



**Alabama's  
TREASURED  
Forests**

F a l l : 1 9 8 6

# STATE FORESTER'S MESSAGE

by C.W. MOODY



One of our TREASURE Forest owners, Robert Sellers, wrote an interesting letter to me recently. He told me that he was quite distressed when he had visited the grocery store and had his groceries bagged in plastic instead of the old Kraft paper bag.

He said, "The plastic bag doesn't do any better. It's made from non-renewable petroleum products, and it's damaging the market for our pine trees!" He went on to add that one of his friends in the wholesale grocery business had even told him that the plastic bag is more expensive! Robert suggested that we start a campaign among our forest owners and encourage them to question their store owners about replacing pine tree paper bags with plastic made from imported petroleum!

He certainly is correct that such a practice is hurting the market for pines. In fact, in Alabama many pulp mills are converting their production from Kraft paper to white business paper. Kraft paper is made with a high percentage of pine pulp. On the other hand, white paper is made with a high percentage of hardwood pulp. Certainly we need to increase the demand for hardwoods and white paper, but not at the expense of pine trees and Kraft paper! We can have the best of both worlds by retaining the Kraft paper market and meeting the increasing need for white business paper through the expansion of our paper mills.

I decided to start such a movement myself. My wife and I recently went to a local supermarket where I noticed they still used Kraft paper bags. I complimented them for their good judgment in using the "superior" and less expensive paper as opposed to the "inferior" and rather costly plastic! I also urged them to continue this practice. This is only one individual's response, though, and I encourage you to follow Robert's suggestion in contacting your store owners and managers. Additionally, I'd like to know if you have any other suggestions which we could incorporate into our strategy.

All this is based on the premise that forestry is good for Alabama. Trees are a renewable resource. Forest manufacturing activities generate products, jobs, taxes, and wealth which meet our citizens' needs. It is our responsibility to increase this wealth base and to utilize the renewable raw materials which our TREASURE Forests are producing.

Sincerely,

A handwritten signature in cursive script that reads "C.W. Moody". The signature is fluid and elegant, with a long, sweeping tail on the final letter.

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USDA—Forest Service  
USDA—Soil Conservation Service  
USDA—Agricultural Stabilization and  
Conservation Service  
Tennessee Valley Authority

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 Photo: This flowering dogwood paints autumn  
in its prime at the Smith-Westervelt fire tower located  
in Tuscaloosa County. The tower site is a ten-acre  
TREASURE Forest which has a nature trail and  
pavillion named for retired District Forester Lambert  
Smith, who is responsible for its development. The  
original tower site was named for the founder of Gulf  
States Paper Corporation—the late H. E. Westervelt.  
The public is encouraged to visit this location.  
Arrangements can be made by contacting the District  
3 office, 333-1590. Mark Beeler, Forest Management  
Specialist in District 3, captured this lovely scene on  
film last fall.

# Alabama's TREASURED Forests

Volume V

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Number 4

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**COTTON  
CATTLE  
HAY  
TIMBER!**

*Dan James has proof that farming and timber production  
is a profitable combination*

**M**ANAGING 2800 ACRES of forest-land and over 500 acres of cropland is a tremendous undertaking for a 22 year old just out of college. After 25 years of practice, though, Dan James has now developed an operation that will sustain under extremely adverse circumstances. If he has a bad year with the hay and cattle, he can offset it with trees! On the other hand, if the farming operation is profitable, he can put a little more into the trees for future needs!

### Timber!

“We’ve planted over 40,000 tree seedlings here in the last five years,” explained James. “All of it has been in loblolly thus far. I plan to plant some slash in the 1986-87 planting season. Since so much of the land was in row crops, pasture, and cutover land, site preparation wasn’t too difficult. We used boys from the vocational school and Roger Brothers to do the planting. This past year, we were able to get cost-share money through the Alabama Resource Conservation Program (ARCP) to pay 60% of the cost of the seedlings, planting, and establishment of fire lanes.”

“When I came back here from college and a stretch with Uncle Sam in 1961, not much had been done in the way of timber management. One uncle had passed away in 1979 and the other one in 1985, and the other relatives thought it would be a good idea to get me to manage it. The trees had been an enjoyment to them, something they just liked to look at, not cut. I believe that we have a responsibility to help every acre to reach its potential, whether it’s farming or growing trees. I started working with several agencies—the U.S.D.A. Soil Conservation Service, the Alabama Forestry Commission, Alabama Cooperative Extension Service, Agricultural Stabilization and Conservation Service, and the Department of Conservation Game and Fish Division. Before long, I was beginning to see a difference in the productivity of this land!”

One problem that James faced was the density of the older pine stands. “We started the thinnings, maybe a little too late,

but we’ll soon know if the trees will pull out of the stress and start growing.” James, his son Jeff, two other full time workers, and a part time employee stay on top of every harvesting operation on the property. “We mark the trees that we want removed, and the loggers we hire *know* what we *want* and *don’t want*; they had better not cut any of the others unless they’re ready to pack up



and go home. You can’t get a good crop if you harvest all the good trees and leave the poorer ones to grow. You’ve got to do it the other way around. I’ve been lucky to have one of the best loggers around.”

There are other reasons, too, why the family marks its own trees. “I don’t believe I would ever cut a dogwood,” James said. “Not only do they add beauty in the spring, but the berries are excellent wildlife food. Other mast bearing trees are left for the same reason. Snags might be left for den trees, and still others just because I like the way they look and they add to the beauty of the surroundings. I even leave some simply

because of tenure. They’ve been here for so long that they deserve to be left alone.”

Of course, that is not to say that this is done on such a large scale as to allow the hardwoods to take over the pine sites. In fact, James does a great deal to keep the pines as productive as possible. Prescribed burning is carried out which not only keeps down the competition, but also stimulates the growth of browse for wildlife. Considerable timber stand improvement has been accomplished using **TORDON RTU**. Grasses and weeds have been controlled with **OUST** and **ROUNDUP GARLON 4** and **VELPAR** are used to control undesirable woody competition.

James has voluntarily taken some marginal cropland out of production and planted it to trees. On one eleven-acre site, he is developing a black walnut plantation. “We found out that walnut trees don’t like **OUST**! However, they fair better using a shielded **ROUNDUP** application,” James remarked. “I’ve observed natural *pine* regeneration within the **OUST** treated area. We had planted on a site we had chemically treated, and they just didn’t do very well. We’ve replanted, though, and except for not having any rain, they’re not doing too badly.”

### Wildlife Haven

Prescribed burning as part of every good pine management program does three things—reduces the risk of wildfire, eliminates unwanted competition, and benefits wildlife. Besides the benefit from the browse which comes up behind these controlled burns, James has also planted 27 food plots in various plants such as bicolor, browntop millet, chufa, corn, clay peas, buckwheat, and Egyptian wheat. Several are planted in winter game foods such as rye, ryegrass, and clover. About 500 sawtooth oaks have been scattered within the pine stands to provide adequate mast production, and Chestnut trees line the edges of some of the fields. Several hundred trees such as white oak, swamp chestnut, overcup oak, yellow poplar and sycamore have been planted on wet sites.

Permanent fire lanes double as food plots. They've been seeded with bahia and limed and fertilized, providing food for wildlife and at the same time preventing erosion. James plans to mix clover and fescue in with the bahia this winter to provide a greater variety.

"We've had a tremendous population of rabbits this year," James exclaimed. "There are also deer, squirrels, ducks, turkey, quail, raccoons, armadillos (possums on the half shell for you folks in north Alabama), and all kinds of birds. Artificial nest boxes for wood ducks and bluebirds have been constructed. The edge effect around the fields is ideal brood rearing habitat for turkey and quail. "I'm leasing over 2500 acres to a hunting club



Firelanes also serve as supplemental game plots.

that participates in the Game and Fish Division's Deer Management Program. Last year they harvested about 70 deer and saved the jawbones so they can be used in studying the growth habits of deer here within our hunting club area."

Some forms of wildlife aren't as desirable as others. "We've got coyotes here, and I used to worry that they would attack the cattle. Everybody knows that coyotes love young goats, so I put a few down close to the cattle to lure them away. None of them are missing yet! I figure there must be enough other small game for them to prey on so that they just don't bother with my livestock."

Now beavers are another matter altogether. "I trap 'em, break up their dams



Lower water levels encouraged a healthy cypress seedling crop.



AFC County Supervisor Joe Barton and SCS District Conservationist Tommy Counts have worked closely with James.

and lodges, and anything I can try and discourage them," James said. "They're so industrious! One thing I've found that works, though, is Octagon soap. (You live and learn!) Simply break up the dam, put a bar of Octagon soap in a nylon stocking, suspend it just above where the dam was, and allow it to barely touch the water. They won't build back there! I guess the soap must have a high alkaline content."

### Hardwood Management

White oak, yellow poplar, overcup oak, sawtooth oak, swamp oak, and cypress are scattered over 1000 acres of bottomland. James has cleared some of the undergrowth already and has chemically injected the least desirable trees. Wildlife thrives in the bottomland where there is a plentiful food supply as well as cover.

"Nature gave us a helping hand this year. You see, under normal conditions, cypress will probably regenerate about once every thirty years. The seeds won't sprout in the water. With the low water levels brought on by the drought, we've got cypress sprouting everywhere! We broke up some beaver dams which lowered it even more in some places. We'll lift the seedlings before the water level rises and transplant them onto a drier site.

### Total Land Stewardship

"Land has to be looked after to keep it productive." This is something that Dan James believes in strongly. "I've had some erosion in some fields that I've voluntarily taken out of production. I knew if I kept cropping them, it would only get worse. As it is, I'm protecting the land, and in the end I'll have a valuable crop of trees!

I seed the firelanes with bahia, and clover, not only for the wildlife, but to protect it from erosion as well. There are also water bars on the inclines to carry the water away gently.

### Only One Objective

"Everyone has an area of speciality, suppose," reflects James. "I manage for timber and wildlife because there are so many other benefits that come as a result of it. There's the beauty, recreation, and the protection of the environment. My only real objective is to make this land the best it can be, to produce all that it's capable of producing, and still be left in prime condition, whether it is producing timber, wildlife, or simply enhancing the balance of nature. To me, every forest is a treasure. It's up to the caretaker to develop it."



## EDITOR'S UNDERSTORY

by CYNTHIA K. PAGE, Editor

**N**OT MUCH RAIN has fallen in Bibb County, nor in the Southeast for that matter, since March. Dan James has only cut hay one time this year, and his cotton is so late that his crop probably won't be a good one. The swamp is 'bout dried up, and the cattle are sweating in the field.

Most folks would have thrown up their hands in despair by now, but not Dan James. A Gideon and hard worker, he has tremendous faith that generates an optimism unequalled by most men.

At just under 6 feet tall, the gray-haired, blue-eyed, 49-year-old has the "Jock Ewing" look of an outdoorsman. When he speaks, though, a calmness in his voice conveys a "let's take it as it comes" attitude that melts away any anxiety of the visitor. A few minutes of conversation reveal other portholes into his personality such as intelligence, resourcefulness, and innovativeness. His straight stance also hints at his level of pride.

He had entered Auburn University (Alabama Polytechnic Institute) with the intention of becoming a veterinarian. Having promised his mother that he would not get married until he finished school, he quickly decided that he could accomplish that in four years instead of six by opting for a degree in animal husbandry! Dan came home to Bibb County with his wife Romaleta in 1961 and began to manage the James Brothers farm for two uncles. Their two children—Jeff and Robin—were raised romping through the swamp and eating apples, plums, peaches, and blueberries grown in the yard, just as their father had done.

"My father died when I was two years old," James explained, "so my mother played both roles. She and I used to go quail hunting and fishing. Our relationship was different than many mother-son relationships. After I left for college, she decided to remarry, and I drove 'em to the justice of the peace."

Insofar as innovativeness, James is constantly looking for new techniques to use in his land management, whether it's farming or growing trees. He has tried new varieties of game food on his plots. Also, he has done spot treatment of herbicides right around the base of the area where new seedlings are planted as opposed to the entire site. Young cypress seedlings which have sprouted where the swamps have dried up will be transplanted onto a plantation site. (Black walnuts don't do well when planted on a site which is later treated with OUST to control weeds and grasses). "Some things you just have to find out the hard way!" James laughed.

Dan James feels an attachment to the land. "I enjoy coming out here and walking through some of these areas where I know a human being has never put a foot. Only Nature can create something like this."

Besides the appreciation of Nature, James feels the obligation to improve the land whenever possible. "Necessity is the mother of invention," he quoted. "If I see a resource that's not producing its potential, I try to enhance it. I think that every forest is a treasure. Some are just not treated with the respect that they deserve. God put this in our care for a short while to enjoy, develop, and appreciate. I want to leave it in good enough condition that others can do the same."

I wonder what it is about a rural upbringing that instills this in people and makes them so different from many others. The compassion, understanding, kindness, and unselfishness that I have found when interviewing the TREASURE Forest landowners has restored my faith in mankind.

If you're ever filled with anxiety over the pressures of today's world, take a drive out to the country, walk through the woods, and talk to the people who care for the land. I know a great place in Bibb County that just "puts its arms out to you" and draws you closer to peace of mind.



# THE FINISHING TOUCH

by RANDALL ROGERS, Consulting Forester, Natural Resource Services

**B**OUNDARY LINE ESTABLISHMENT and maintenance is a neglected part of many landowners' overall management efforts. Are boundary lines a necessary evil, or a positive, beneficial management practice?

For the landowner truly interested in the proper management of his land, both may be true. Even though a landowner or manager may know where his boundary lines are located, adjacent landowners, loggers, and hunters may not know their locations; thus, the potential for unintentional trespass cutting, hunting, and other encroachment onto your property.

Through many years of managing timberland for private landowners, unintentional trespass cutting has been the biggest problem on tracts where no boundary lines were clearly marked. Thousands of dollars in damage have been paid and many friendships strained over these types of happenings.

These problems can be deterred if landowners will legally establish and paint their boundary lines.

## Getting Started

Before boundary lines can be painted, these lines must be located on the ground.

In many cases, boundary lines are already well established with fencing and/or firelanes. In these instances, with the agreement and possibly cost-sharing with the adjacent landowner, boundary line painting can be carried out without further work.

However, if existing boundary lines consist only of old, patchy fencing and very few recognized and agreed upon corners, a boundary line survey by an Alabama Registered Land Surveyor (R.L.S.) is highly recommended. A boundary line survey is the best way to establish property boundaries when they are questionable. Survey costs vary from \$0.18-\$0.25 per running foot, or approximately \$1,000-\$1,300 per mile.

