims family. John and Mary Mims have three children. Dr. Park Mims is an endodontist in Huntsville. Dr. Rosemary Fisk is a professor of English and literature at Samford University in Birmingham. Their daughter Emy Carlson completed graduate studies in education and lives with her family in Tuscaloosa. 



*Dr. John Mims*

# Eastern Indigo Snake

by TIM L. GOTHARD, Forest Management Chief, Alabama Forestry Commission

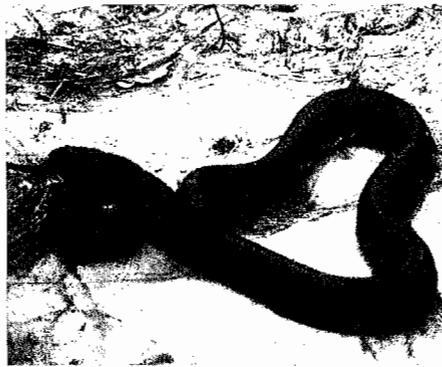
**T**he threatened Eastern indigo snake is large, shiny, and bluish-black. Mature specimens reach 8 to 8 1/2 feet in length. Their coloration and sheen often hint of deep purple. Unlike many snakes that have different colored patterns and/or lighter colors on the belly, the Eastern indigo's coloration is consistent even along the belly. A reddish to cream-colored patch is usually found around the chin, throat, and cheeks. As with most other snakes, the head is not prominent and joins the body with little or no distinct division. Eastern indigos feed on a variety of animals, including other snakes (poisonous and nonpoisonous), but are fairly docile and approachable.

Historically, this species has inhabited dry, sandy regions of the mid and lower coastal plain from Mississippi to the extreme southeast corner of South Carolina. The snake continues to exist in Florida and Georgia, but is an extremely rare occurrence in Alabama, Mississippi, and South Carolina.

The most common type of habitat used by Eastern indigos is dry, deep sand ridges. This habitat often supports the longleaf pine-scrub oak forest type. This same type of habitat is preferred by the gopher tortoise. In fact, the Eastern indigo snake and gopher tortoise often share living quarters. A 1978 study in Georgia

located 108 den sites, and 77 percent were located in gopher tortoise burrows.

Although some people doubt that the Eastern indigo continues to exist in Alabama, others feel that some snakes remain in scattered locations. Uncon-



firmed sightings are still reported on occasion. Numerous factors have been suggested for their decline. Collection for the pet trade has physically removed many Eastern indigos from the wild and has been directly attributed to declines in south Florida populations. As well, land uses such as farming, development, and certain types of intensive silviculture have been cited as detrimental when employed on the Eastern indigo's habitat.

Forest management practices can, however, be conducted in a way that provides benefits to the Eastern indigo. Thinning and prescribed burning to control midstory trees

and shrubs, maintain open habitat, and promote low herbaceous plants and grasses benefit the gopher tortoise and in turn benefits the Eastern indigo. Longleaf pine can be retained or established when appropriate and will allow more judicious use of prescribed burning than with other pine species, especially when longleaf is young. When choosing site preparation methods, favor low intensity site prep when feasible. When mechanical site prep is used, protect gopher tortoise burrows from equipment damage. When windrows are constructed, leave all or some unburned. Research has shown that Eastern indigos will readily use unburned windrows for denning and prowling sites. ♣

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- U.S. Fish and Wildlife Service. **Endangered and Threatened Species of the Southeast United States (The Red Book)**. Prepared by Ecological Services, Division of Endangered Species, Southeast Region. Washington, D.C.: Government Printing Office, 1992.

## Malone Named Executive Director of TREASURE Forest Association

**J**ames D. Malone of Mobile has been named executive director of the Alabama TREASURE Forest Landowners Association. He began work in this capacity on May 1.

Malone, 46, is a native of Mobile County and has owned forestland since the early 1970s. He and his wife, Joan, own 156 acres near Chunchula that was certified as a TREASURE Forest in 1993. The Malones were the 1995 state Helene Mosley winners. Malone has served on the ATFLA Board of Directors since January 1996.

One job of the executive director will be to guide the ATFLA into a self-supporting entity. For this to happen, Malone says, new membership in the organization is essential. "It is necessary not only for the financial support, but also as a means of reaching other landowners and interested individuals with the TREASURE Forest message."

Malone says he is open to ideas on how the Association can grow and better serve the landowners of the state. He may be reached through the ATFLA office at 334-264-3236. ♣

# TREASURE Forest Awards Program Marks 20th Anniversary

**1997** marks the 20th anniversary of the Helene Mosley Memorial TREASURE Forest Awards. The awards, sponsored by the Alabama Forestry Planning Committee and the W. Kelly Mosley Environmental Awards Program, recognize outstanding TREASURE Forests across the state, especially with respect to their educational value and use.

W. Kelly Mosley is the owner of Pineland in Marengo County, which was the first certified TREASURE Forest. The Helene Mosley Memorial TREASURE Forest Awards are in memory of his late wife.

Four regional selection committees composed of representatives from various member agencies and groups of the Alabama Forestry Planning Committee will review nominations and select regional

winners. Each of the four winners will be formally recognized at the 14th Annual Alabama Landowner and TREASURE Forest Conference Banquet in Huntsville on October 2. Regardless of the outcome of the selection process, it is quite an accomplishment just to be nominated for this prestigious award. Each of us should find an opportunity to congratulate the 1997 nominees for a job well done. 

## 1997 Helene Mosley Memorial TREASURE Forest Awards

### REGIONAL NOMINEES

#### NW REGION

**Bob Blanks** — TF #47  
Residence: Rogersville  
Land: Marion Co.  
Acres: 103  
Objectives: Timber and Wildlife

**Lee Goar** — TF #918  
Residence: Haleyville  
Land: Pickens Co.  
Acres: 480  
Objectives: Wildlife and Timber

**McGiffert Farm** — TF #708  
Residence: Tuscaloosa  
Land: Tuscaloosa Co.  
Acres: 1,398  
Objectives: Wildlife and Timber

**Dr. Robert D. Mathews** — TF #72  
Residence: Sheffield  
Land: Colbert Co.  
Acres: 372  
Objectives: Timber and Wildlife

**George and Sandy Morris** — TF #922  
Residence: Tuscaloosa  
Land: Bibb Co.  
Acres: 187  
Objectives: Timber and Wildlife

**L.C. and Kaye Steedley** — TF #1111  
Residence: Millport  
Land: Lamar Co.  
Acres: 405  
Objectives: Timber and Wildlife

**Faris E. Taylor** — TF #568  
Residence: Russellville  
Land: Franklin and Colbert Co.  
Acres: 29  
Objectives: Wildlife and Timber



#### NE REGION

**Jack McQuinn** — TF #938  
Residence: Huntsville  
Land: Jackson Co.  
Acres: 900  
Objectives: Wildlife and Timber

**Frank Mason** — TF #163  
Residence: Mentone  
Land: DeKalb Co.  
Acres: 3,000  
Objectives: Wildlife and Recreation

#### SW REGION

**Robert and Carolyn Brown** — TF #336  
Residence: Creola  
Land: Washington Co.  
Acres: 690  
Objectives: Timber and Wildlife