On properties where boundary lines are in doubt, no boundary line painting should be carried out until a survey is completed and accepted by adjacent landowners.

## Mark Your Own Territory

Now that the boundary lines have been established, these lines should be marked in the same manner to identify and preserve their location. The best method of marking is with long lasting, highly visible tree or boundary marking paint. Normally, the

boundary lines are marked at breast height or eye level on trees along the edge of the property boundary.

Applying the paint is a simple process, but some care still needs to be taken to insure the paint will stay on the trees for a long period of time. Both pine and hardwood trees can be painted along the boundary border. Trees being painted should be healthy and either *on* the property line or *slightly inside* the line.

The bark of the tree should be trimmed where the paint is to be applied. The trimming can easily be done with a machete or bush cutter. A band of bark six to eight inches wide all the way around the tree should be trimmed. Trimming will remove flaky bark, moss, and lichens from the trees, making a cleaner surface to which the paint will adhere.

When painting the trimmed bands around each tree, it is recommended that the full circle around the tree be painted. This will enable the property owner to recognize the boundary line from inside the property and make the property lines easily identifiable to persons viewing the property from the outside. Trees should be marked at 20-30 foot intervals along the boundary lines.

Check the lines several years after painting. Most boundary paints will last from three to five years before the bright color begins to dull. Repainting is recommended when paint visibility becomes low.

Boundary marking paint can be purchased through any forestry supply catalog. The recommended colors are orange, blue, and yellow. Paint is also available in spray cans for easy application.

Forestry consulting companies generally offer boundary line painting as a service to private landowners. Costs vary depending on access and topography, but generally run from \$200-\$400 per mile.

The importance of boundary line location and painting cannot be overemphasized. In the overall scheme of managing forestland, the painting will provide the finishing touch to your Treasure Forest masterpiece.





# ACTIVITIES

## DISTRICT

# 1

A successful forestry field day was held in Cherokee County at the Georgia Kraft Woodland office. There were several topics discussed including site prep, prescribed burning, cost-share, TREASURE Forest, and also a tour of the property. In attendance were three timber buyers, a representative from the Alabama Forestry Association, seventeen private landowners two vendors, one consulting forester, nine from the Alabama Forestry Commission and ten from other agencies. Dupont and Georgia Kraft Company provided the lunches.

Approximately 8,000 black walnut seed have been planted in Jackson County. These seed were planted in individual 5 quart pots and in specially designed planting beds. The seedlings will be provided to landowners at no cost as part of the Black Walnut Program in Alabama. Paul McCabe, black walnut specialist, will assist landowners in planting up to one acre of walnut seedlings.

A tree identification and general forestry program was presented by Ed Eldridge to the Calwell Elementary School. These students were very receptive of Ed's presentation.

An urban forestry inventory for forestry purposes has begun in Jackson County.

Congratulations Ed Eldridge for all the work you have done for the Tree City USA award in Scottsboro. Without your guidance and participation, they would not have been able to achieve this award.

Larry Parker has been working with the new city planner of Guntersville to initiate Tree City for them this year. Literature was given out for the city council members to study.

A Forestry Planning Committee meeting was held in Guntersville and Brian Bradley was the moderator. A Southern Pine Beetle film was shown and tree planting was discussed. TSI work will be done this year. Several vendors and consultants were present as well as other agencies and landowners.

The Civitans in Guntersville met with Larry Parker to assist in landscaping the park area with tree seedlings. The Forestry Commission will provide them with some of our free seedlings for planting.

## DISTRICT

# 2

Cullman County Forest Rangers Jimmy Moody and Tom Gilpin spoke to approximately 115 Girl Scouts (ages 8-16) June 4. Their presentation included the topics of forest fires and how they are fought along with a segment on the importance of the forest.

On June 11, the Jim Freeman (Eagle Ridge Farm) TREASURE Forest on Smith Lake in Walker County was the site of a chemical demonstration hosted by the Walker County AFC office. Participating in the demonstration was Monsanto representative Jimmy Cobb, Walker County Supervisor Charles Hall, Management Forester Tom Kimbrell, Information and Education Coordinator Coleen Vansant, Walker County Soil Conservationist George Smalley, Walker County Extension Agent Ray Rice, and Mr. Freeman.

On June 17, Channel 6 news reporter Brian Pia interviewed Cullman County Supervisor Darrell Johns and Forest Ranger Jim Moody on the effects of the southern pine beetle on the state's timberland. Also present at the interview were District Management Forester Tom Kimbrell and I and E Coordinator Coleen Vansant. Mr. Pia and the Channel 6 cameras returned to Cullman County on July 25 to tape a segment on the drought and how it is contributing to a high mortality rate with pine tree seedlings.

The Blount County Volunteer Fire-

man's Field Day was held June 21 at the Agri-Business Center in Oneonta. West Blount Fire Department won first place honors at the competition. On July 19, two Blount County departments participated in firefighters competition in Hartselle. Dallas-Selville captured second place honors while West Blount placed sixth.

In celebration of the state's certification of its 650th Rural Volunteer Fire Department, District 2 held pinning ceremonies in each county where the Commission's special-designed commemorative pin was personally presented to each AFC employee by District Forester Bart Williams. District 2 was especially proud of reaching the 650-goal since a District 2 fire department, Holly Springs in Blount County was the unit that put the state over the top.

Forest Rangers in St. Clair County recently conducted a series of 30-second radio announcements with their local radio station to inform St. Clair County landowners of the southern pine beetle problem in their area. The segments were aired several times during the day in promotion of their local landowners' meeting.

Cullman County Supervisor Darrell Johns was recently awarded an "Honorary State Farmers Degree" by the Future Farmer's of America. The award was pre-

sented during the organization's annual meeting in Montgomery. It was given in appreciation for John's work with the FFA in Cullman County.

District Forester Bart Williams gave a presentation to attendees of the CaWaCo RCD Council meeting held in July. He advised the council members of the AFC three-year work-plan goals for TREASURE Forest, Tree Cities, Rural Community Fire Protection, Wildfires, and Safety. He bragged on employees of the Birmingham District for working as a team to hold 2,316 fires from October 1, 1985 through mid-July 1986 to an average fire size of 10.4 acres per fire. He also took pride in pointing out that one of the CaWaCo counties, Blount County had the RCFP unit recognized as the department being officially declared as the state's 650th certified fire department. He advised that Holly Springs RCFP unit of Blount County was the fire department allowing the AFC to reach its three-year goal of 650 certified departments. Williams also pointed out that AFC monitoring of the southern pine beetle was at a high intensity level. He encouraged all attendees to plan to attend the Forest Landowners' Conference in September in Montgomery and to bring other forest landowners along.

District Forester Bart Williams,

Shelby County Supervisor Daryl Lawson and Shelby County Secretary Johnnie Tidwell represented the Alabama Forestry Commission July 18, at the Annual Meeting of the Area III Soil and Water Conservation District Supervisors held at the 4-H Development Center in Shelby County.

District 2 Information and Education Coordinator Coleen Vansant was a guest recently on "Party Line," a half-hour talk show sponsored by WSMQ Radio Station in Bessemer. Topics brought up during the interview included the drought and its effects on the forest industry, rural fire departments, the 1985-86 fire season and what's ahead for this year, and the southern pine beetle epidemic.

Shelby County personnel have been busy assisting Neil Letson, Frank Roth and Hugh Mobley with organizing field tours for the National Society of American Foresters' Convention to be held in October in Birmingham.

District 2 Urban Forester Lee Laechelt recently returned from Central America where he attended a workshop on non-traditional agriculture in Costa Rica. He also worked in Guatemala with several communities which have forestry problems. The work is being done with the Partners of the Americas, which has 10 Partner

# TREASURE SEEKERS • TREASURE FINDERS TREASURE KEEPERS

## TREASURE SEEKERS

Creed Signers (Between 12-12-85 and 4-30-86)

### SEEKERS

R. C. Green (DeKalb)  
Jerry Talley (Marshall)  
Beth Carter Duncan (Shelby)  
Curtis Standridge (Blount)  
W. B. Stonecypher (Cullman)  
Edward Glenn (Tuscaloosa/  
Hale)  
Tommy Carver (Tuscaloosa)  
Voncille Hutto (Fayette)  
F. Alvin Smith (Hale)  
Lenson Montz (Hale)  
Paul Crump, Jr. (Lamar)  
Alice Gay (Fayette)  
Ned Allen Smith (Fayette)  
Bill Dark (Coosa)  
Jeff Beard (Chambers)  
K. S. Kirkwood (Chambers)  
Donald Mock (Coosa)  
Mr. and Mrs. J. C. Martin  
(Wilcox)  
Robert C. Jones (Wilcox)

N. W. Phillips (Geneva)  
Roger Pridger (Geneva)  
Phillip Forester (Houston)  
John Mixon (Houston)  
George Beck Taylor (Henry)  
John A. Hawkins (Barbour)  
Chauncey D. Graves  
(Covington)  
Thomas Smith (Conecuh)  
Whitfield King (Lawrence)  
Doris Antepenko (Franklin)  
Norman Clay (Lowndes)  
Danny Corbett (Russell)  
Quita Kimbrough  
(Montgomery)  
John "Bubba" Trotman  
(Montgomery/Pike)  
Eugene Renfroe (Bullock)  
Charles E. Fennette (DeKalb)  
Gerald Loegler (Cullman)  
Leon Hicks (Bibb)  
George K. Greene (Dallas)

Martha H. Parker (Lowndes)  
R. H. Phelps (Montgomery)  
Lyndon McCavitt (Fayette)  
George Lowery (Fayette)  
Monroe Smith (Chambers)  
Ellen Beard (Chambers)  
Clay Slate, Jr. (Clay)  
Leon and Liz Cambre  
(Tallapoosa)  
Jeff Harrison (Dallas)  
Bill Deloney, Jr. (Dale)  
Earl T. Brown (Dale)  
Mr. and Mrs. Ed Driggers  
(Houston)  
C. C. Vickrey (Henry)  
Jimmy "Bubba" Money (Henry)  
Rodney Logan (Dale)  
Winn E. Martin (Barbour)  
Billy Wood (Butler)  
Lanier M. Myrick (Escambia)  
Earl Hughes (Franklin)

## TREASURE FINDERS

Certified TREASURE Forest Landowners (3-20-86)

FINDERS	OBJECTIVES	ACRES
Cherokee Rock Village Park	Recreation/Wildlife	656
Eagle Ridge Farm	Aesthetics/Timber	114
Joel and Paula Neighbors	Timber/Wildlife	125
Earl Manning, Jr.	Timber/Wildlife	1082
James Brothers	Timber/Wildlife	3354
Ned F. Folmar	Timber/Recreation	287
Royce Mann	Timber/Environment	87

## TREASURE KEEPERS

Re-certified TREASURE Forest Landowners (3-20-86)

Dr. H. L. Allen #90

T. A. Carnes #127

Cities in Alabama and Guatemala.

**Blount County Forest Ranger Steve Bowden** was recently honored by the **Alabama Association of Volunteer Fire Departments** when he was named "Fire-fighter of the Year" by the Association. Steve received the award during a banquet held August 2, in Bessemer. He is a member of the **West Blount Volunteer Fire Department** in Blount County.

#### DISTRICT

# 3

**Fayette County Fire Fighters Association** (nine volunteer fire departments) met July 10, 1986 with \$39,000 in grant money presented at this meeting.

A special meeting of the **Fayette County Fire Fighters Association** was called on July 29 to discuss recommendations and suggestions in dealing with the numerous illegal refuse dumps in the county.

The **Fayette County Forestry Planning Committee** met June 23 and July 8th. Twenty-two attended the July 8th meeting with **Mark Beeler** presenting a program on the Southern Pine Beetle.

Eighteen **Fayette County** landowners have signed agreements to participate in the Conservation Reserve Program during the second sign-up period. A total of 485 acres have been approved and management plans written for the properties.

**Fayette County** personnel have assisted five vendors in contacting and submitting bids to the 40 landowners who are signed up under various cost share programs for reforestation.

**Hale County Forester Landre Tomlinson** and **TREE CITY Coordinator Neil Letson** presented a program to 20 members of the **Greensboro Garden Club**. The presentation covered wildflowers and the **TREE CITY** program.

The **Hale County Forestry Planning Committee** held a Historical Tree presentation in **Greensboro** for Magnolia Grove, located at the home of Spanish-American war hero **Richmond Pearson Hobson**. The key note speaker was **Greensboro Mayor and President of Magnolia Grove Foundation Mr. John Jay**. Anyone wishing to donate to support the work of restoring the house at Magnolia Grove should contact **John Jay** at 624-8119.

The **Hale County Forestry Planning Committee** also sponsored a landowner field day at the **Bill Wagner** property. The tour stressed proper pine management and featured a soils pit. Thirty landowners attended the tour.

**Landre Tomlinson** and **Jim Junkin** with the Alabama Forestry Commission in Hale County also worked the **Moundville Tree Board** in preparing to become a **TREE CITY USA**. Approval of their application is expected in early 1987.

**Kenneth Colburn**, Forest Ranger-Tuscaloosa County, graduated from the Seventy-Sixth session of the Law Enforcement Academy of the University of Alabama in July. Kenneth, assistant county supervisor of Tuscaloosa County served as vice-president of his class.

Night meetings were held in four counties—**Fayette, Lamar, Pickens, Tuscaloosa**—during July to update forest owners on the activity of the Southern Pine Beetle. Information on identifying and controlling the SPB was presented by **Mark F. Beeler**. Cooperation between industry, private individuals and all AFC personnel is helping to combat the problem of the SPB.

#### DISTRICT

# 4

The **District Cooperator-Landowner** meeting was held in **Ashland** in the Wynn Building on Tuesday, July 15 at 1:00 P.M. There were 47 people present for this most informative session. **E. O. Moore**, district forester, gave the opening remarks. Fire control and law enforcement were discussed by **Skip Turner**, law enforcement-fire specialist; **John P. Tyson**, Talladega County supervisor, discussed fire control problems and future plans for Talladega County. **Jim Hyland**, entomologist and chief of the

Insect and Disease Section of Alabama Forestry Commission in Montgomery, presented a video taping of the Southern Pine Beetle's spread across the South, including the current situation in Alabama. **Ray C. Jones**, pilot, talked about the southern pine beetle detection that had begun in March. The flights have shown the rapid spread of the beetle through East Central Alabama so the need for the flights continues. **Tom Cambre**, management specialist, discussed the procedures for salvage of beetle wood and cut-and-leave contracts; he opened the meeting for discussion and problem solving at that time.