**Emmet Gaston** — TF #930  
Residence: Grand Bay  
Land: Mobile Co.  
Acres: 1,412  
Objectives: Timber and Wildlife

**A.A. Nettles, Sr. Properties, Ltd.** — TF #950  
Residence: Peterman  
Land: Monroe  
Acres: 2,588  
Objectives: Timber and Wildlife

#### SE REGION

**Walter B. King** - TF #120  
Residence: Luverne  
Land: Crenshaw Co.  
Acres: 534  
Objectives: Timber and Wildlife/Recreation

**Dr. Robert Parker** - TF #114  
Residence: Millbrook  
Land: Elmore Co.  
Acres: 405  
Objectives: Timber and Wildlife/Recreation

**Johnny and Beverly Taylor** - TF #1039  
Residence: Goshen  
Land: Pike Co.  
Acres: 854  
Objectives: Timber and Wildlife/Recreation

# Understanding Wood Composites and Engineered Wood Products

by JIM GOBER, Alabama Forestry Commission, and  
KEN MUEHLENFELD, Auburn University Forest Products Development Center

The terms “composites” and “engineered wood products” have been used very loosely in the forest products industry and they can mean different things to different people. In some circles the terms are almost interchangeable, while in others the categories are quite distinct. There probably is no right or wrong application of these terms, because in the broadest interpretation all of these products are certainly “engineered” and are also “composites” of wood and other materials. For purposes of organizing this discussion, however, we will herein refer to composites as those non-structural products made from small wood particles or fibers. Engineered wood products will include structural products made from lumber, veneers, strands, or flakes. Taken together, this family of products includes a wide array of wood products that are used for everything from commercial construction to decorative moldings.

The use of composite and engineered wood products has exploded in recent years. While some of these products have actually been around for a long time, their popularity increased dramatically during the 1980s and 1990s. There are a number of factors that have contributed to the success of these products; however, two in particular stand out. First, many of these products make much more efficient use of wood than the conventional products they are replacing. This feat is accomplished by using either a greater portion of the tree in the finished product or by using smaller or less valuable timber as raw material. Some even use wood waste residuals that are by-products of other manufacturing processes. The second reason for their growth in popularity is that many of these products are just plain superior in their performance to the conventional alternatives. Because the properties of these products are largely engineered to meet the requirements of the application and because they are highly consistent in both their appearance and

performance, many consumers have developed a real preference for composites and engineered wood products.

While the recent past has witnessed very strong growth in composites and engineered wood products, the future promises more of the same. Growing worldwide demand for wood products, increasingly tight timber supplies, and continuing developments in product technology suggest a bright future for this family of products. Emboldened by the successes of the recent past, forest industry researchers are investigating a whole new array of composites and engineered wood products. These include composites of wood and plastics, wood and other natural fibers, wood and metals, and wood and various inorganic materials. Where this research will lead, one can only imagine.

In order to provide the reader with a better understanding of the various composite and engineered wood products that are already commercially available, a brief description and discussion of each is provided below.

## Wood Composites

**Particleboard**—Particleboard is a non-structural panel product made from small particles of wood that are bound together with resin. The source of the raw material may be from roundwood or from wood products residuals such as chips, shavings or sawdust. Either softwoods or hardwoods may be used, depending upon the product properties being sought. The wood particles are typically bound together with an interior-grade resin, commonly urea formaldehyde.

Particleboard is used in a variety of industrial products, including furniture, cabinets, counter tops, door cores, and others. The product is also often used in construction as a flooring underlayment, where it will be covered with carpet, tile, or vinyl flooring. Particleboard can be purchased in various panel sizes and in typical

thicknesses of 3/8 up to 1 1/2 inches. Product density can range from about 28 lbs./ft.<sup>3</sup> up to 50 lbs./ft.<sup>3</sup>, depending upon the intended application.

Particleboard is a product that has been around for a long time, both in Europe and the United States. It emerged as a major product segment in the U.S. during the 1950s. It has been subject to ups and downs in popularity, but has recently seen slow but stable growth. An interesting recent innovation is particleboard bonded with cement, which can be used as an exterior wall or roofing product.

**Medium Density Fiberboard (MDF)**—MDF is a non-structural panel product made from wood that has been reduced to individual fibers or fiber bundles. Raw material is usually processed in a refiner, much like in a pulp mill. Again, either softwoods or hardwoods may be used, and the source may be roundwood, wood products residuals, or various combinations thereof. The binding agent is generally an interior-grade resin, with urea formaldehyde being the most common.

MDF is used in a variety of industrial applications, including furniture, cabinetry, molding, millwork, and door skins. A variety of panel sizes are available, and typical thicknesses range from 3/16 to 1 1/2 inches. The product density is usually in a range of about 44 lbs./ft.<sup>3</sup> to 58 lbs./ft.<sup>3</sup>

MDF was developed in the 1960s but really did not gain widespread acceptance until the 1980s. Since then, the growth in demand for this product has been phenomenal, not only in the U.S., but worldwide. Because of the smooth surfaces and homogeneous profile of this product, manufacturers have found that they are able to produce excellent finishes and molded edges that rival solid wood. The product not only substitutes for particleboard and other non-structural panel products, but is also being used as a lum-

*(Continued on page 22)*

## Understanding Wood Composites and Engineered Wood Products

*Continued from page 21*

ber substitute for molding and millwork applications. Continued strong worldwide growth in demand for MDF is expected.

**Hardboard**—Hardboard is a medium to high-density non-structural panel product that is made from wood fibers and fiber bundles. Both hardwoods and softwoods may be used in the manufacture of hardboard, and the wood source may be either roundwood or wood products residuals. Hardboard differs from most other composites in that the natural lignin found in the wood is the primary binding agent. A small amount of resin is normally added, and this is typically a phenol formaldehyde resin.

Most hardboard is intended as an interior product, although some exterior sidings are made from hardboard that has been factory primed. Other applications include wall paneling, pegboard, furniture components, underlayment, and a variety of industrial uses. The product is available in various panel sizes and common thicknesses range from 1/8 up to 1/2 inch.

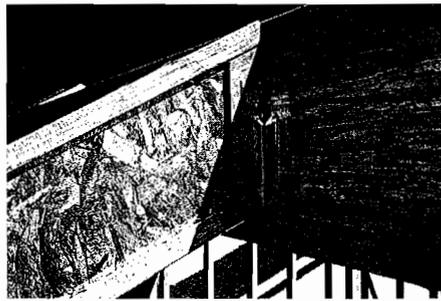
Hardboard is a product that was invented in the U.S. in the 1920s by William H. Mason. He formed a company to make his new product, which later became known as the Masonite Corporation. Hardboard demand grew steadily until the late 1970s and has declined somewhat since. The market in recent years has been stable, but little growth is expected.