**Tom Cambre**, management specialist, gave a presentation on hardwood management on June 13 in **Rockford** at a **Coosa County Landowners' Meeting**. He also attended the technical session on herbicides in **Tuscaloosa** on June 18-19 and the Personal Management Workshop at **UAB** on June 20. On June 26 he and **Wayne Strawbridge** worked with **Danny Everett** at **Sumter Farm Stock Co.** in developing hardwood recommendations for their lands. Tom presented the SPB slide program to the **Cleburne County Forestry Committee** July 9; to the **Tallapoosa Forestry Planning Committee**, July 10; to the **Talladega County Forestry Planning Committee**, July 17; to the **Coosa County Forestry Planning Committee**, July 25. On July 16, Cambre spoke on hardwoods and hardwood management to the **Annual Teachers' Conservation Workshop** at Auburn University. July 22-23 he attended the **Scott Paper Co.** tour on hardwood management held in Mobile.

The **FFA Chapters** from **Milltown** and **Five Points** held their Forestry Judging Contest during the late spring with **Five Points** winning the competition. **AFC** and **SCS** personnel set up the competition on the property of **Bill Thomas**. The high scorer for the contest was **Derek Ash** of **Five Points High School**.

**Chambers County** personnel assisted the **Auburn University Silvicultural Herbicide Cooperation** with a "Loblolly Pine Tolerance to Oust" test. Several rates of Oust were applied over newly planted loblolly pine seedlings in recently row-cropped fields. The property is owned by **TREASURE Forest landowner Jack Langley**. Mr. Langley was present as **Steve Metcalf**, Auburn University; **Tim Sharp**, E.I. Dupontdenemours Co., Inc.; **Jim Hyland**, AFC, Montgomery; and **Clayton Schwind**, AFC Chambers County, established test plots. Rainfall was monitored over a ten-week period and on July 7 seedling condition information was collected by AFC employees and the information will be made public.

In June the **Chambers County Forestry Planning Committee** held its meeting. Southern pine beetle problems were discussed along with the up-coming Landowners' Conference. **Leonard Blanton** was selected as Chambers County's delegate to the conference.

**Ronnie Ray**, Forest Ranger II, has been coordinating the SPB work in **Chambers County**. He and **Jeff Abney** have ground-checked over 50 spots and notified the landowners. He reports salvage is slow because the beetle wood is hard to sell.

The **SCS** held a demonstration on **Bill Thomas's** property concerning pen raised catfish. **Alabama Forestry Commission** personnel attended and found the program very informative. One part of the program dealt with water quality and forestry practices. Harvesting and chemical use in the pond watershed was discussed and how improper use is detrimental to pond water quality.

**Earl Smith** assisted with the **FFA Forest Judging Contest** in the late spring. All **Clay County** schools competed and **Lineville** was the county winner. The **Clay County Forestry Planning Committee** is planning a Landowners' tour for September 16. Topics will be forest herbicides and prescribed burning. The Planning Committee is also in the process of producing a video of forestry topics such as SPB, Tree Plant-

ing, Site Preparation, Prescribed Burning, and Thinning.

**Earl Smith** attended a county meeting on the Conservation Reserve Program; he also attended a **Clay County Emergency Board** drought meeting. He and **Cleburne County Supervisor Glenn Berry** attended the forest industry survey training session in **Cullman** on May 29. **Glenn** and **Earl** have been surveying all wood using industry in **District 4** counties (June-July).

The **Clay County Cub Scout Day Camp** was held on July 29 at the **Farmer's Market**. **Earl Smith**, county forester; and **Keith Medforth**, Forest Ranger II, spent the day working with the youngsters. Tree identification environmental education, a visit by **Smokey Bear**, and two films made for a busy day.

**Wiley N. McCollum**, FRIII and paramedic, taught a first responder course to 10 people (June 1-12). The total time was 16 hours; the classes had the advantage of a **VCR** to assist them in the classroom work. All 10 were certified.

**Cleburne County Association of Volunteer Fire Departments** held their May meeting at the **AFC Office** in **Heflin**. **State Senator Gerald Dial** and **State Representative Richard Lindsey** presented \$1000 to the association.

**Horton (Buddy) Adcock**, forest ranger from **Coosa County**, attended the **Wildlife and Recreation Ranger Training** May 26-30.

On July 24 the committee presented a program on the southern pine beetle epidemic. **Jim Hyland** was the speaker for this meeting which was very informative and interesting. More than 25 landowners attended. Other projects like these are in the planning stages. The **Coosa County AFC** personnel give their full support to this committee and **Joel L. Neighbors**, FRII, serves as its secretary. Through the efforts of the dedicated members of this committee, a positive impact on forestry is being made in **Coosa County**.

**Nix** and **Glenn Berry**, **Cleburne County Supervisor**, interviewed **Don Gay** at his 4-H camp. **Charles Sikes** and **Steve Nix**, using a film as well as activities, presented the forestry program; the film concerned wildfire and was shown by **Charles Sikes** who offered an interesting narrative.

The **Smokey Bear Committee** met on July 10. All monies had been collected to purchase a **Smokey Bear** suit. "Thank you" cards were mailed to all contributors. **Smokey** materials were purchased for a map project.

**WELR Radio** used the SPB epidemic and the contracts for beetle wood information for a news spot. The **Forestry Planning Committee** met with **Earl Manning**, **Station Manager**.

On July 16 a meeting of 50 landowners and wood dealers met with **Steve Nix** and **Tom Cambre** for more SPB information, especially concerning contracts for beetle wood cutting. Steve presented the guests and introduced **Cambre** who discussed the SPB situation according to the latest flights, and the proper handling of infested timber. The meeting was held at the **Farm Bureau Building** and sponsored by the **Forestry Planning Committee**; **Jerry Rice** gave market information and **Tom Burnside**, **Etension Service**, closed the meeting.

**Guy Slayden**, **Tallapoosa County Forester**, worked with other agencies to make the **Annual 4-H Club Day Camp** a success. **Guy** conducted a tree identification course for 52 campers.

#### DISTRICT

# 5

A forestry awards luncheon was held in **Bibb County** on May 16. **State Forester Bill Moody** presented the **James Brothers Farm** with the **TREASURE Forest Award**. **Dan James**, farm manager, accepted the award. **Doug Link** of **Hammermill Paper Company** presented several **Tree Farm** awards. Among the award winners was former **State Senator Eddie Gilmore**. **Tom Lang**, forest management specialist, presented the **L. L. Ragland** estate with a **State Champion Tree** award for a bald cypress

located in north **Perry County**. **Rand Ragland** and his mother **Billie**, accepted the award along with a framed photograph of the tree given to them by **Tommy Counts**, **ASCS**. The luncheon was sponsored by the **Bibb County Soil and Water Conservation District**.

The **CRP** had a large response on the second sign-up for 1986. Bids were accepted on almost 9,000 acres of marginal cropland for tree planting.

**District 5** secretary **Margaret McCauley** retired on July 1, 1986, after 39 years of service. **Miss McCauley** began working with the **State Division of Forestry** in 1947 and served under 7 **District Foresters**. A retirement party was held for **Margaret** on July 25 at **Paul Grist State Park**. A large gathering of friends and co-workers from all over the state came to wish **Margaret** a happy retirement.

**Staff Forester Billy Hunt** presented a fire prevention program with **Smokey Bear** on July 16 at the **Plantersville First Baptist Church**. About 50 **Vacation Bible School** children were in attendance.

**Perry County Forester David Pearce** has done two interviews with **WAKA-TV** on the SPB problem we are experiencing this year. **Tom Lang** also talked to **WAKA-TV** about this year's drought, and how it is affecting seedlings and mature trees.

Special meetings of **County Forestry Planning Committees** were held in all **District 5** counties in July to discuss the SPB problem. By late July, all **District 5** counties were epidemic for the southern pine beetle, **Wilcox, Autauga and Dallas Counties** held special landowner meetings in July to discuss the SPB epidemic. We have had good cooperation in the **District** between agency, industry, consultants and timber dealers on trying to keep the SPB under control.

#### DISTRICT

# 6

A forestry field day was recently held on the **Bob Snyder TREASURE Forest** in **Clayton, Alabama**. The program featured a chain saw demonstration and a tour of the farm. Lunch was provided by local forest industries of **Barbour County**. The field day was a joint effort of the **Cooperative Extension Program, Tuskegee University** and the **Barbour County Forestry Planning Committee**.

**Barbour County** is in the process of forming a landowner association. As a result of the tour of the **Bob Snyder** farm, approximately 12-15 landowners expressed an interest in the formation. **Good Luck!**

The **Coffee County Forestry Advisory Committee** recently held its quarterly meeting with **Chairman Steve Musser** presiding. A covered dish supper was served with approximately 40 to 45 people attending. **Bill Hughes**, economist with the **Soil Conservation Service**, gave an informative program on the economic alternatives of the **CRP Program** comparing grass, forestry, and wildlife uses.

**Mr. H. C. Jordan** from **Ozark in Dale County** was the **District II** winner in the **State Helene Mosley** award. Congratulations to **Dale County** and **Mr. Jordan**.

The property of **Bud, Sandy and Steve Smith** in **Geneva County** was the site of a recent tour. This tour was unique in that it was being looked at as a proposed gopher tortoise sanctuary. The property is also being considered for **TREASURE Forest** status.

A forestry and wildlife field day was recently held in **Geneva County**. About 200 students participated in such topics as tree identification, hunter safety and other phases of forestry and wildlife. **Forest Ranger Ronnie Hickman** and **Game Warden Dick Mowbray** were the instructors.

The **Geneva County Forestry Planning Committee** is to be commended for their recent participation in the **TREASURE Forest Program**. They have attended on reinspection and two inspections in the past few weeks. Keep up the good work.

Forest Ranger **Ronnie Hickman** recently presented a program to the **Young Farmers of Geneva County**. He discussed the TREASURE Forest Program and the Alabama Forestry Commission.

The **Henry County Forestry Association** held its quarterly meeting with **District Management Specialist Barry Lawrence** as featured speaker. His topic was a timely one on (SPB) Southern Pine Beetles. With SPB a large problem for timber owners, steps to prevent SPB attack and various control measures were discussed.

**Henry County's CRD Committee** had a meeting recently with the head of the County Firefighters Association **Carroll Grimes** as its speaker. Mr. Grimes gave an informative report on the county rural fire defense program and the progress that has been made since its beginning.

**Mr. and Mrs. R. C. Curry** of Graceville, Florida recently received the TREASURE award in Houston County.

**Forest Rangers Wayne Craft and Mike Stinson** along with **District 6 personnel** have been real busy this summer on their new office building. Plans are coming along real well and completion is expected sometime this fall.

**Smokey Bear** was in a parade in **Brunswick** for a 4th of July celebration.

A **4-H Natural Resource Camp** was held in **Pike County** at **Pike County Lake** on August 12, 1986. Tree identification, hunter safety, trapping, fishing and compass reading were some of the topics covered. **Forest Ranger Wayne Craft and Game Warden Jerry Jinright** were the instructors.

On May 29, 1986, **District 6 AFC personnel** sponsored an appreciation dinner for local TREASURE Forest landowners. The purpose was to express appreciation for the outstanding stewardship they exhibited in managing their land with the TREASURE Forest concept. In conjunction with the dinner provided, a working session by attendees provided the TREASURE Forest landowners a chance to have input into the TREASURE Program. **C. W. Moody**, State Forester; **Franklin McAlley**, District Forester; **Brian Bradley** and **Barry Lawrence**, Staff Foresters; represented the Alabama Forestry Commission. We hope this will be the beginning of an annual event in the District.

**DISTRICT 7** **Monroe County Supervisor Gary Cole**, **Escambia County Supervisor Robert Knowles**, and **Fire Specialist Lesley Williford** attended the Law Enforcement School held in Selma on July 7-11.

A forest landowners' meeting was held in **Greenville** on August 5th. The program on SPB was presented by **Foresters Gib Burke and Blake Kelley**.

**District 7** welcomes **Ranger Tony Chandler** who transferred from Jefferson County to Crenshaw County. We are all looking forward to working with him.

The **Covington County RCFP Association Meeting** was held on July 22nd and ten RCFP departments were presented checks to their departments.

**Forester Gary Cole and Ranger Steve Lloyd** presented a Smokey Bear Program which included a parade in **Vredenburgh** on July 17.

Sunday, August 13, a fire destroyed the **Union Camp Corporation Planer Mill** in **Butler County**. There were nine RCFP departments from **Butler County** on the scene that battled this fire for 6 hours. These fire departments were responsible for containing this fire to one building and preventing it from spreading to other buildings and property. **Union Camp** officials gave very high praise to all of these departments for their faithfulness and team work on this fire.

The July 4th Celebration in **Luverne** was a big success. **Crenshaw County Supervisor Tim Money and Laborer David Kelley** assisted with the chain saw competition.

The RCFP departments in **Crenshaw County** were given 10 mobile radios. This was made possible by the County Commission paying half and the Forestry Commission paying half for these radios. All departments in Crenshaw County now have mobile radios.

On July 8th the **Crenshaw County Forestry Planning Committee** met and planned two forestry landowner meetings. The first meeting will be held on August 8 on Southern Pine Beetles and Leasing Rights. The second meeting will be held on November 12, and this will be a field day.

**DISTRICT 8** **District 8** welcomes **Ranger Jake Gibbs** who joined the district staff in his new position as **fire specialist**, effective 5-12-86. Jake is a graduate forestry technician and an honor graduate of the Fall 1985 Forestry Academy. He transferred from Etowah County where he was a crew Leader with the Helitack program.

**Forester Mike Hinson** resigned his position as **Clarke County Supervisor** effective June 6, 1986. Mike joined the AFC in March 1978 and had been supervisor for **Clarke County** since June 1983. He has gone into the pole and piling business with his father. All of us at **District 8** wish him, his wife **Rhonda**, and son **Jeff** the best of luck for the future.

**Benji Elmore** became **Clarke County Supervisor** effective July 7, 1986. Benji joined the Commission in 1985. Upon completion of the 1985 Fall Academy, where he graduated with honors, he worked as staff forester at **District 3 Headquarters** in **Tuscaloosa**. Welcome to **District 8**, Benji!

**Clarke County Treasure Forest landowner Vivian White** received the **State Tree Farm Award** this year.

**Baldwin County Supervisor John Martin** was honored at the **May Fire Chief's Association Meeting**. He was presented a certificate of appreciation by the **Daphne Fire Department** for the continued support, cooperation and good working relationship between the Fire Department and the Alabama Forestry Commission. Also honorably mentioned in the citation was all **Baldwin County personnel**, **David Frederick**, **Ray Tucker** and **"Bill" Moody**.

**Mr. Mack Vines** of **Baldwin County** was selected as one of the six statewide finalists for the **Helene Mosley Memorial TREASURE Forest Award**. Congratulations!

**Washington County personnel** are happy to report that the ground breaking for their new county office has been started.

**District 8** would like to recognize **Otis French**, **Gordon Horsley**, **Tim Kelly**, **Jake Gibbs**, **Earnest Hunt** and **Benji Elmore**, who attended the Spring Forestry Academy.

**Rangers Jerry Dwyer and Gordon Horsley** of **Mobile County** held a Fire Prevention Program and Arbor Day Poster Awards Ceremony at **Semmes Elementary and Phillips Middle Schools**. **Ranger James Wade and Aaron Hunt** held identical programs at the **E. R. Dickson Elementary and Booker T. Washington Schools**.

**Jake Gibbs** presented a Fire Prevention Program to **Cub Scouts** at the **District 8 Headquarters** on **June 19**.

**Choctaw County Supervisor Chuck Quinn** held discussions and instructions on the use of the **Biltmore stick** to forestry students at the **Tom Orr Vocational School** on **May 10**.

On **May 12** **Baldwin County Forester John Martin** attended a meeting with the **Baldwin County Forestry Planning Committee** to discuss and plan a forestry tour in **Baldwin County**. At this meeting a decision was made to set up a questionnaire to be mailed to landowners to determine which forestry disciplines landowners would be most interested in as topics for future programs. The response from landowners was very good.

**Clarke County Ranger Randy Kinman**

attended a **Forestry Planning Committee** meeting on **June 19** to discuss ways to market timber in **Clarke County**.

A tour was held on **September 18** on **Leon James' TREASURE Forest** property in **Clarke County**. The AFC's portable sawmill was demonstrated at this tour.

**County Forester John Martin** attended a meeting on **June 20** with the **Baldwin County Rural Development Committee** and was asked for his assistance in the planning and setting up of an arboretum in conjunction with the **Heritage Museum** in **Elberta**.

**DISTRICT 9** "Awards are rewarding". Especially when your district receives two national awards in one month. The **Florence Garden Club's Potpourri Trail**, located at **District 9 Headquarters**, was honored by the **National Federation of Garden Clubs**. The wildflower garden project was selected for second place honors in the wildflower category. Along with the award goes \$500.00 to be spent for maintenance of the trail.

The second national award went to **Amanda Ray**, a student at **Russellville Middle School** in **Franklin County**. Amanda won first place in the **Smokey Bear/Woody Owl Poster Contest**. This contest which is open to all ages—both students and adults—is sponsored by the **National Council of Garden Clubs**. Amanda's drawing of clouds, rainbows and butterflies was judged best in the seventh grade category both at state and national levels.

The **Franklin County Forestry Planning Committee and Champion International** hosted a landowner meeting to discuss the **Southern Pine Beetle** problem. After a video presentation on "What Can Happen If Beetles are Not Controlled", the group enjoyed a picnic by the lake.

**Dr. Frank Roth**, **Forest Management Specialist** from **Auburn**, was guest speaker for the recent **Marion County Forestry Planning Committee Meeting**. This was a joint meeting of the **County Planning Committee and the Farm Bureau Forestry Committee**.

**Royce Mann**, **Marion County's** newest **Treasure Forest landowner**, was presented his certificate by the **Marion County Forestry Planning Committee** meeting. **Marion County** now has 14 **Treasure Forest Landowners**.

Congratulations to the **Clyde Holcomb family**. Their **Treasure Forest** has been selected winner of the prestigious **Helene Mosley Treasure Forest Award**. The certification committee visited the **Holcomb property** in **July**. They were accompanied by the **Marion County Forestry Planning Committee**, **Tony Avery**, **County Forester** and **Gerald Steeley**, **District Forster**.

**Neil Letson and Gerald Steeley** attended a meeting of the **Florence City Planning Commission**. Neil explained the **Tree City USA** program to the Commission. The **City Planner** has asked the **Forestry Commission** to do a street tree survey.

**Don Burdette** presented the **Tree City USA** program to the **Red Bay City Council** at their **July Meeting**.

On **July 8**, the **Zip City Volunteer Fire Department** held its annual hamburger supper and hosted the monthly meeting of the **Lauderdale County Volunteer Firefighters Association**. Chief **Butch Tucker** welcomed the association members to **Zip City** and **County Forester Steve McEachron** announced that the **Grant checks** were ready to be distributed.

**DISTRICT 10** The newly organized **State Capital Chapter of Professional Secretaries International**, with 44 State employees as charter members, received its **National Charter** at a special dinner meeting recently. **District 10 Secretary Tonce Thomas** was installed as the secretary for the group. **Dr. Halycon Ballard**, **Alabama's** personnel director, who is very supportive of **PSI** and the

benefits it can offer to encourage professionalism among State clerical employees, was the guest speaker at the initial session. At her suggestion the **Annual Statewide Conference** was planned for **July 31-August 1**.

**Russell County Planning Committee** met in late August to set the stage for their tri-county TF field day coming up this fall. Nothing is very firm about the event yet, but **Supervisor Melvin Phelps** says it should be the biggest planning group-sponsored TREASURE outing ever in **District 10**. Associate **David Boozer** said the advisory committee also did good work with the recent SPB quick-meetings called in each county to acquaint landowners with the size and scope of our current bug threat. Their forestowners' gathering was well attended and covered beetle control measures, contracts, marketing damaged timber, and some advice on saving yard shade trees.

Also, work on **District 10's** responsibilities toward the upcoming **Annual Landowner Conference** continues, with the big **TREASURE Hunt** shaping up nicely. In it, conference participants collect wooden tokens each having a letter from "TREASURE" on them, and when they have a full set their names go in for a chance at a really grand prize.

Then too, **SPB** flights are continuing over all 7 counties in spite of the on-going fire season. Pilot **Jim Mosley** sees the trouble as being the spotters finding more bug infestations each time he takes some up. Beetle coordinator **Sharon Clark** says salvage operations in **District 10** are going better than history would have predicted. **Macon County Supervisor Jerry McGhee** says there are more crews cutting continuously in his county's hot spots now than at any time before during this current SPB epidemic cycle. **J. B. Coker**, **Lee County Supervisor**, and his associates **Jimmy Kinney** and **Randy Quick** think the same thing is true in their neighborhood too. **Melvin Phelps** and **David Boozer** and making dozens of landowner contacts in **Russell County**, and are district leaders with contract numbers.

## CALENDAR

**October 5-9**—Jefferson County. National Meeting of Society of American Foresters. Many concurrent sessions. October 7 and October 9 on Non-Industrial Forest Owners. Contact **Cynthia Page**, 261-2525.

**October 7**—Walker County. 9:00 a.m. Forestry Planning Committee. Call **Mr. Smelley** 387-1879.

**October 7-9**—Athens, Georgia. Southern Biomass Energy Research Conference. Call **Mac Copeland**, (404) 542-2236.

**October 14**—Jefferson County. 7:30 p.m., Alabama Forest Owners' Association, AmSouth Bank, Hoover. Program to be announced. Pre-program dinner at **Shoney's**, 6:00 p.m. Call **Lee**, 663-4138.

**October 14-16**—Eatonton, Georgia. Workshop on Piedmont Forest Roads: planning, design, construction, maintenance. Call **Dr. Leonard A. Hampton**, (404) 542-3063.

**October 17-18**—Montgomery County. Whitetail Deer Management Workshop for Private Landowners Land Managers. Call **Dr. Stribling**, 826-4850.

**October 23**—Bullock County. 9:00 a.m. Multiple-Use-Management—A Field Day at **Rumph Treasure Forest**. Free Luncheon. Contact **Dr. Peter Mount**, 727-8809.

**October 23**—Monroe County. Fall Forestry Tour. Contact **Sam Fish**, 575-3477.

**October 27-31**—Durham, North Carolina. Forest Appraisal - Part II. Instructor. **Dr. William Sizemore**. Call (919) 684-2135.

**October 29-30**—Jackson, Mississippi. Annual Meeting of Mississippi Forestry Association. Call **Bob Izlar**, (601) 354-4936.

**November 1**—Jackson, Alabama, Clarke County. Southwest Forestry and Wildlife Festival, 8:30 a.m.-4:30 p.m. Free games for children. Contact the Chamber of Commerce in Jackson.

# Southern Forest Pest Management Slide-Tape Programs Available

This series of slide-tapes were developed through the Expanded Southern Pine Beetle Research and Application Program and were distributed by the Southern Region, Forest Pest Management (FPM) to key federal agencies, Extension-Service, and State Foresters. Numerous requests for additional slide-tapes prompted FPM to make them available at a reasonable cost to interested persons or agencies. The series is suitable for training and general informational usage. The slide-tapes can be obtained from SOUTHFORNET, Science Library, University of Georgia, Athens, Georgia, 30602. The prices and description of each slide-tape are listed below.

1. **CONTROL METHODS FOR THE SOUTHERN PINE BEETLE** (80 slides/16 minute tape). This program describes in detail the four major treatment methods—salvage removal, cut-and-leave, chemical control, and pile-and-burn—recommended for SPB control. Cost - \$50.
2. **THE BIOLOGY AND IDENTIFICATION OF THE SOUTHERN PINE BEETLE** (46 slides/7 minute tape). This slide-tape presents a detailed description on how to identify pine attacked by the SPB and describes the

SPB, its various life stages, and associated insects. Cost - \$35.

3. **INSECTS ASSOCIATED WITH THE SOUTHERN PINE BEETLE** (79 slides/14 minute tape). Other bark beetles—pine engravers, black turpentine beetle, pine sawyers, ambrosia beetles—attack and sometimes kill pine. This program describes how to identify these beetles, so they will not be confused with the southern pine beetle. Cost - \$50.
4. **BUILDING AMONG THE PINES** (121 slides/19 minute tape). This program discusses protecting trees during construction and how to minimize the incidence of bark beetle damage to pines. Although this program emphasizes pines, the same protection principles apply to all forested sites. Cost - \$70.
5. **SILVICULTURE CAN REDUCE SOUTHERN PINE BEETLE LOSSES** (65 slides/9 minute tape). This program covers the need for using good forest management practices to prevent or reduce SPB-caused mortality in pine stands. The presentation is in three parts, general silvicultural practices

and specific recommendations for the Piedmont and Coastal Plain regions. Cost - \$40.

6. **CHEMICAL CONTROL OF SOUTHERN PINE BEETLE** (50 slides/9 minute tape). The slide-tape describes the use of three insecticides (Lindane, Dursban, Sumithion), for chemical control of SPB. Both preventive and remedial methods are presented. Cost - \$35.
7. **APPLYING INTEGRATED PEST MANAGEMENT IN SOUTHERN PINE FORESTS** (82 slides/15 minute tape). This program explains the integrated pest management approach to the control of major pests which occur on the southern yellow pine at different stages of a tree's development. Cost - \$50.
8. **LITTLELEAF DISEASE** (Slides, script, pulsed cassette). The purpose of the program is to increase awareness among foresters that littleleaf can be identified and successfully managed to reduce future losses caused by the disease and associated bark beetles. Littleleaf disease is described as a "rather unusual disease because it involves a complex of... a tree species, ... a parasitic fungus, an insect, and the socio-economic history of... the Piedmont." In this slide-tape, these aspects of the disease are explained and its symptoms identified. Also covered is information on the prediction and management of littleleaf disease and the danger of associated southern pine beetle attack on untreated stands. It was produced by the USDA Forest Service, South Carolina Forestry Commission, and Clemson University as part of a cooperative project. The authors, F. H. Tainter and S. W. Oak, are with the Department of Forestry at Clemson University and the U.S. Forest Service in Asheville, NC. Cost = \$40.

Each set contains a script, slides, and a cassette tape with audible and inaudible tones. Prices includes shipping and handling. ♣

Please send slide-tapes to:

Name: \_\_\_\_\_

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

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

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# Growing LOBLOLLY PINE in Alabama

by LOU HYMAN, Chief, Forest Management, AFC

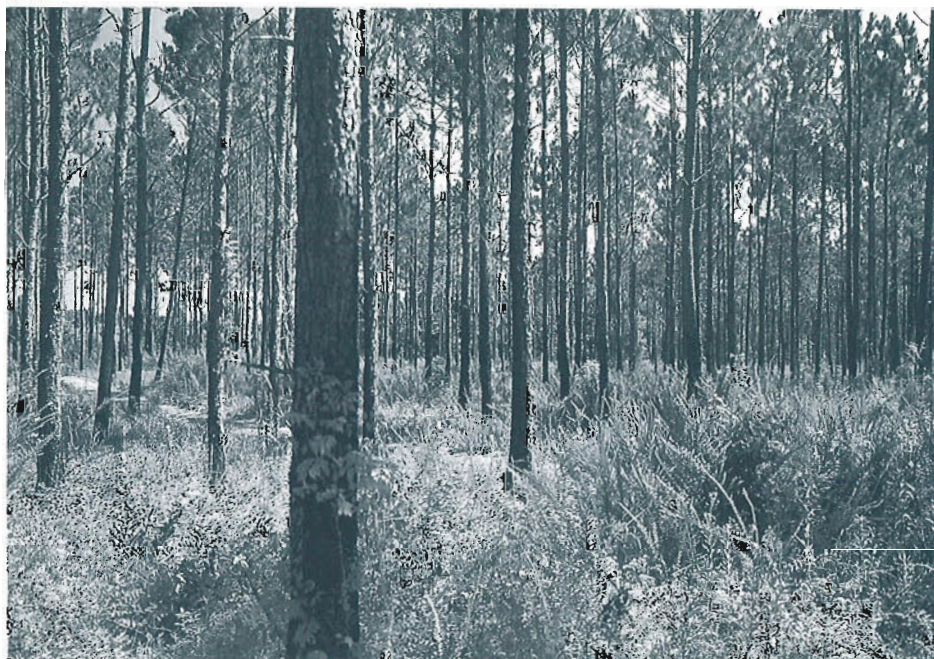
**J**UST ABOUT ANYWHERE you look in Alabama, you can find loblolly pines growing. It grows in the compact straight rows of plantations, and the random patches of a natural stand. Forest nurseries grow millions of loblolly seedlings which are planted by landowners in Alabama. Lumber cut from loblolly pines is used to build houses, furniture, decking, and even toys. The trees can be sliced to make veneer and plywood, ground up to make pulp, or trimmed and treated to become telephone poles. The pulp produced from loblolly pines is used to make kraft paper bags, corrugated cardboard boxes, writing paper, and even this magazine.