Other composite wood products of note include insulation board, cement-bonded particleboard, and gypsum fiberboard. Insulation board is a low-density fiberboard product used in wall sheathing and sound insulation. Cement-bonded particleboard, as the name implies, is a particleboard panel that is bonded with inorganic cement. It is used for exterior wall surfaces and in various roofing products. Gypsum fiberboard is a product which is used as a substitute for conventional gypsum wallboard. It is increasingly popular in Europe and is made primarily from recycled wood fibers that are bonded together with gypsum.

### Engineered Wood Products

**Plywood**—Plywood is a panel product that has been around for so long that most people don't think of it as an engineered wood product, but it really is. Wood veneers are bonded together in such a way

that the strength and appearance of the product is engineered. Veneers are generally produced on a rotary lathe from higher-quality logs. It may be made either from softwoods or hardwoods, and may be either an exterior or interior product, depending upon the type of glue used. Most softwood plywood is bonded with phenol formaldehyde resin, which is an exterior-grade glue. Most hardwood plywood is generally intended as an interior product and will be bonded with a urea formaldehyde resin.



*Wood I-beam rafter and parallel strand lumber (PSL) beam. The wood I-beam is made of laminated veneer lumber (LVL) and oriented strandboard (OSB).*

As a rule, most softwood plywood is intended for construction applications, including wall and roof sheathing, flooring, exterior siding, and concrete forming. Softwood plywood is also used in a variety of industrial applications. Hardwood plywood is commonly used in furniture and cabinetry, wall paneling, decorative flooring and industrial products. Plywood is available in a number of panel sizes, and thicknesses of 1/4 up to 1 1/8 inch are commonly available. Plywood has a very high strength to weight ratio, with densities usually running in the range of 32 lbs./ft.<sup>3</sup> to 38 lbs./ft.<sup>3</sup>, depending on the wood species used.

In North America, softwood plywood has struggled in recent years because of the growth of oriented strandboard, which can be substituted in many applications and is less expensive. Further declines in softwood plywood production are expected in North America because of the increasing scarcity and cost of plywood quality logs. Much of the world's supply of hardwood plywood has been made from tropical woods, and the long-term supply of these resources is also questionable. Plywood remains a very important product segment and has performance

advantages in many applications. However, because of the current problems, it is not considered a growth industry.

**Oriented Strandboard**—Oriented strandboard (OSB) is a structural panel product that has enjoyed phenomenal success during the last 10 to 15 years. The product is made from thin wood strands or wafers that are bonded together with an exterior-grade resin, normally phenol formaldehyde. OSB can be manufactured from either softwoods or low-density hardwoods and is typically made from smaller, low-quality trees. The OSB manufacturing process starts with roundwood; the product cannot be made from chips or other wood product residuals.

OSB is an exterior-grade panel that is used almost entirely in the construction industry. The product substitutes for softwood plywood in many applications such as wall sheathing, roof decking, sub-flooring, and exterior siding. As the markets for OSB continue to develop, the product is finding its way into increasingly varied applications. OSB is available in a variety of panel sizes and in thicknesses of 1/4 up to 1 1/8 inch. The product density usually ranges from about 38 lbs./ft.<sup>3</sup> to 44 lbs./ft.<sup>3</sup>

Because of very good product performance and lower manufacturing costs, OSB has steadily captured market share from plywood. Although the product was originally developed in North America in the early 1960s, it did not really become much of a factor until the mid-1980s. Since that time growth has exploded, and this product now accounts for about 40 percent of the structural panel market in North America. This growth in market share is expected to continue to about the 70 percent level or better in the coming years. OSB has been primarily a North American phenomenon up to this point in time, but it is now starting to become accepted in overseas markets as well.

**Glue-laminated Timber**—Glue-laminated timber (glulam) is an engineered construction product made by adhesively bonding individual pieces of solid sawn lumber together. The product is usually made from softwood lumber bonded together with exterior grade resins, typically resorcinol formaldehyde. This product is very closely engineered in that the strength and stiffness of each piece of lumber being laminated is known, and each piece is placed within the construc-

tion so that the end properties of the beam are predetermined.

Glulam is usually used in heavy load-bearing applications, both in residential and commercial construction. It is a very versatile product in that the mechanical properties and the physical form can be varied widely to meet the application needs. Forms range from straight beams to complex curved arches. Glulam beams and arches are often valued for their appearance as well as their structural performance. The combination of lengths, widths and depths of glulam members can range widely. This product is not typically a commodity, but is designed and manufactured to meet specific customer requirements.

Glulam has been in common use in the United States for over 60 years. The growth of this product has been slow, but steady, and this is expected to continue in the future. Because of the strength, versatility and beauty of glulam products, their future in the construction market appears to be assured.

**Laminated Veneer Lumber**—Laminated veneer lumber (LVL) is an engineered lumber product that is manufactured primarily from rotary-peeled softwood veneers. The product is made similar to plywood, except that the veneers are typically oriented so that the grain of all veneers runs in a length-wise direction. The mechanical properties of the veneers being used are usually known and the recipe for the LVL is engineered so that the desired product properties are achieved. The product is normally made in long billets that are later sawn into the sizes required by the customer. An exterior grade resin, usually phenol formaldehyde, is used to bind the veneers together.

LVL is most widely used in construction applications, both residential and commercial. LVL is widely used as beams and also as a component of wood I-beams, another engineered wood product. LVL has also been very successfully used as scaffold planking. LVL can be purchased in thicknesses of 3/4 inch up to about 3 feet and in almost any length to about 60 feet or more. Depths normal-

ly run in the 4- to 12-inch range, but much wider depths can also be specified.

LVL was pioneered in the U.S. during the 1970s by Trus Joist Corporation, who was the sole manufacturer in this country for many years. As more manufacturers have come on-line, the product has grown strongly throughout the late 1980s and 1990s. Continued growth is expected due to the favorable mechanical properties of the product and the wide variety of sizes possible.

**Parallel Strand Lumber**—Parallel strand lumber (PSL) is an engineered lumber product that is made from narrow strips of veneer that are bound together with an exterior resin, normally phenol formaldehyde. The product can be made from either softwoods or low-density hardwoods. The manufacturing process requires timber of sufficient size and quality that can be peeled on a rotary lathe. As in the case of LVL, parallel strand lumber is made in long billets that are subsequently resawn to sizes required by the customer.

PSL is used primarily in commercial construction for beams, columns, and headers. Because most natural wood defects are removed and because all of the wood grain is aligned in the longitudinal direction, PSL has very impressive mechanical properties with regard to strength and stiffness. The product also has a strong, unique grain pattern that provides favorable appearance characteristics. PSL can be purchased in custom sizes of up to 11 inches thick, 18 inches wide, and 66 feet long. The product is about 15 percent denser than the original wood from which it is made.

PSL was pioneered in the 1980s by MacMillan Bloedel in Canada. The product is currently being produced by only one manufacturer, Trus Joist MacMillan,

a joint venture of MacMillan Bloedel and Trus Joist Corporation. The product is marketed under the trade name Parallam. Currently the market for PSL is limited, with only two production facilities in the United States. Because of its favorable characteristics, however, this product does appear to have growth potential.