How can a landowner grow loblolly pine trees? There are many parts to that question, and much information is available to answer specific questions. The purpose of this article, though, is to give an overview of the entire process of growing loblolly pines in Alabama.

Loblolly—the tree that does so much for us—is one of the Southern pines. The natural range of loblolly pine stretches from Virginia to Texas, including the entire state of Alabama. Loblolly is one of the least demanding of the Southern pines. It can tolerate a wide range of soil types, but it cannot grow in some areas of the black belt where the soil pH gets above 6.0. It will also not do well in areas of very shallow, rocky soil, deep dry sands, or areas with heavy flooding.

Loblolly pine is intolerant of shade. In order to grow at its best, the tree needs direct sunlight. Loblolly is considered a pioneer species. It is one of the first trees to seed in to an abandoned field. In the woods, loblolly will reseed itself if the woods are relatively open and there is very little hardwood brush competition.

Loblolly pine stands begin one of two ways. The trees are either planted or the seedlings develop naturally from seeds dropped by adjacent trees. This seeding in process is called natural regeneration. Planting trees is often referred to as artificial regeneration. Artificial regeneration consists of two parts: site preparation and tree planting.



## Site Preparation

Site preparation means just that—preparing a tract so that trees can be planted and can grow. Most site preparation has as its goal the elimination of competing trees and brush and the improvement of access on the site for the tree planters.

The best way to prepare a site is to begin five years before the final harvest. The tract should be prescribed burned and any large cull trees killed. The stand should be burned again 3 years before harvest, and then again just before cutting.

This method of site preparation is very inexpensive. Prescribed burning only costs about \$5 per acre (including some fire-breaks). So, for \$15 per acre, the site will only need some light cleaning after the harvest. The problem with this system is that it requires that the timber harvests be planned five years in advance. Unfortunately, most landowners do not have the luxury of advanced planning.

The more common case is that the timber is harvested first and then regeneration is thought about. In this case, some action must be taken to clean up the site for re-planting. Failure to adequately site prepare

will result in the new stand being choked by heavy brush and weed competition. The most common types of site preparation used in Alabama are *mowing*, *shearing and piling*, *drum-chopping*, *discing*, and *spraying with herbicides*.

When a site is *sheared*, all standing trees and brush are pushed down by a bulldozer using a pointed, sharpened blade called a K-G blade. The blade cuts the tree at the base and pushes it over. The dropped material, called slash, is pushed into windrows with a root-rake, which is a bulldozer blade with teeth along the bottom.

A *drum-chopper* is a large tank with sharpened fins all around it. The chopper tank is filled with water and pulled behind a bulldozer. The chopper crushes any cull trees and brush, while the blades on the chopper cut the slash into two foot long pieces. Usually the drum chopping is followed by a prescribed burn.

In some cases, after a site is windrowed or drum-chopped, the ground is *disked* using a heavy duty disk harrow. The purpose of discing is to break up any roots left in the soil and thus hopefully prevent any hardwood sprouting.

A relatively new method of site prepara-

ration is *spraying with chemical herbicides*. Herbicides used to have a bad reputation, resulting from problems with “Agent Orange” during the Vietnam War. These problems resulted in the banning of some herbicides and their replacement with new environmentally safe chemicals. All the herbicides in use today are safe to humans and wildlife if they are used correctly.

During chemical site preparation, the tract is sprayed with a herbicide either by helicopter or ground machinery. The chemical kills the cull trees and brush. The herbicide also kills the roots of the sprayed brush, thus preventing any sprouting. The tract is usually prescribed burned after the chemical has done its work. The burn cleans up the site to make tree planting easier.

One of the key considerations in selecting a method of site preparation is preventing soil erosion. Erosion can be speeded up by the removal of topsoil during windrowing or discing. Site preparation using herbicides causes the least erosion.

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## Planting Loblolly

The purpose of site preparation is to make the land ready for tree planting. Loblolly pine can be planted two ways: by hand or by machine. Hand planting is done by poking a hole in the ground with a planting bar, called a dibble. The seedling is placed in the slit and the hole closed tightly. Machine planting is done with a machine pulled by a tractor that cuts a slit in the ground. The seedling is placed in the furrow at regular intervals and the trench is closed by a set of packing wheels.

Usually loblolly pines are planted in a grid pattern. The reason is to get an even distribution of trees across the area. Some common seedling spacings are *8 feet by 8 feet*, which will set out 680 seedlings per acre; *7 feet by 10 feet*, which will produce 622 trees per acre; and *6 feet by 9 feet*, resulting in 806 trees per acre.

Remember, pine seedlings are perishable. They need to be protected from freezing and drying out. Keep the seedling bundles covered and watered during transportation and storage. It only takes three minutes of exposure to dry air to kill the roots of a loblolly pine. Three minutes of carelessness will cause you to plant dead trees. For more information about handling live seedlings, see the pamphlet *Seedling Care and Planting Guide*, available at any Alabama Forestry Commission Office.

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## Natural Regeneration of Loblolly

The biggest drawback to the artificial

regeneration methods of site preparation and planting is the high cost of doing the work. Heavy site preparation and planting can easily cost \$125-\$200 per acre. For many landowners, this high capital investment is prohibitive.

Natural regeneration is a relatively low cost method of working with nature to reforest a stand. The two main steps in natural regeneration are *leaving seed trees* and *controlling competing hardwoods*.

Seed trees are the parents of your next crop. To get the best crop, you need to leave the best parent trees. **SAVE THE BEST, SELL THE REST.** A good seed tree is over 12 inches diameter breast height (DBH), with a strong full crown and some pine cones already present. For good regeneration, you need to leave 6 to 10 seed trees per acre.

The best time to control the hardwood competition is before the harvest. Prescribed fire followed by injecting herbicides into cull hardwood trees is the easiest way. A follow-up fire after harvest will knock back any residual hardwoods and clean up the site.

In order to work, natural regeneration must be planned in advance. Any harvest cutting plan should include regeneration plans. These plans should include what site preparation work is needed and what seed trees to leave.

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## Managing a Young Stand

Once the forest is started, it still needs looking after if it is to grow at the best rate. Even if site preparation was done, the stand can become choked by weeds. Control against grasses and weeds can be done by spraying during the first spring. Research shows a tremendous growth response to this work. At about age four, your stand should be checked for hardwood competition, and the pines released by herbicides if needed.

In naturally regenerated stands, sometimes the trees will seed in too densely. Depending on the number of trees and the economics of the situation, precommercial thinning may be needed. In many cases, though, and in most plantations, precommercial thinning is not recommended.

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## Loblolly Pine and Fire

Mature loblolly pines are resistant to fire, but young pines can be easily damaged or killed. Fires must be kept out of young pine trees until they are at least 15 feet tall or about 8-12 years old.

Prescribed burning is the careful use of fire for a specific purpose under exact weather and fuel conditions. In loblolly stands, fire is used to reduce hardwood

competition and improve access and wildlife habitat. Prescribed burning can be dangerous and should only be done by someone who is trained in fire control. Burns should be no closer than two years apart.

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## Thinning Loblolly Stands

As the trees get bigger, they begin to crowd each other, reducing their growth. Generally, an acre of land will only grow so many cubic feet of wood per year. By thinning the stands, removing some of the trees, this growth can be concentrated on the better quality trees. This will result in a higher percentage of quality sawtimber trees in the final stand.

There are many ways to thin. One way is to cut every third row in the plantation. The best way though is to remove the worst trees in the stand. Those with diseases, forks, or poor forms should be taken out. About one-third of the trees should be removed in the first thinning. The rule to follow is **KEEP THE BEST, CUT THE REST.**

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## Protecting Loblolly Pines from Insects and Disease

One of the risks of growing any crop is damage from insects and diseases. Loblolly pines have relatively few insect and disease problems. The most serious concern is the Southern pine beetle. A bad infestation can wipe out the entire stand. There is a way, though, to lower the risk of a bad infestation. Do not let your stand get above 100 square feet of basal area. Stands that are denser than that are high risk and need to be thinned.

The major diseases of loblolly pine are annosus root rot and fusiform rust. Annosus root rot infects stands that have been partially cut and can kill off the stand. Frequent prescribed burns will reduce the risk of annosus root rot. If a stand gets infected, the only cure is to clearcut. Fusiform rust is easier to treat. Infected trees are cut during the next thinning. The key to insect and disease control is maintaining a well stocked, well growing stand of trees.

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## Loblolly and Wildlife

*GOOD FOREST MANAGEMENT IS GOOD WILDLIFE MANAGEMENT.* A loblolly pine stand that is managed well, with thinnings and prescribed burns, will produce abundant wildlife, both game and nongame. Game species that use loblolly pine stands are deer, quail, rabbits, and—in mature stands—turkey.

New stands of trees, under eight years old, are prime wildlife habitat. As the trees

grow larger, they begin to shade out the wildlife foods. This is where the myth of the "Biological Desert" originated. However, if a stand is thinned and prescribed burned, the food plants can flourish again. Thus the myth of the biological desert is not true in well managed loblolly stands.

The prime food for deer is *browse*. These grasses, weeds, and succulent growth are helped by prescribed burning. Wildlife openings can be planted to extend the amount of browse. The other main wildlife food is *mast*, such as acorns and dogwood berries. These can be helped by leaving up to six mast producing trees per acre. Mast is primarily used by wildlife during the fall and winter.

Hardwood control has both beneficial and negative effects on wildlife. If all the hardwoods are killed, then there is no mast production. However, hardwood control greatly enhances browse production. A good compromise is to save the best mast producers and control the rest. This will encourage good pine growth and good wildlife food production.

One of the problems with forest management is the long periods of time between incomes from timber sales. Good wildlife management can generate annual income from hunting leases. Thus good wildlife management can subsidize your forestry work.

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### A Mature Loblolly Forest

At long last, your growing forest will reach maturity. A mature loblolly forest will contain a large number of sawtimber trees. Many of these trees will have slowed in their growth, sometimes resulting in the tree crowns becoming flat-topped, instead of steeple shaped. Individual loblolly trees can grow for 150 years, but loblolly pine stands begin to break apart at age 60. As stands get older, the trees succumb to lightning, insects, and diseases.

*Economic maturity* is a term used to describe how long it takes to grow a certain wood product. Generally, it takes 15-25 years to grow pulpwood, 25-30 years to grow sawtimber, and 40-50 years to grow high quality veneer trees.

Pine stands have a limited life span. Eventually the pines will die, being replaced by lower quality hardwood trees. It is important to cut the trees when they are mature, rather than let them die and rot in the woods.

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### Harvesting Loblolly

When the timber reaches maturity, it is time to harvest. This is not the end of the forest, but the beginning of a new forest.

For this reason, foresters refer to the final harvest as a "regeneration cut." There are two major ways to regenerate your forest. The seed tree system involves leaving some of the best trees to naturally regenerate the forest. The other system is to clearcut, site prepare, and plant. To be done right, both of these systems require planning for regeneration.

In Alabama, there are three basic methods of harvesting loblolly pine. In the shortwood method, the trees are cut by



chainsaws into short sticks and loaded by hand or winch onto "bobtail" trucks. Most of the wood cut this way is used as pulpwood. Another method is to cut the trees with chainsaws and pull the whole tree with skidders to trucks where they are loaded and hauled to the mills. Some loggers are now using feller-bunchers, machines that snip the trees off the stump using giant shears. The trees are then skidded to the trucks for loading.

Harvesting is necessary for the life of the forest, but it must be done so as not to destroy the forest. Loggers need to follow "best management practices" (BMP's). These guidelines require the loggers to leave buffer strips along all creeks, keeping out all machinery. Loggers also need to set up logging roads and skid trails so as to prevent soil erosion and protect any trees left on the site.

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### Selling Your Timber

There are several ways to sell timber. The most common ones are sealed bid auction and negotiation. Sealed bid auc-

tions involve several bidders competing for the timber. Negotiated sales involve the landowner working with only one timber buyer. The timber can be sold "lump sum," one price for all the trees; or by the unit, where the landowner is paid a set price for every cord, ton, or MBF harvested from his land. The best deals are usually sealed bid, lump sum sales.

**Never sell timber without a written contract!** A contract protects both the landowner and the timber buyer. Your contract should contain an exact description of the trees to be cut, how much should be paid and when, what BMP's should be followed, logger's responsibility for damage, and when cutting must be finished.

Selling timber is *NOT* a do-it-yourself activity. Studies have shown over and over again that having a professional forester assist you can generate up to 50% more stumpage value. Consulting foresters are in the business of helping people sell timber. A good consultant can appraise your timber, mark out the sale area, solicit bidders, draw up the contract, and supervise the logging operation. He will usually charge 10% of the sales price for this work, but it is well worth it.

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### Loblolly Pine Management and TREASURE Forest

TREASURE Forest, a program sponsored by the Alabama Forestry Planning Committee, is an awards program recognizing landowners who act as good stewards of their land. Landowners who practice good loblolly pine management, with attention paid to the wildlife, environmental, recreational, and aesthetic benefits of the forest can easily qualify for this award.

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### Is Loblolly Pine Management for You?

Loblolly pine management can be financially rewarding. Even during a period of depressed stumpage prices, such as during 1985 and 1986, landowners can still generate financial rates of return well above those of alternative investments, such as bank certificates of deposit.

Just as important as cash income, growing loblolly pines will improve the value of your property. A well managed stand is worth more than a neglected cut-over brush field. Growing trees will also improve wildlife habitat and protect the environment.

If you would like to find out more about pine management and whether your land can grow loblolly pine, contact your local professional forester. ♣

# LANDSCAPE

LEGISLATIVE  
ALERT

## NATIONAL



by FRANK SEGO, Legislative Liaison, Alabama Forestry Commission

**T**HE TIME FOR WRITING this column and the time for reading it are always weeks apart. That's why it is difficult to sit down at a typewriter in mid-July and give the reader something fresh on the legislative front for release in September. Things move too fast in Alabama politics for that.

However, as this is written the madness in the aftermath of the governor's race is still very much with us. Charges and counter charges have been flung to the four corners of the state and the voters are bewildered by it all. As you read this, you will surely know who the Democratic nominee is. The rest depends on the outcome of the general election on November 4.

Realizing that the whole squabble has left an unsavory taste in the palate of the electorate, we feel it best to dwell on a more refreshing view of the Alabama political scene—the races for the legislature. We'll begin with the quadrennial run for the State Senate.

### The Senate Races

Some interesting developments are noted in the races to determine "who's who" in the new Senate. Rick Manley, the Demopolis Democrat and former Speaker Pro Tem of the Alabama House, returns to Capitol Hill after ousting Frances "Sister" Strong in a heated campaign for Senate District 22. Manley received support from the Farm Bureau and the Alabama Alliance of Business and Industry.

In District 24, longtime Senate leader Earl Goodwin of Selma faces a formidable challenge from former senator Cordy

Taylor of Prattville. Goodwin had to stave off his first challenge from Democrat Larry Hunt in the June primary.

Senator Danny Corbett of Phenix City turned back the challenges of three democrats, including Lucius Amerson, the outgoing sheriff of Macon County, before being assured of his return to the upper chamber. He has no Republican opposition in November.

Representative Jim Preuitt of Talladega finds himself in a scenario unlike any of the other Senate candidates. He is seeking the seat vacated by John Teague. First, he had to hold off a Democratic threat from Randy Billingsley. Now, he must prepare to face Republican Curtis Lambert and Independent Bill Thompson in the general election.

### Bedsole Goes for Second Term

Meanwhile, down in the port city of Mobile, vivacious Ann Bedsole, who stands tree-top tall for forestry in Alabama, is campaigning for her second term in the Senate. She needs only to turn back a Democratic challenge from former House member Tommy Sandusky, also of Mobile.

The departure of Steve Cooley from Senate District 4 (the Cullman, Morgan, and Madison area) finds two newcomers battling it out in November. Cullman County Commissioner Randall Shedd—the Democrat, and attorney Don Hale—the Republican, also a Cullmanite, are running a spirited campaign for the Cooley seat.

Republican Senator Perry Hand of Gulf Shores, popular member of the Legislative

Forestry Study Committee who speaks out loud and clear for forestry from District 32, is being challenged by another former senator and Wallace Cabinet member, Bob Gullledge of Robertsedale.

Incumbent Senator John Amari of Birmingham defeated Bettye Fine Collins in the June 3 primary. He now awaits the challenge of Republican C. R. Jones, Sr. in District 15.

Five other incumbent senators, Charles Bishop of Jasper, Roger Bedford of Russellville, Bill Smith of Huntsville, and Fred Horn of Birmingham (all Democrats) face Republican opponents in November. Senator Bill Cabiniss of Birmingham will have a Democratic challenger in November.





# WINNERS

## STATE

by J. KENNETH MYERS\*, Legislative Affairs, U.S.D.A. Forest Service

### Fourteen Unopposed

Senators Bobby Denton, Tuscumbia; Jim Smith, Huntsville; Bill Drinkard, Gadsden; Donald Holmes, Oxford; Frank Ellis, Columbiana; Mac Parsons, Hueytown; Jim Bennett, Homewood; Earl Hilliard, Birmingham; Ryan deGraffenried, Jr., Tuscaloosa; Larry Dixon, Montgomery; Chip Bailey, Dothan; Foy Covington, Newville; Crum Foshee, Andalusia; and Bill Menton, Mobile, were unopposed for reelection.

Two current House members, Loyd Coleman of Arab, and John Rice of Opelika, will move into the Senate Chamber following their victories in the Democratic primary. Newcomer Ray Campbell of Morgan County will gain his first term in the Senate after winning nomination in the June primary. He succeeds Gary Aldridge of Hartselle who vacated the seat in District 3.

Incumbent Senators Lowell Barron, Fyffe; Gerald Dial, Lineville; Hank Sanders, Selma; Charles Langford, Montgomery; and Michael Figures, Mobile, won reelection in the Democratic primary.

Alabama law stipulates that members of the legislature take office immediately following the general election. Organizational and orientation sessions will begin for lawmakers in December. However, law provides that the regular legislative session will not commence until April 1987.

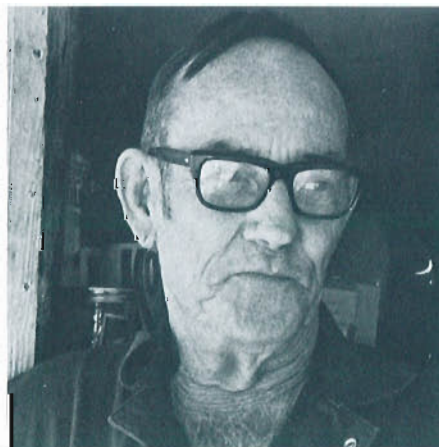
In the next issue of *Alabama's TREASURED Forests* we will profile the 1987-90 Alabama House of Representatives. ♣

AS THE 99TH CONGRESS draws to a close, attention continues to be focussed on the budget and deficit reduction and on tax reform issues which have dominated its agenda since convening in January. These are but two of the many issues Congress seeks to complete action on before adjourning prior to the November elections. Despite this pressure, Congress continues its work on a wide variety of issues. Altogether, the legislators have been busy.

The appropriations acts for the upcoming fiscal year (beginning October 1, 1986) are being put into their final form by the Appropriations Committees. Those for the cooperative State/Federal forestry programs that provide funding for protection and management assistance for the nation's state and private forest lands are expected

to continue at about the same level as last fiscal year. This would be about \$58 million. This congressional action represents a refusal to go along with the Administration's budget that recommended no funding for these programs. The Forestry Incentives Program, funded currently at about \$12 million, is also expected to receive the same amount for the next year. Despite the emphasis on budget reduction and the heavy cuts in funding experienced in many federal programs, the cooperative forestry programs would appear to be holding their own. Good luck, Ken!

\* This is the last article which Ken Myers will write for this magazine. We extend our sincere appreciation to him for his cooperation over the last four years.



## MEMORIAL

H. T. (Tal) Evans, charter member of the Barfield Volunteer Fire Department, died April 14, 1986. He was admired and respected by everyone in the community. Because he had been so devoted to the fire department, he was named Honorary Fire Chief. We will miss his daily encouragement and inspiration.

# ESTABLISHING FOOD PLOTS FOR DEER AND TURKEY

by ROBERT E. WATERS, Biologist, U.S.D.A. Soil Conservation Service

**A**BOUT 237,000 DEER and 48,000 turkey were harvested by Alabama hunters during the 1984-85 hunting season, the last season for which the Game and Fish Division has totaled the figures. By anybody's standard, that's a lot of deer and turkey!

How many did you harvest during the 1984-85 season? How many did you harvest last year? Are you and your hunting companions getting your fair share? Are the people to whom you lease hunting rights or to whom you sell daily hunting permits getting their share? If not, you may also want to consider the establishment of food plots!

It's not difficult to do. Merely plant small plots in winter forage crops and wait for deer and turkey, especially deer, to come into the plots to feed. It's that simple if you follow the instructions below.

## Size

Plots should cover at least one acre. It's better to plant several 1-to 3-acre plots than to make one larger planting. One plot (1-3 acres) for every 25 acres of forestland is enough to increase your chances of harvesting more deer and turkey and to provide wildlife with an abundance of supplementary winter food.

## Location

Good locations for food plots are openings in forestland, utility rights-of-way, idle crop fields, and almost anywhere else near forestland if the soil is suitable. The Soil Conservation Service can tell you whether it is suitable.

## Suitable Plants

Food plots should be planted to either small grains (barley, rye, wheat) and other grasses or to cool-season legumes. There are many crops from which to choose. The better ones are listed in the table below. You

will notice that some of the crops are suited only to north Alabama; some are suited to both north and central Alabama; and others are suited to all areas of the state. Select those crops that are suited to your area, of course.

Plant the crops alone or mix two or more that are adapted to your soil and area. Many landowners and hunters in Alabama prefer a winter-hardy small grain mixed with an adapted winter legume. For example, rye and white clover are popular in north Alabama; and wheat mixed with crimson clover is popular all over the state, especially in central and south Alabama. Avoid planting oats—they are not winter-hardy.

Annuals should be planted only in plots that are level or nearly level. That will help to prevent your soil from washing away. Perennials can be planted on level land as well as on steeper sites. In fact, fungus-free fescue (perennial) is recommended for only steeper sites such as road banks and sloping

cropland where the planting of annuals would increase the likelihood of serious erosion.

Frankly, fescue is not a choice food of deer and turkey. They eat the fungus-free varieties to some extent, however, especially if the crop is clipped in the fall and heavily fertilized with nitrogen fertilizer. Plant only fescue seed with a low level of fungus infection, preferably less than five percent. The percentage is listed on the seed tag.

## Time to Plant

Planting dates vary a good bit, of course, depending on the crops selected. August through October, however, is generally the best time to plant. The table on the next page contains planting dates and seeding rates for the winter forage crops usually recommended for deer and turkey in Alabama.



Winter forage in a little-used road reduces the cost of road maintenance, serves as a firebreak, and produces winter food for deer and turkey.

## Soil Preparation

Break and harrow your plots several weeks before planting. That allows rain to settle the soil before planting. The seedbed should be well prepared, but firm.

## Lime and Fertilizer

Deer and turkey (especially deer) prefer forage that's been properly limed and fertilized, and they eat it first when it's available. Such forage may be more nutritious, it may be more palatable, or it may be both. One thing is for certain, it is definitely preferred by deer and turkey! Therefore, apply both lime and fertilizer according to soil test recommendations, and apply them at the time of land preparation.

Because food plots are small and frequently located in remote places, dealers may be reluctant—or may even refuse—to apply the lime and fertilizer that's so necessary for attracting deer and turkey. Sometimes the dealers simply can't drive their loaded trucks over the rough roads to reach the plots. In such cases, it may be necessary to apply the lime and fertilizer by hand. Use whatever means is necessary to get the correct amounts of lime and fertilizer on the plots. Otherwise, you will probably be disappointed.

## Log Landings, Access Roads, and Firebreaks

Other good locations for winter forage crops are on log landings, in little-used roads through forestland, and on firebreaks.

Besides providing winter food for deer and turkey, a winter forage crop growing in a little-used road serves several other useful purposes—it makes an effective firebreak, it reduces the cost of road maintenance, and it helps to control erosion. All are worthy objectives, of course.

When planting in little-used roads, on log landings, and in other such places, it may be difficult to make plantings of at least one acre. Make the plantings anyway, though, because it's much better to have the smaller areas in forage for wildlife than to leave them unattended and exposed to the ravages of erosion.

More information on planting and managing food plots for deer and turkey is available from the Soil Conservation Service, your county Cooperative Extension Service office, the Game and Fish Division of the Alabama Department of Conservation and Natural Resources, the Alabama Forestry Commission, private consultants and others. ♣



High quality winter forage attracts both deer and turkey.

### WINTER FORAGE CROPS FOR DEER AND TURKEY

Crop	Growth Habit <sup>1</sup>	Area <sup>2</sup>	Soils
<i>Arrowleaf clover</i> <sup>3</sup>	A <sup>4</sup>	N, C, S	Well drained, medium to high fertility.
<i>Ball clover</i> <sup>3</sup>	A <sup>4</sup>	N, C, S	Sandy loam to clay. Tolerates wet soils.
<i>Barley</i>	A	N, C, S	Well drained, productive.
<i>Crimson clover</i> <sup>3</sup>	A <sup>4</sup>	N, C, S	Well drained. Avoid lime soils of the black belt.
<i>Fescue, tall</i> <sup>5</sup>	P	N, C	Moist, fertile bottoms (Fungus free) and productive uplands.
<i>Orchard grass</i>	P	N, C	Well drained, medium to high fertility.
<i>Red clover</i> <sup>3</sup>	B	N, C	Fertile, well drained. Grows fairly well on some black belt soils.
<i>Rye</i>	A	N, C, S	Well drained, sandy to clay loam.
<i>Ryegrass</i>	A <sup>4</sup>	N, C, S	Well drained, productive.
<i>Subterranean clover</i> <sup>3</sup>	A <sup>4</sup>	N, C, S	Well drained, productive.
<i>Vetches</i> <sup>3</sup>	A <sup>4</sup>	N, C, S <sup>6</sup>	Well drained, productive.
<i>Wheat</i>	A	N, C, S	Moist bottoms to productive uplands.
<i>White clover</i> <sup>3</sup>	P	N, C, S	Moist bottoms to productive uplands.

Planting Date	Seeding Rate/Acre	Planting Depth (in.)
August 25 - September 30	6 lb.	¼ in.
September 1 - October 31	4 lb.	¾ in.
September 1 - October 31	1 ½ bu.	1 in.
August 15 - September 30	30 lb.	¼ in.
August 15 - November 15	15 lb.	¼ - ½ in.
August 15 - October 31	15 lb.	¼ in.
September 1 - October 31	15 lb.	¼ - ½ in.
September 15 - November 15	1 ½ bu.	1 in.
September 1 - October 15	25 lb.	¼ in.
September 1 - October 31	8 lb.	¼ - ½ in.
September 1 - October 15	30 lb.	1 in.
September 15 - November 15	1 ½ bu.	1 in.
August 15 - November 15	3 lb.	¼ in.

<sup>1</sup> A - Annual, B - Biennial, P - Perennial

<sup>2</sup> N - North Alabama, C - Central Alabama, S - South Alabama

<sup>3</sup> Use appropriate inoculant at planting time.

<sup>4</sup> Will reseed for several years if managed correctly. Obtain instructions from the Soil Conservation Service.

<sup>5</sup> Not choice food, but is eaten to some extent. Excellent for controlling erosion on road banks and other steep areas.

<sup>6</sup> Hairy vetch is better suited to north Alabama than are other vetches.

<sup>7</sup> Later dates are for south Alabama.

# Planting CONTAINERIZED Seedlings

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by MARK P. ELLIOTT, Registered Forester, International Forest Seed Company

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**P**LANTING CONTAINERIZED seedlings is a viable alternative to regenerate southern pine stands. Containerized seedlings are not new. Forest landowners in Scandinavia, Canada, and the Pacific Northwest have used container-grown planting stock since the early sixties.

Since the technology is new to the South, however, planting crews and landowners are unsure of how to handle and plant containerized seedlings. Proper handling and planting ensures dramatic results in reforestation.

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## Storage Is Simple

Seedlings shipped in their original re-useable container makes storage easy. Generally, the seedlings should be stored on a slight slope if possible. This allows for drainage after watering. Water the seedlings often enough to keep the entire root system moist. Do not allow the roots to dry out. Refrigeration or heeling-in is not required as with bare-root seedlings.

Additional measures are needed depending on the length of time before planting. If seedlings are stored only a few days, simply leave them in the box. Make sure the top is open to expose the seedlings to sunlight.