**Oriented Strand Lumber**—Oriented strand lumber (OSL) is a structural lumber product made from wood strands. Both softwoods and low-density hardwoods can be used to manufacture the product, although it is currently being made only with hardwoods. The manufacturing process is similar to OSB in many respects, with the wood strands being derived primarily from small, low-quality timber. By controlling the strand geometry and alignment, along with resin content and compression ratio, the properties of this product can be closely engineered. Again, this product is made in long billets that are subsequently resawn to customer requirements. An exterior grade isocyanate resin is used to bind the strands together.

The mechanical properties of OSL are not as good as those of PSL; however, the price is significantly less. This economic advantage opens up additional markets for this product. Although this product is still very new, it has found uses in both construction and industrial applications. Light-duty beams and rim-boards seem to be the major construction applications. Industrial uses include door and window components, as well as

frame material for upholstered furniture. As this product evolves, many other applications are likely. The product is produced in sizes up to 5 inches thick, 18 inches wide, and 35 feet long.

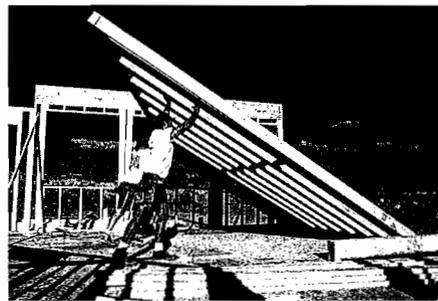
OSL was also pioneered by MacMillan Bloedel during the late 1980s. The sole

manufacturer of this product, sold under the trade name TimberStrand, is currently Trus Joist MacMillan. Currently the mar-

*(Continued on page 27)*



*Wood I-beam floor joists supporting oriented strand-board (OSB) flooring.*



*A wall section made of oriented strand lumber (OSL) being erected on a construction site.*

Photos courtesy of Trus Joist MacMillan.

# T H I N N I N G

## Pine Plantations

by BRUCE DEHAAN and SAM HOPKINS, Gulf States Paper Corporation, Tuscaloosa, Alabama

**T**he first consideration before thinning is to decide what your objectives are in managing your plantation. Thinning is normally used when your objective is to grow sawtimber. Reducing the number of stems in the stand allows the remaining trees to grow faster with the growth concentrated on the highest quality stems. Another valuable result of thinning is that it produces income from your forest without harvesting all the trees in the stand and regenerating on a shorter growing cycle.

Unless you are knowledgeable about forestry, it is helpful to get professional assistance from county agents, foresters, local forest industry landowner assistance programs, or forestry consultants. When you are evaluating professional assistance, look for someone interested in listening to your objectives and providing a job that will meet your goals. Remember that plantations can have very different characteristics and that the prescribed treatment must be tailored to your particular situation. It is often helpful to have the consultant show you comparable jobs he or she has handled in the past so you can visualize how the thinning will look when complete.

### Options for Thinning

The method and intensity of thinning are important considerations. The most widely used type of thinning is a selective approach called "thinning from below." Thinning from below concentrates on selecting the smaller, slower growing and poor quality trees for removal. This method is often used together with a systematic row removal (row thinning) to reduce stocking and provide corridors to allow skidding without damaging the residual trees. With the low thinning-row thinning combination,

every third or fifth row is usually removed and trees within the remaining rows are selectively harvested using the thinning from below strategy.

Residual density after thinning normally leaves from 100 to 250 trees per acre depending on tree size. Young plantations, 10-20 years old with smaller trees, would be on the upper end of the



*Row thinning-low thinning typically removes every third or fifth row and selectively removes trees in between.*



*Thinning pine plantations like this one provides timber production advantages and benefits a variety of wildlife.*

spectrum. Older plantations, 20 years plus with larger trees, would be on the lower end of the spectrum. The exact stocking level to leave should provide enough room for the trees to grow and reach an intermediate or final product goal, while not hurting the future quality of the stand. If too few trees are left, this

will lower total yield and possibly allow branches to become too large. Leaving too many trees will not allow the future product size to be reached before crowding causes slowed growth and possibly mortality. Keep in mind that a minimum volume must be removed to make the operation commercially viable. In many instances, a minimum of four cords per acre is required before a commercial harvest can be performed, even though the individual trees are of commercial size. This amount may differ to a degree based on location and specific contractor harvest requirements.

Carefully consider your options for how to determine which trees will be removed and which trees will remain to grow. One method is marking the stand before the logger starts work by using paint to designate either the cut or leave trees. Marking the trees to be left helps focus on the stand's future rather than focusing on trees to be removed.

Another method of selecting trees is to have the logger decide which trees to remove as the logging takes place. This method avoids the cost of marking, which could be 10 percent of the revenue received from the thinning. To use the operator-select method, an experienced logger with a good understanding of the landowner's objectives is critical. Have the logger show you comparable tracts he or she has cut to help ensure your satisfaction with the job. Closely monitoring the operator-select harvest is also advisable.

One of the final activities is contracting with a timber buyer to purchase and thin the plantation. Advertising with reputable buyers for competitive bids will normally get top dollar. Negotiating with a reputable buyer is also an option. We strongly advise developing a written contract with

*(Continued on page 27)*

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# TURKEY MANAGEMENT

# Basics

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by JOE MCGLINCY, Southern Forestry Consultants, Inc., Bainbridge, Georgia

**C**ontrary to popular belief, you do not have to own thousands of acres to have a healthy, huntable turkey population. The right few acres managed properly can create surprising results and many an enjoyable spring morning in the turkey woods. Don't expect the turkeys just to show up on your land. Getting them there and keeping them until the spring season rolls around requires that you follow the basics of turkey management. Very simply put, the basics are: 1) You must raise them in the spring and summer, 2) You must provide a stable food source during the winter, so that, 3) You can hunt them in the spring. Sounds simple, doesn't it? Well it isn't exactly rocket science, but turkey management on small properties—or large ones for that matter—requires effort and implementation of some basic wildlife management practices.

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## Providing Habitat and Food

Let's start at the beginning. If you expect to have turkeys around to hunt in the spring, it all begins with successful nesting and brood-rearing seasons. Hens entering the nesting season need a highly nutritious diet to build the energy it takes to make it through the rigorous egg-laying and incubation period. Their diet during the early spring consists mostly of green vegetation brought on with the "green-up" of spring. Late winter prescribed burning enhances this green-up and the vegetation following a burn is succulent and high in nutrients. Hens also utilize areas that were planted as winter food plots for deer. Snail intake is also high during this period, as the hens need the extra calcium during the egg-laying period. When hens begin incubating their eggs, they usually leave their nest once



*Food plots can help provide the nutrition hens need before entering the nesting and brood-rearing seasons.*

each day to feed. Favorite foods of incubating hens are blackberries and dewberries. These high energy fruits contain a lot of water and hens can fill up on them quickly. Management that favors these soft mast producers (such as burning on a two-year cycle) will help nesting hens.

The nesting season is the most dangerous time of the year for turkeys. Many nests are lost to predators such as raccoons, opossums and crows before they ever get a chance to hatch. Hens are also lost during this period to bobcats, foxes and feral dogs that catch them while they are incubating their eggs. Landowners and managers should encourage sport hunting and trapping of these predators to reduce their populations as much as possible prior to the nesting season.