Longer periods, one week or more, require more preparation. Lay the containers on plastic or raised boards to prevent contact with the soil. Roots are actively growing in the fall and require continued air pruning. Air pruning encourages development of numerous lateral and fine roots. It is these roots that absorb water and nutrients needed by the seedling to survive.

Root protection is needed if you receive container seedlings in the winter. Keep the seedlings in the container. Cover the containers completely with hay or pine straw. This added insulation reduces the possibility of freeze damage to the roots.

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## Planting Is Fast and Easy

The seedlings' survival depends on more than a healthy root system. Planting technique is also important. Due to the ease of planting and reduced stocking level, planting speed increases. Total planting costs can be reduced up to 50% (Shaw, 1985).

Actual planting is a 3-step process (see illustrations). A specially designed hand planting tool cuts a hole that exactly matches the seedling's root system. Each seedling is removed from the container and fits neatly into the hole. This eliminates J-rooting, root pruning, air pockets, and twisted roots. Finally, firm dirt around the top of the hole to seal and protect the roots.

Daily planting rates of 1500 to 3000 seedlings per person, depending on skill and motivation, are common. Container seedlings are being successfully planted by standard planting machines. Small adjustments are needed to ensure proper seedling placement.

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## Plant in the Fall

Planting containerized seedlings can add up to eight months to the normal three months bare-root season.

Several studies have shown that seedlings planted in the fall enjoy an initial growth

advantage over winter planted seedlings. Differences in first year height growth of one foot or more have been noted. This is due to the additional root growth that occurs prior to full seedling dormancy in early winter. Additionally, container seedlings are planted with their root system intact. They suffer no shock from being lifted out of a nursery bed. In sum, the result is to reduce the time to harvest by one year (Shaw, 1985).

Because of fall planting and low transplant shock, container-grown seedlings can be interplanted six to nine months following the original bare-root planting (Guldin, 1983). They do not fall behind the survivors. Interplanting helps maintain a uniformly spaced stand at the desired stocking level.

Sites too wet to plant in the winter can be planted after flooding ceases. Finally, an extended planting season allows greater flexibility in scheduling harvests and site preparation.

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## Fewer Seedlings Are Needed

Per acre stocking is affected by the higher survival made possible with container seedlings. Fewer seedlings are needed to reach stocking goals.

Average survival rates of 90% have been noted. Recent USDA-Forest Service research shows first year survival of up to 98% for longleaf pine on sandy sites (Boyer, 1984). Higher, more predictable survival rates help reduce the risk of planting failures.

A knowledgeable forester can help determine the proper spacing for a specific

site. Wider spacing promotes the growth of more valuable, large diameter trees.

### What to Look For

Not all container seedlings are alike. Each has characteristics that may or may not fit your situation.

What characteristics make a "good" container seedling? Basically, it's the same as for bare-root stock. The top should be healthy and well proportioned to the roots. Select seedlings grown from the best seed source available. General seed source recommendations are available for some species. Do not accept seedlings that are diseased or of low vigor.

Additional guidelines particular to con-

tainer seedlings may help. Look for seedlings grown in containers that encourage proper root development. Vertical ribs reduce root spiralling. An air hole in the container's base will reduce the problem of roots becoming pot bound. A fibrous root system composed of nutrient and water absorbing lateral and fine roots should be chosen.

The container should fit the species being grown. It should have a large enough cavity to grow a root system that will support the shoot. Also, seedlings should not be grown so densely that stem diameter is affected. Optimal growing density is different for each species.

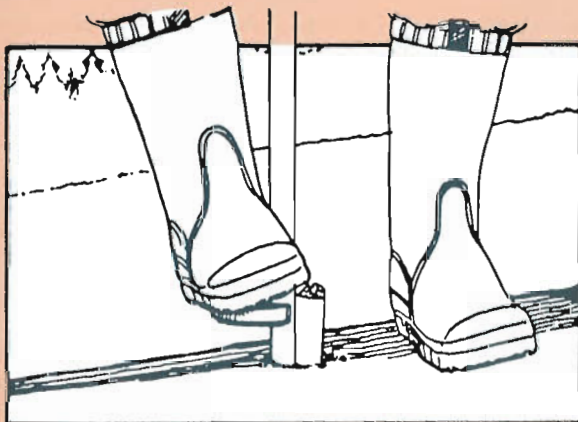
Seedlings should be acclimatized before planting. Beware of moving seedlings from

a warm climate, such as a greenhouse, directly to the field.

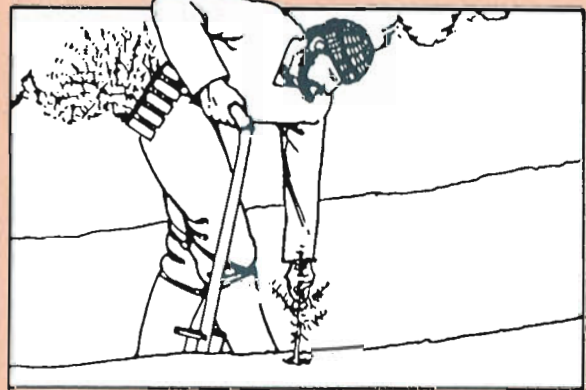
Finally, make sure the planting tool used is matched to the seedling's root system. The tool should not compact the soil, forming another container. Instead, it should cut a hole that exactly matches the seedling's root system. This prevents air pockets and makes planting easier.

Container seedlings are meant to supplement the other methods of regeneration. The advantages of a longer planting season, higher survival and faster hand planting show that innovative landowners cannot afford to overlook them. A pocket-sized planting guide and a calendar to aid scheduling your planting job are available from International Forest Seed Company. ♣

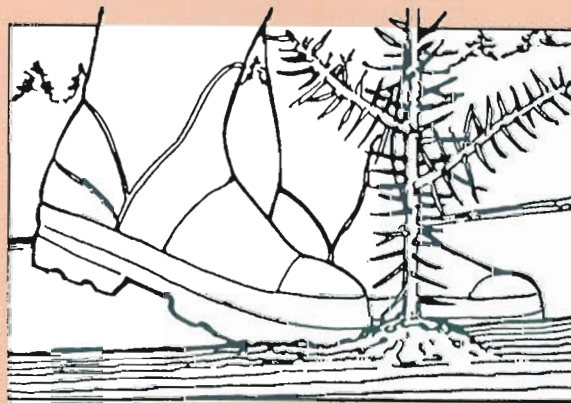
## HOW TO PLANT CONTAINERIZED SEEDLINGS



*Push the dibble into the ground until the foot rest touches the ground to remove soil while forming the proper size hole.*



*Remove the dibble, extract the seedling from the container, and place the seedling into the hole.*



**IMPORTANT!** Firm the dirt around the top of the hole to seal and prevent drying of the roots.

# INVESTING: FORESTRY OR AGRICULTURE?

by BILL MCKEE, Forest Economist, Alabama Cooperative Extension Service

*Portions of information in this article were prepared with information provided by Jerry Johnson and Bill Hughes, both with the U.S.D.A. Soil Conservation Service. The author also wishes to acknowledge Dennis Werblow and John Gunter, Extension Forest Resources, University of Georgia, for original preparation of most of the text found here. Without their assistance, this article would not have been possible.*

With oversupply and depressed prices threatening returns from many agricultural commodities, landowners often wonder if

growing pine trees isn't a better financial alternative than growing row crops, particularly on marginal cropland.

This article should help landowners make a knowledgeable decision about the use of their land. Perhaps it will help to answer the question, "Should I plant corn, cotton, soybeans, or peanuts on this land, or should I plant pine trees?" With cost-share money now available through the Conservation Reserve Program as well as the Alabama Resource Conservation Program, landowners all over the state are finding that pines are a good investment!

The expected annual return from growing

corn, cotton, soybeans or peanuts will be compared to the equal annual equivalent return from planted loblolly pine. Think of an equal annual equivalent as an annuity that spreads the net cash flow (including interest) uniformly over a period of time. A 25- and 35-year pine rotation period will be used. The annual equivalent value is useful in comparing investments having periodic returns (forest crops) with those having annual returns (agricultural crops).

Other factors affect the decision to convert cropland into pine. In addition to choosing the land use that gives the highest expected returns, you need to consider annual cash needs, risk preferences, taxes, and investment length. TABLE I illustrates a few of the differences between crops and planted pines.

Any economic analysis requires valid information and sound assumptions. The generalized assumptions used in this analysis are discussed below.

## Corn, Cotton, Soybean, Peanut, and Loblolly Pine Yields

The U.S.D.A. Soil Conservation Service (SCS) county soil surveys were the basis for all yield projections. Average annual per acre yields for corn, cotton, soybeans and peanuts for each soil series were taken directly from the published surveys and SCS soil interpretation sheets.

Loblolly pine yields are not listed in the soil surveys as such, but a measure of forest site productivity and site index is provided. Site index is the average height of the dominant and codominant (taller) tree at selected ages. The selected age is usually 25 or 50 years. Fifty years is com-

TABLE I

### ROW CROPS VS. LOBLOLLY PINE

Item	Row Crops	Loblolly Pine
1. Cash Flow	Annual	Periodic
2. Income Tax Treatment	Ordinary Income	Long term Capital gains amortization and investment credit on reforestation costs
3. Supply/demand Price outlook	Unfavorable	Favorable
4. Market	Usually must sell at current price; relatively perishable product	Multiple products, can hold and sell in a good market
5. Returns from land	Low, may be negative	Good
6. Soil conservation	Poor	Good
7. Drought	High risk	Low risk once established
8. Management	Intensive/active	Extensive/passive
9. Investment length	One year	15 years or more

monly used for natural stands, while 25 years is used for plantations. The site index was used in published yield equations to estimate harvest volume at rotation ages of 25 and 35 years. Yields for each site index class are listed in **TABLE II**.

Based on a planting rate of 778 trees per acre and first year survival rate of 85%. Yield estimates taken from TVA's Yield Program developed by Todd Hepp (Version 1.4, March, 1985). Site index is expressed as 50 year basis/25 year basis. An assumed residual basal area of 80 square feet was used for thinnings.

**PW** - Pulpwood harvested in cords per acre  
**ST** - Sawtimber harvested in thousand board feet (MBF), Scribner log rule.

### Production Costs

Corn, cotton, soybean, and peanut production costs for each major land resource area (**FIGURE 1**) were taken from the 1986 Crop Budgets published by the Alabama Cooperative Extension Service. Total costs for producing each crop are listed in **TABLE III**.

Investors in timber growing may have to purchase land; prepare planting sites; plant, release, thin, protect, and prune trees; prepare and administer timber sales; and pay annual taxes. Not every timber grower will have all of these expenses, but all will have some costs in growing timber. Such costs can be thought of as investment outlays that must be made to grow a certain kind of timber in a certain way. An experienced forester can provide you with various forest management costs. Expected costs used for this analysis are presented in **TABLE IV**. Site preparation will not be necessary since we are evaluating conversion of cropland to loblolly pine.

### Revenue

The average price received by farmers for crop years 1981-85 was used to calculate revenue for corn, cotton, soybeans, and peanuts (**TABLE V**). For cotton, revenue generated from the sale of the seed and deficiency payments were included. A seed price of \$65 per ton and a deficiency payment of \$.18 per pound, average for 1981-85, was used.

In order to estimate the timber sale income, you need to know what price to expect for the trees you plan to sell. The price paid for trees as they stand in the forest (stumpage price) can be obtained from local markets or *Timber Mart-South*,

**TABLE II**  
**PER ACRE LOBLOLLY PINE YIELD ESTIMATES**

Site Index	1st Thinning		2nd Thinning			Clearcut		
	Age	PW	Age	PW	ST	Age	PW	ST
65/47	15	3.7	25	10.2		25	27.8	
	15	3.7	25	10.2		35	15.6	3.5
70/51	15	5.8				25	27.4	1.0
	15	5.8	25	11.7		35	14.9	4.7
75/54	15	7.6				25	28.5	1.3
	15	7.6	25	12.8		35	14.2	5.6
80/58	15	10.1				25	27.9	2.1
	15	10.1	25	10.8	.8	35	12.8	6.8
85/62	15	12.9				25	28.2	3.0
	15	12.9	25	11.1	1.1	35	11.7	8.3
90/65	15	15.2				25	28.2	3.7
	15	15.2	25	11.1	1.4	35	10.4	9.5
95/69	15	17.0				25	30.1	4.2
	15	17.0	25	12.0	1.7	35	10.3	10.6
100/73	15	19.1				25	27.7	5.1
	15	19.1	25	11.1	2.1	35	9.1	11.4

**TABLE III**  
**Per Acre Production Costs for Corn, Cotton, Soybeans, and Peanuts by Major Land Resource Area, Alabama, 1986**

Major Land Resource Area	Corn	Cotton	Soybeans	Peanuts
Gulf Coast Flatwoods	181.55	471.22	156.77	567.50
Southern Coastal Plain	159.46	471.22	148.04	567.50
Blackbelt	160.27	517.69	151.77	—
Southern Piedmont	158.98	437.01	129.85	—
Southern Appalachian Ridges and Valleys	158.98	437.01	129.85	—
Sand Mountain	178.02	437.01	132.03	—
Highland Rim and Pennyroyal	179.60	437.01	141.53	—
Cumberland Plateaus and Mountains	178.02	437.01	132.03	—

**TABLE IV**  
**Expected Costs and Years of Occurrence for a 25- and 35-Year Rotation**

Year	Activity	Today's Cost (\$/acre)
1	Plant	\$60
12	Prescribe burning at age 12 to continue on a three-year cycle until end of rotation.	\$ 8
—	Consultant fee for timber sale, administration of thinning and final harvests. See <b>TABLE II</b> for years of occurrence.	10% of timber sale revenue.
Annual	Management costs	\$ 2

**TABLE V**  
**Price Received by Farmers for Various Agricultural Commodities**  
**Alabama, 1981-85**

Crop	Unit	1981	1982	1983	1984	1985	Average
Corn	\$/bu.	2.98	2.46	3.16	3.26	2.61	2.89
Cotton	\$/lb.	.56	.58	.66	.56	.54	.58
Soybeans	\$/bu.	6.64	5.84	6.80	7.00	5.55	6.37
Peanuts	\$/lb.	.25	.25	.25	.26	—	.25

Source: Agricultural prices, Alabama Crop and Livestock Reporting Service and the Alabama Cooperative Extension Service.