For the poults that are lucky enough to hatch, their battle has just begun. The first two weeks of life are a real chal-



*Openings along woods roads can be used to provide important grassy areas for turkeys.*

lenge. Loss to avian predators such as hawks and owls can be high. Sufficient cover must be available for the hen and her brood to prevent abnormally high losses. A good prescribed burning program should incorporate techniques such

*(Continued on page 26)*

## Turkey Management Basics

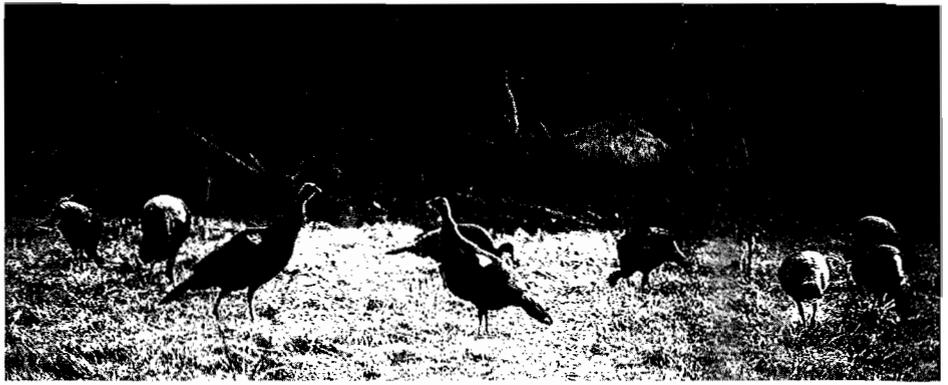
*Continued from page 25*

as plowing around good cover patches or leaving an unburned corridor meandering through the property to provide cover for young turkey poults. These unburned areas are also favorite nesting sites.

Although they are under a constant threat of being eaten, poults must have a highly nutritious diet during the first few weeks of life. Their main diet staple during this time is insects. Insects are high in protein, which is essential for rapid poult growth. A poult's diet during the first two weeks of life will be about 90 percent insects. These insects are found in fallow fields, along woods roads that have been allowed to grass over, and in burned piney woods that have been thinned enough to allow sunlight to penetrate and increase the vegetative ground cover. These three areas, all of which can be produced on small land holdings, provide excellent brood habitats that will be used throughout the summer. Mowing, usually in July, will create new growth and make these grassy areas more productive. By late summer the rapidly growing poults' diet will shift toward grass seeds and other seeds that are available before the mast crops such as dogwood berries and acorns begin to fall.

A stable, nutritious fall and winter food supply is essential if you expect the turkeys to be in your woodlands next spring. There are several reasons for this. First, having a good food supply nearby will prevent the need for turkeys to expand their range to find something to eat. Second, if they have to expand their range, you are no longer able to protect them from illegal harvest. Keeping them on your property assures that they are not illegally killed by an unscrupulous poacher. Third, if they expand their range enough, they may find a suitable habitat elsewhere and never make it back to your property next spring.

How do you provide this winter food supply? First, retain as many mast producing trees on your property as possible. Areas along creeks and streams, often referred to as streamside management zones (SMZs), usually contain mast producers such as oaks, gums, and beech. These high value wildlife areas should be protected when conducting timber man-



*Chufa performs best on new ground. Rotate chufa plantings to different plots every two years.*

agement activities in the uplands. Dogwoods, a favorite turkey food, should also be protected. Second, supplemental foods, usually in the form of food plots, should be considered, especially if you do not think that enough natural food is available to sustain the turkey flock through the winter. The most common food plot item for turkeys is chufa. Chufa, a domesticated cousin to nutgrass, (don't panic—it won't take over your garden!) forms an underground tuber that is high in carbohydrates and is readily eaten by turkeys. Deer use is low but if you have a wild hog population close by, you may need to fence the plot. A herd of wild hogs can lay waste to a chufa patch overnight! Chufas do best on "new ground" and should be rotated to a new plot every two years. Old log landings or pine beetle spots make excellent chufa patches. If you have never planted chufas on your property, turkeys may not take to them immediately. If so, some education may be in order. Pull up some chufas, sprinkle a little corn on them and the turkeys should take right to them.

Supplemental feeding can be used for turkeys. Be sure you are familiar with the state game laws because deer season will be going on during this time and you do not want to get crossways with your local conservation officer! If you do supplemental feed, wheat or grain sorghum seem to work well. Just keep in mind that supplemental feeding is not a substitute for good habitat management.

Now for the test. If everything has gone according to plan, turkeys will still be on your property in March. Just as you get to your property at daylight on a beautiful spring morning, a gobbler sounds off on the back forty, close to the

chufa patch that he, his buddies and the flock of hens have been feeding in all winter. Mission accomplished! From here you can probably take it on your own. Whether you just like seeing turkeys on your property or enjoy the thrill of a spring morning turkey hunt, your management activities during the preceding year will enable you to accomplish your objective.

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### Review

Here is a quick review of the management activities that landowners can implement to improve their property for turkeys:

- Prescribe burn, usually in late winter, every two years.
- Protect some areas from fire to provide escape cover and nesting areas.
- Encourage hunting and trapping of turkey predators such as raccoons, opossums, bobcats, coyotes and crows. This should be done during regular trapping seasons and according to Game and Fish Division regulations.
- Maintain woods roads in a grassy condition and mow roads and fields during midsummer.
- Protect mast producing hardwoods.
- Establish a stable winter food source such as chufa. Plant chufas on "new ground" and rotate to a new plot every two years.

Turkey management is not all that difficult. You raise them in the summer, feed them in the winter so that you can enjoy them in the spring. Don't forget to get your kids involved; they are our land managers and hunters of tomorrow. ♣

## Understanding Wood Composites and Engineered Wood Products

Continued from page 23

ket for OSL is still evolving, but there are many who feel that a product of this type will be the lumber of the future. There is no doubt that the manufacturing process makes very efficient use of wood and yields a product that has many advantages.

**Wood I-beams**—Wood I-beams are products that are made by forming an I-beam with lumber, LVL or PSL as the top and bottom flanges, and plywood or OSB as the web. Therefore, the raw materials for wood I-beams are normally other composite and engineered wood products, although stress-graded sawn lumber is sometimes used. The web material usually attaches to the flanges

within a slot and is glued with an exterior-grade resin.

Wood I-beams are used primarily as floor joists in residential and light commercial construction. The product is very light in weight and can be purchased in long lengths. The narrow web material is often made with knockouts for ease in routing wiring and plumbing during construction. Wood I-beams are available in a variety of widths and lengths, with 10 and 12 inches being very common and lengths up to 40 feet.

Although wood I-beams have been commercially available since the late 1970s, most of the growth in this product has occurred during the last 10 years. This product is now a common sight on residential construction sites across North America. A large number of forest products companies have begun manufactur-

ing wood I-beams, and pricing has become more competitive with solid sawn lumber in recent years. Continued growth in the markets for this product is expected.

## Conclusion

As we have seen, a wide array of wood composite and engineered products are now commercially available. Many of these have already been extremely successful in the marketplace, while others are just now starting up their growth curves. The variety and technological sophistication of these products seems to grow and develop with each passing year. No end to this trend is in sight. While the history of composite and engineered wood products has been interesting, the future promises to be truly exciting. ♣

## Thinning Pine Plantations

Continued from page 24

the purchaser that designates terms of the contract, including method of thinning to be used, terms of payment, duration of the contract and penalties for damage.

Checking the job during the thinning operation and after completion is important to getting the results you expected. Again, a qualified consultant can help with this. Proper tree selection and minimal damage to the residual timber are critical. Meeting your objectives for aesthetics, attention to forestry best management practices (BMPs), repairing roads damaged during logging and keeping lit-

ter picked up in the area are also essential to a quality job.

## Additional Benefits

In addition to timber production advantages, thinning can also benefit many wildlife species. White-tailed deer, Eastern wild turkey, bobwhite quail, rabbits, and some songbirds receive benefits from the vegetation changes that occur due to increased sunlight reaching the forest floor. A flush of new herbaceous and woody growth will take place and provide browse for deer and rabbits. Seed and soft mast production associated with much of the new plant growth benefits quail, turkey and songbirds, as well

as the other species mentioned. Cover for quail and turkey can also be developed. Combining thinning and prescribed burning can help maintain vegetation in the appropriate state to benefit the wildlife species most desired.

Thinning is an important tool for many reasons—some economic, some not. Regardless, you should identify your objectives for the stand, consider the merits of thinning, and act accordingly. If thinning is appropriate, plan ahead. Identify how you should thin to meet your objectives, arrange for assistance with details, and follow the operation. Because never forget, you as the landowner have the most vested interest in the outcome of the project. ♣

# Free Publications

*Landowners: Don't Miss Out!* is an overview for landowners who want to know more about the range of options for managing their forestland. Request a copy from the Alabama Environmental Council, 2717 7th Ave. South, Ste. 207, Birmingham, AL 35233; 205-322-3126.

*Threatened and Endangered Species of Alabama: A Guide to Assist with Forestry Activities* contains photos and range maps for endangered plants and animals in Alabama. Request a copy from Kim Gilliland, Alabama Forestry Commission,

P.O. Box 302550, Montgomery, AL 36130-2550; 334-240-9355; fax 334-240-9390. Limited quantity available.

*Managed Forests for Healthy Ecosystems* describes the concept of ecosystem management and provides examples of how it may apply to your forestland. Request a copy from John Bliss, School of Forestry, M. White Smith Hall, Auburn University, AL 36849; 334-844-1049. Limited quantity available.

The **Little River Canyon Field School** offers workshops and field trips throughout the year. Some examples are nature photography, canoeing, canyon hikes, night hikes, snake and birds of prey programs, and experiencing a frog pond. Request a copy of the workshop and program schedule from the Little River Canyon Field School, 700 Pelham Rd. N., Ste. 216 Ayers Hall, Jacksonville State University, Jacksonville, AL 36265; 205-782-5697.

# Prescribed Fire in the Summer: Another Tool

by ROBERT SMITH, Conservation Biologist and JIMMY ATKINSON, Natural Resource Manager,  
Joseph W. Jones Ecological Research Center at Ichauway, Newton, Georgia

**T**he use of prescribed fire in the summer is receiving increased attention. Summer fire is also called growing season fire, lightning season fire, and ecological burning. Winter fire, also called dormant season or cool season fire, has historically been used by land managers because 1) weather patterns are more consistent and predictable, 2) cooler temperatures make working around fires safer and more pleasant, 3) game and non-game animals typically do not have nests or young that cannot move away from fire, and 4) it is easier to avoid damaging overstory trees. Fire regimes should be determined by landowner and management objectives.

The season of burn is only part of the fire regime and burn prescription; it is usually not the goal and should not be confused with the objective for the fire. The habitat and fuel conditions, the timing between fires, the size and patchiness of fires, weather conditions prior to and during fires, and the ignition techniques may have more influence on the results of a fire than the season of burn. Whether summer fire fits into your burn prescription depends upon your general management objectives and the specific purpose of the fire.

## History

Before modern man fragmented natural habitats and learned to fight wildland fires effectively, fire was common in the Southeast. Fires were started by lightning and Native Americans. Lightning-ignited fires occur in every month of the year. The most common time for lightning-ignited fires is late summer, while the most acreage is burned by lightning-ignited fires in early summer. Native Americans undoubtedly burned in every month of the year also. The Spanish explorers in the 1500s and the English and French explorers in the 1700s described fires that burned for hundreds of square miles and in some cases individual

fires that burned for more than a year. They noted that smoke was constantly in the air. As the Southeast became more populated, the impact of wildfires became unacceptable, and we learned to control them effectively. Smokey Bear's message of preventing all fires appears to be changing to wildfire specifically, which better represents land stewardship issues, including prescribed fire. As prescribed fire became an accepted practice in the South-



*A growing season strip-head fire is being used to reduce fuel loading and top-kill understory hardwoods.*

east, most foresters, wildlife biologists, and land managers used winter fire. Unless there is a compelling reason to burn at a different time, winter fire continues to be used today. Many groups are now advocating the use of summer fire to better mimic natural ecosystem functions with the caveat that a fire during the "natural" season does not necessarily result in a natural fire or natural impacts.

## Natural History

As a result of fire's historical prevalence, many Southeastern plants and animals are adapted to fire, and in some cases depend upon fire to complete their life cycles. Most of the Southeastern pines require bare soil for significant natural reproduction, and fire creates such a seedbed. Two of the pines

found in Alabama are particularly adapted to fire. Pond pine produces some cones that require fire to release their seed; these are called serotinous cones. Longleaf pine generally depends upon fires for establishment, release from competition, and control of brownspot needle blight. Wiregrass in southeastern Alabama requires a summer fire for significant seed production. Other plants, such as running oak and pencil flower, have been noted to produce more flowers and seed in the year of or the year after a summer fire.

Fires produce habitat for many game and non-game species. Periodic fires or other disturbances are necessary to keep forage within reach of a diverse group of herbivores, including white-tailed deer and gopher tortoises, and to provide suitable habitat for other animals, such as bobwhite quail. The comparative lack of fire in many Southeastern ecosystems has caused many of the species adapted to fire, such as red-cockaded woodpeckers, gopher tortoises, and Bachman's sparrows, to become increasingly less common.

## Management

Land managers accomplish similar objectives using different tools; summer fire is one tool that is available. Prescribed summer fire is similar to prescribed fire in other seasons in that a burn prescription is developed to help reach a management goal. Summer fire can be used for hazard or fuel reduction, site preparation for seeding or planting, hardwood control, wildlife management, increased visibility and access, and aesthetics.

Under the right conditions, summer fire removes fuel and reduces the potential for destructive wildfire. Site preparation for natural regeneration or seedling planting is probably the most common use of summer fire in forest management. These site preparation fires also help control vegeta-



*Even though the growing buds were exposed during the prescribed burn, both of these longleaf pine seedlings survived this summer fire.*

tive competition and reduce fuel loads for the next fire, both of which increase growth and survival of young pine seedlings. Summer fire is receiving increased attention for forest, wildlife, and natural area management due to its apparent ability to help control understory hardwoods. Summer fire also promotes flowering and seed production of wiregrass and shifts reproductive cycles of other plants.

When used at comparatively small scales, summer fire may also benefit wildlife by producing brood habitat for species like bobwhite quail and wild turkey or increasing available food for understory foragers like white-tailed deer and gopher tortoises. High quality browse for Southeastern deer herds is typically least available in late summer. During late summer, browse plants burned earlier in the summer are typically more digestible and have higher relative nutrient concentrations than nearby unburned or winter burned areas. For similar reasons, summer fire is also used to improve available cattle forage. Summer fire increases visibility and access for recreation, forest management, or wildlife management activities. In some open stands, summer fires produce a visually appealing landscape of seeding grasses and blooming wildflowers.

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### Comparison

While summer fire and winter fire are used for many of the same reasons, there are also differences. Two major differences are fuel condition and weather. Much of the fuel is green and growing during a summer fire, in contrast to the mostly dormant vegetation present during a winter fire. Compared to winter weather, daily and weekly summer weather patterns are less dependable and less predictable. In the winter,

strong, northwesterly frontal systems generally control weather patterns, whereas in the summer the winds and rains are more variable. Many things currently attributed to season of burn are perhaps more correctly attributed to the conditions associated with the burn such as fuel loading and moisture, weather conditions, and ignition patterns. Return interval, firing techniques, size of burn block, or other parts of the fire regime may be more critical in achieving burn objectives than season of burn.

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### Advantages

Summer fire has several advantages over winter fire. Use of summer fire broadens the burn window from the traditional four to five months to nearly all year, giving managers more quality burn days. Summer fire aids in regeneration of some species and is necessary for others. Summer fire typically results in better seed beds for natural regeneration of pines than winter fire. Summer fire is necessary to induce wiregrass flowering. There is rapid post-fire green-up, which reduces potential erosion and benefits some wildlife species by providing forage and cover sooner than a comparable winter fire. Because air temperatures are already higher, it is easier to scorch vegetation with a summer fire, making it easier to control vegetative competition.

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### Disadvantages

Summer fire also has disadvantages. While ease of scorching is advantageous for controlling unwanted vegetation, it is a disadvantage for timber values and aesthetics. Heavy scorch reduces growth rates,

and may result in mortality, especially for pine regeneration when shoots are actively growing. Since leaves are green and contain more nutrients than in the dormant season, there is a higher potential for nutrient loss. The higher moisture content of the green vegetation also results in more steam and thicker smoke. The higher air temperatures and thicker smoke are harder on the burn crew. Because summer weather is less dependable, predicting fire behavior during the fire and projecting smoke plume movement during and after the fire is much more difficult.

Burning in the summer can also reduce or even eliminate a year's reproduction of ground- and shrub-nesting birds and some forbs and grasses. Many burn managers lack experience with summer fire, and some of the "rules of thumb" for winter fire do not fit summer fire well. Until more experience is gained with summer fire, most managers who are using summer fire are planning and conducting their fires conservatively.

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### Summary

Summer prescribed fire is another tool available to land managers. Under certain conditions, summer fire has utility in wild-fire prevention, timber and forest management, grazing management, game management, non-game wildlife management, endangered species management, conservation biology, site access and visibility, and aesthetics. Careful planning and explicit prescribed burn objectives are important for any fire and will help determine whether prescribed fire during the summer is a helpful tool for use on your property. 🏠



*The golden wiregrass seedstalks and dead oak sprouts in this park-like longleaf pine stand resulted from an early June burn.*

# Huntsville to Host 1997 Landowner Conference "TREASURE Forest and Spaceship Earth"

If you are a forest landowner and want to learn how to better manage your property, a wonderful opportunity awaits you in Huntsville this fall. The Fourteenth Annual Alabama Landowner and TREASURE Forest Conference will be held October 2-3, 1997. The conference is the premier event in the state each year for forest landowners to receive technical information through lectures and tours. This year's conference promises to be one of the best ever.

An indoor session will take place at the Huntsville Marriott on the afternoon of Oct. 2. Experts will give presentations on six topics and conference attendees will choose four of those sessions to attend. Topics covered will include "Specialty Items to Enhance Tree Growth," "Forest Fertilization," "Satellite Imagery and Forest Management Applications," "Aesthetics for Forest Landowners," "Financial Assistance Programs," and "Quality Deer Management."

A banquet on the night of Oct. 2 will honor some outstanding TREASURE Forest landowners and county forestry planning committees. It will also take

place at the Marriott.

On Friday morning a tour of Redstone Arsenal will be the highlight of the day. The theme of the tour is "TREASURE Forest and Spaceship Earth." The tour will consist of several stops on Redstone Arsenal's 16,000 acres of forestland to include the following:

- Management of upland hardwoods on steep, rocky, mountainous sites.
- Examinations of a planted, mixed stand of yellow poplar and loblolly pine with discussions of pros and cons of current options.
- A wetlands area being managed for wildlife and recreation; a boardwalk over the water enhances the enjoyment of the area.

In addition to the stops at Redstone, the tour will make a stop at the Huntsville/Madison County Botanical Garden. An audio-visual presentation on our earth's biosphere will be given using a 14-foot diameter sphere, and participants will also visit a "Lunar Greenhouse."

The tour will wrap up with a walk-through of a full-size model of the Inter-

national Space Station at NASA's Marshall Space Flight Center. VIP guides will be present to answer questions and explain the challenges of creating an artificial biosphere to live in.

After the tour a barbecue lunch will be held on NASA picnic grounds. The tour is accessible by bus only. Buses will transport conference attendees from the Marriott and return them after lunch.

A new addition to the conference this year is a silent auction sponsored by the Alabama TREASURE Forest Landowners Association. Bids will be received during the day Thursday and items awarded to the highest bidders that evening.

Registration for the conference is \$40 per person if postmarked by Sept. 19. This includes the indoor sessions, breaks, and banquet on Thursday, and both the tour and lunch on Friday. After Sept. 19 the registration fee increases to \$60. A luncheon for TREASURE Forest landowners will be held from 11:30 to 1:00 on Oct. 2 for an additional cost of \$17 per person.

Please use the form on page 31 to register for the conference. ☪

## Notable Environmental Award Recipient

*Editor's Note: The W. Kelly Mosley Environmental Award is one of the most prestigious awards given in Alabama. To encourage nominations and recognize recipients, Alabama's TREASURED Forests will occasionally feature award winners in this column.*

Colonel Jack Walls was a recipient of the W. Kelly Mosley Environmental Achievement Award in 1993 for providing free use of 46 acres to a 4-H club. Col. Walls has given exclusive rights to the 4-H club to manage his tract of land in Coosa County since 1985. Although he is informed of projects undertaken by the 4-Hers, he's never attempted to intercede or direct the group to meet his own needs. These students have had a wonderful opportunity to get hands-on experience managing natural resources because of Col. Walls' generosity.

The experience managing the tract of land has resulted in many awards and accomplishments by the students enrolled in this project. Currently the site is used by the forestry judging teams to train for competition.

After 12 years the property is still providing a venue for forest management and recreational activities. The concepts of multiple-use and good

stewardship are being instilled in our youth today because Col. Walls took a chance on the enthusiasm of some young people.

Col. Walls lives in Virginia and was the first person living out of state to be honored with the Kelly Mosley Environmental Achievement Award. As another sign of his dedication to the project, he donated the cash award he received back to the 4-H club.

The Mosley Environmental Awards program seeks to publicly recognize achievements that result in wiser use of our renewable natural resources. Almost anyone is eligible: youths, adults, practitioners, professionals, technicians, and private citizens who are concerned with forestry, wildlife, fisheries, soil, water, air, wildflowers, non-game wildlife, environmental education, conservation, and urban forestry.

The award consists of a certificate, a cash award of up to \$500, and a framed limited-edition reproduction print of a painting. Individuals who make successful nominations also receive a copy of the print for their efforts.

Nominations may be submitted any time of the year and must be in writing. For additional information write to Dr. H. Lee Stribling, Dept. of Zoology and Wildlife Science, 331 Funchess Hall, Auburn University, AL 36849-5414; 334-844-9247. ☪

# Fourteenth Annual Alabama Landowner and TREASURE Forest Conference

Huntsville Marriott • Huntsville, Alabama • October 2-3, 1997

## REGISTRATION FORM

Name(s) of Attendee(s):

#1 \_\_\_\_\_

#2 \_\_\_\_\_

#3 \_\_\_\_\_

#4 \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Will Attend Tour on Friday:

Yes  No

Yes  No

Yes  No

Yes  No

**Bus transportation will be provided for the tour. No personal vehicles can be driven.**

**CATEGORY(IES) OF ATTENDEES (Check one category only)**

Total number attending Friday's tour \_\_\_\_\_

#1	#2	#3	#4	
___	___	___	___	TREASURE Forest Landowner
___	___	___	___	Government Agency/TREASURE Forest Landowner
___	___	___	___	Landowner
___	___	___	___	Government Agency/Landowner
___	___	___	___	Government Agency
___	___	___	___	Private Forest Industry/Consultant
___	___	___	___	Other

**Thursday, Oct. 2: Luncheon begins at 11:30; Indoor session begins at 1:15 p.m.; Banquet begins at 7 p.m.  
Friday, Oct. 3: Outdoor tour in the morning. Lunch will be provided after the tour.**

I am attending the conference and am enclosing

\$40 preregistration x \_\_\_\_\_ attendees = .....\$ \_\_\_\_\_

I am attending the TREASURE Forest Landowner Luncheon and the conference, and am enclosing

\$40 preregistration x \_\_\_\_\_ attendees, plus \$17 x \_\_\_\_\_ luncheon attendees = .....\$ \_\_\_\_\_

**NOTE: The TREASURE Forest Luncheon is for TREASURE Forest landowners only. Luncheon is by preregistration only.**

### CONFERENCE INFORMATION

- The first day of the conference is indoors. The second day will be an outdoor tour. **Please dress appropriately.**
- The registration fee includes indoor session and banquet on Thursday; tour and lunch on Friday.
- Registration will be from 10 a.m. until 2 p.m. Oct. 2.
- **Preregistration fee for conference per person if postmarked by September 19 is \$40.**
- **Preregistration fee for conference and TREASURE Forest Luncheon per person if postmarked by September 19 is \$57.**
- NOTE: The TREASURE Forest Luncheon is for TREASURE Forest landowners only. Luncheon is by preregistration only. Luncheon will be from 11:30-1:00.
- Registration fee for the conference after September 19 is \$60.
- Mail upper portion of form and fee payable to Alabama Forestry Conference to:  
**Fran Whitaker, Alabama Forestry Association, 555 Alabama St., Montgomery, AL 36104; 334-265-8733.**

### HOTEL INFORMATION

- You will need to make your own reservations.
- The Huntsville Marriott is offering a special room rate of \$82. *To receive this room rate please specify that you are attending the TREASURE Forest Conference when you make reservations.* Check-in time is 3 p.m.  
**Huntsville Marriott, Five Tranquility Base, Huntsville, AL 35805; 205-830-2222.**
- A registration confirmation, map, agenda, and complete list of area hotels will be sent to everyone who preregisters.

## Eastern Redcedar

by COLEEN VANSANT, Education Specialist, Alabama Forestry Commission, N.E. Region, Cullman

**F**or most Southerners, the sharp, spicy smell of the Eastern redcedar (*Juniperus virginiana L.*) can trigger some of the most pleasurable memories. The trek each December in search of the perfectly shaped cedar to be decorated with ornaments, popcorn streamers, and lights for the family Christmas tree, or on cold winter nights nestling under quilts that still harbored the scent of the cedar chest or cedar wardrobe.

The Eastern redcedar is the most widely distributed conifer of tree size in the Eastern United States. It grows as a tall tree or a shrub and any size between, utilizing a wide array of sites. It adapts to a variety of soils including abandoned fields, rocky cliffs, and even swamps. It is particularly favorable to limestone soil. In Alabama, the Eastern redcedar is most abundant in the northern tier counties and is common in the Black Belt.

The leaves are usually opposite, being smooth, shiny, dark green, and glandular on older foliage. On young foliage, leaves are linear (somewhat needle-like), pointed, and prickly. The fleshy cones are round, 1/4 to 1/3 inch in diameter, and at maturity a bluish color with a

grayish-white waxy covering. The seeds are indigestible in the digestive tracts of birds which possibly accounts for the wide distribution of redcedar.



The tree is commonly 40-50 feet tall with a trunk diameter of 1-2 feet, although larger trees can be found. The short, slender branches form a compact, pyramidal crown except on very old trees. The bark is light reddish-brown, thin, and

separates into long, peeling, fibrous strips. Some songbirds strip away pieces of the bark and use it to line their nests.

The wood of the redcedar is moderately heavy, hard, moderately weak in bending, and high in shock resistance. The wood is fine-textured and even-grained, with the well known "pencil cedar" taste and odor. Cedar wood is non-porous, without resin ducts. The heartwood is red and the sapwood nearly white. The wood works easily with tools, shrinks very little in drying, stays in place well after seasoning, and is very resistant to decay, which is why it is favored for fence posts and was once favored for buckets and barrels.

Eastern redcedar wood is usually available only in fairly small sizes and is generally quite knotty. Principle use has changed from fence posts to novelty items. Lumber is used where its fragrance and reputed moth-repellant qualities are valued such as in storage chests, closets, and wardrobes. It is also used for other furniture, millwork, pencils, wood-ware, pet bedding, landscaping, and containers such as buckets for ice cream freezers. It is still favored by many Southerners as a Christmas tree. ♣



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