**TABLE VI**  
**Average Stumpage Price for**  
**Various Forest Products**  
**Alabama, 1981-85**

Zone	Pulpwood (\$/cord)	Sawtimber (\$/MBF, Scribner)
I	12	119
II	17	155
III	21	168

Zones are defined in FIGURE 1.

**TABLE VII**  
**Effect of Crop Yield and Price on Annual Per Acre After-Tax**  
**Returns for Corn, Cotton, Soybeans, and Peanuts, Alabama, 1986**

Major Land Resource Area	Corn			Cotton			Soybeans			Peanuts						
	Yield (Bu./Ac.)	Price per bushel		Yield (Lbs./Ac.)	Price per bushel		Yield (Bu./Ac.)	Price per bushel		Yield (Lbs./Ac.)	Price per pound					
Gulf Coast Flatwoods	50	-42.41	-23.66	-4.91	500	-60.17	-41.42	-22.67	15	-52.89	-47.27	-41.64	1500	-200.63	-144.38	-88.13
	75	4.46	32.59	60.71	650	27.81	52.18	76.56	25	-9.77	-0.39	8.98	2500	-50.62	43.13	136.87
	100	51.34	88.84	126.34	800	115.79	145.78	175.79	35	33.36	46.49	59.61	3500	99.38	230.63	361.88
Southern Coastal Plain	50	-25.85	-7.10	11.65	500	-60.17	-41.42	-22.67	15	-46.34	-40.72	-35.09	1500	-200.63	-144.38	-88.13
	75	21.03	49.16	77.28	650	27.81	52.18	76.56	25	-3.22	6.16	15.53	2500	-50.62	43.13	136.87
	100	67.91	105.41	142.91	800	115.79	145.78	175.79	35	39.91	53.03	66.16	3500	99.38	230.63	361.88
Blackbelt	50	-26.45	-7.70	11.05	500	-60.17	-41.42	-22.67	15	-49.14	-43.52	-37.89				
	75	20.42	48.55	76.67	650	27.81	52.18	76.56	25	-6.02	3.36	12.73				
	100	67.30	104.80	142.30	800	115.79	145.78	175.79	35	37.11	50.24	63.36				
Southern Piedmont	50	-25.48	-6.73	12.02	500	-60.17	-41.42	-22.67	15	-32.70	-27.08	-21.45				
	75	21.39	49.52	77.64	650	27.81	52.18	76.56	25	10.43	19.80	29.18				
	100	68.27	105.77	143.27	800	115.79	145.76	175.79	35	53.55	66.68	79.80				
Southern Appalachian Ridges and Valleys	50	-25.48	-6.73	12.02	500	-60.17	-41.42	-22.67	15	-32.70	-27.08	-21.45				
	75	21.39	49.52	77.64	650	27.81	52.18	76.56	25	10.43	19.80	29.18				
	100	68.27	105.77	143.27	800	115.79	145.78	175.79	35	53.55	66.68	79.80				
Sand Mountain	50	-39.77	-21.02	-2.27	500	-60.17	-41.42	-22.67	15	-34.33	-28.70	-23.08				
	75	7.11	35.23	63.36	650	27.81	52.18	76.56	25	8.80	18.17	27.55				
	100	53.99	91.49	128.99	800	115.79	145.78	175.79	35	51.92	65.05	78.17				
Highland Rim and Pennyroyal	50	-40.95	-22.20	-3.45	500	-60.17	-41.42	-22.67	15	-41.46	-35.84	-30.21				
	75	5.93	34.05	62.18	650	27.81	52.18	76.56	25	1.66	11.04	20.42				
	100	52.80	90.30	127.80	800	115.79	145.78	175.79	35	44.79	57.92	71.04				
Cumberland Plateau	50	-39.77	-21.02	-2.27	500	-60.17	-41.42	-22.67	15	-34.34	-28.71	-23.09				
	75	7.11	35.23	63.36	650	27.81	52.18	76.56	25	8.79	18.17	27.54				
	100	53.99	91.49	128.99	800	115.79	145.78	175.79	35	51.92	65.04	78.17				

a monthly forest products marketing report available through your county Extension office. Stumpage prices used are based on the average price reported, 1981-85, in *Timber Mart-South* for zones I, II, and III (TABLE VI).

Timber prices have historically increased above inflation. An inflation rate of 4% was used and sawtimber prices were assumed to escalate above inflation at the rate of 1%.

Under the provisions of the reforestation tax incentive, a 10% investment tax credit plus a 7-year amortization on the first \$10,000 of capitalized reforestation expenditures are available to all landowners. This tax advantage was applied to the planting cost. In addition, it was assumed that the landowner would qualify for long-term capital gains treatment of timber sale incomes. All results are reported on an after-tax basis for an individual in the 25% marginal tax bracket. Property taxes were not included in the timber or crop analysis.



The long production period associated with a forestry investment entails a cost over and above production costs. This cost is the cost of capital, usually expressed as annual interest. The cost may result from a need to borrow funds and to pay interest on the loan. If you do not need to borrow, you may have other opportunities for the use of your funds, opportunities you must forego if you invest in forestry. Consequently, the decision to accept or reject a forestry investment requires that an alternative rate of return (AROR) be determined. The AROR is the rate of interest that an investor requires on investments. It is usually determined by evaluating an individual's best alternative uses for funds. For this analysis, we will assume that the landowner's before-tax AROR is 13% which is equivalent to a 9.75% after-tax interest rate for a taxpayer in the 25% marginal tax bracket.

$$\text{Interest rate after tax} = \frac{\text{Interest rate before tax}}{(1 - \text{marginal tax rate})}$$

TABLE VII and TABLE VIII can be used to compare expected after-tax per acre returns from corn, cotton, soybeans, peanuts, and loblolly pine.

As you can see from the tables, crop and forestry returns are sensitive to land quality and market price. In addition, forestry returns are affected by the rotation length. A 35-year rotation length results in a higher annual equivalent return because of value increases in volume and timber quality. For a given site index, higher returns are found in the southwestern part of Alabama where higher stumpage prices prevail. If maximization of profits is your objective, it is clear that converting the land to planted loblolly pine would be the best decision in most instances.

Characteristics of the individual landowner and property will vary for a given soil series under local conditions and will have to be adjusted for a specific analysis. If you would like to do your own analysis, obtain a copy of *How to Analyze Forestry Profit Potential*, Circular ANR-377 from your county Extension office or write to this author at the Alabama Cooperative Extension Service, Auburn University, AL 36849.

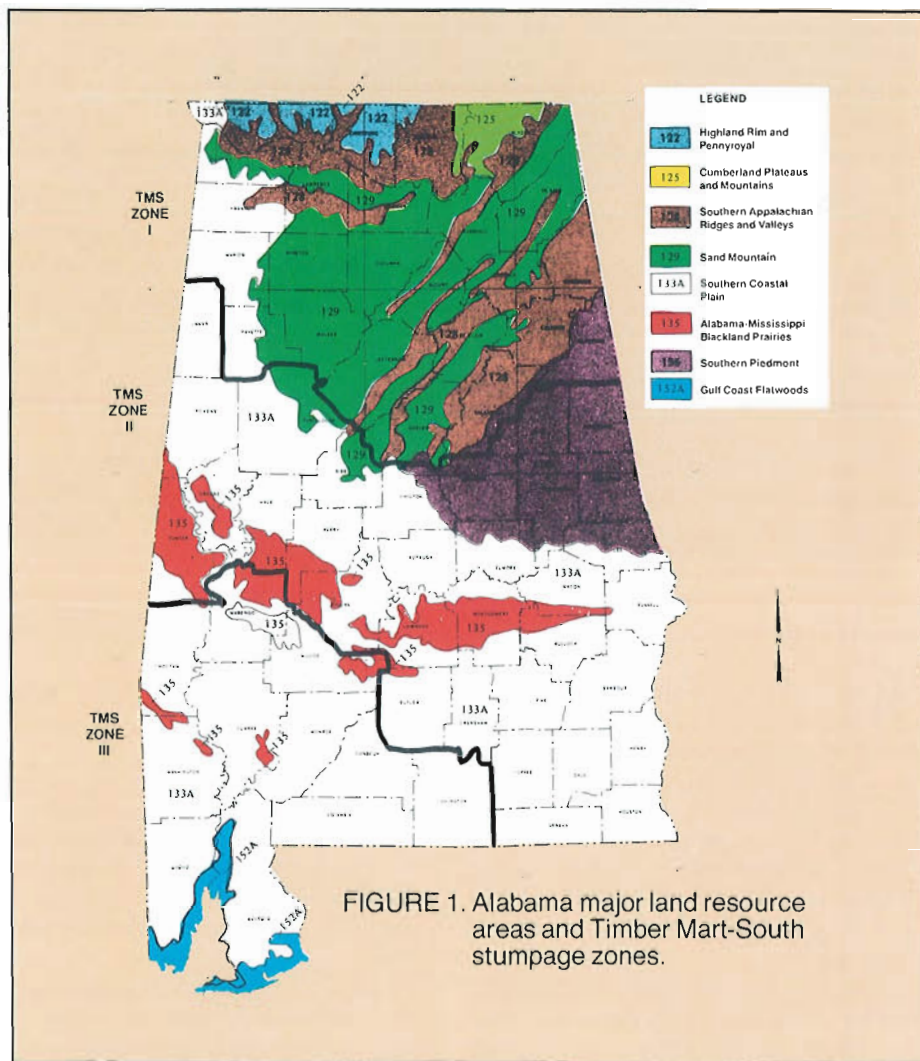


FIGURE 1. Alabama major land resource areas and Timber Mart-South stumpage zones.

TABLE VIII  
Effect of Land Quality, Stumpage Price, and Rotation Length  
on Per Acre After-Tax Annual Equivalent

Site Index*	Rotation	TMS (Zone I)	TMS (Zone II)	TMS (Zone III)
65/47	25	1.50	5.48	8.67
	35	6.16	8.34	11.01
70/51	25	5.19	11.55	14.17
	35	6.88	12.48	15.72
75/54	25	7.20	13.23	18.94
	35	12.94	20.62	24.71
80/58	25	12.20	19.97	22.38
	35	18.64	28.23	32.81
85/62	25	16.88	26.32	32.02
	35	24.08	35.55	40.90
90/65	25	17.79	31.25	37.46
	35	28.53	42.54	47.48
95/69	25	23.68	35.71	42.60
	35	32.62	46.51	53.82
100/73	25	27.32	40.43	47.65
	35	36.58	52.37	46.38

\*Site index reflects a 50 year basis/25 year basis.



# ENDANGERED SPECIES

by DAVID A. HOGE, Endangered Species Coordinator

SINCE 1966, the federal government has formally recognized that preserving wildlife in danger of extinction is a national concern. Extinctions occur naturally as part of the evolutionary process, but usually are slow in rate and number. In the last 200 years, with the industrialization of the human race and his global impact, the rate of species extinction has increased alarmingly.

This fact was displayed vividly in the decline of the carrier pidgeon, the trumpeter swan, and the whooping crane. Such experiences led Congress to pass the Endangered Species Preservation Act in 1966. This act directed all federal agency heads to protect native forms of wildlife threatened with extinction and made the identification of those species an official function of the Secretary of the Interior. The endangered species program of the U.S. Fish and Wildlife Service published its first list of endangered species in 1967. The "red book" contained 72 species. Initial inadequacies with the 1966 act with respect to law enforcement and foreign species were addressed in 1969 with the passage of the Endangered Species Conservation Act.

The 1969 Act also had its shortcomings as it failed to protect local threatened populations of otherwise stable populations, included no prohibitions against the taking of listed species, limited obligations to only a few designated agencies, and gave protection only to vertebrates, mollusks and crustaceans. Congress attempted to remedy these shortcomings in 1973 by passing the Endangered Species Act. This legislation plus subsequent amendments to it in 1978 and 1982 provide the mechanism for the protection given to and the recovery of

listed species under which the various federal and state agencies are currently operating.

The 1973 Endangered Species Act specifies that all species of fish, wildlife, and plants threatened with extinction will be conserved and protection given to them by all federal departments and agencies, and extends to state agencies receiving federal funds.

Nineteen seventy-three also was the year in which the CITES treaty was signed. The treaty binding only on participating nations is an attempt to regulate foreign trade in wildlife products according to classification criteria established by the member nations with regards to categorizing listed species according to the effect such trade will have on their survival. For those so interested, CITES is an acronym for the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

In summary then, with respect to the historical background of endangered species, it is the U.S. Fish and Wildlife Service's responsibility to list terrestrial species of fish, wildlife, and plants threatened with extinction and give those species protection under the Endangered Species Act of 1973, as amended. This list is continually updated by the Service as new information is gathered.

TABLE I contains those species historically found in Alabama which are currently listed by the U.S. Fish and Wildlife Service as endangered or threatened.

Endangered means that a species is in danger of extinction throughout all or a significant portion of its range. Threatened

**TABLE I**  
**Endangered and Threatened Animal and Plant Species Found in Alabama**

Indiana Bat	(E)
Gray Bat	(E)
Alabama Beach Mouse	(E)
Perdido Key Beach Mouse	(E)
Florida Panther	(E)
Red Wolf	(E)
Bald Eagle	(E)
Peregrine Falcon	(E)
Brown Pelican	(E)*
Wood Stork	(E)
Bachman's Warbler	(E)
Ivory-billed Woodpecker	(E)
Red-cockaded Woodpecker	(E)
American Alligator	(E)*
Eastern Indigo Snake	(T)
Kemp's Ridley Sea Turtle	(E)
Leatherback Sea Turtle	(E)
Loggerhead Sea Turtle	(T)
Red Hills Salamander	(T)
Alabama Cavefish	(T)
Spotfin Chub	(T)
Slackwater Darter	(T)
Snail Darter	(T)
Watercress Darter	(E)
Green Pitcher Plant	(E)

E - Endangered  
T - Threatened

\* These species have recovered to the point where a change in classification is being considered.

## Definition of Terms

Before proceeding further, let's define the words *endangered* and *threatened*.

means that a species is likely to become endangered. In addition, you may hear talk of species that are of "special concern."

Species of special concern must be continually monitored because of imminent threats to the habitat, limited range, or because of other physical or biological factors which may cause them to become threatened or endangered within the foreseeable future.

Species of special concern are sometimes referred to as "candidate" species. Candidate species are those currently not on the list as endangered or threatened, but may soon be added as new information is gathered. TABLE II contains a partial list of candidate species found in Alabama.

### Cause for Concern

A large number of biologists, environmentalists and others have expressed concern over the number of animal and plant

species that have recently been added to the U.S. List of Endangered and Threatened Species. According to William P. Horn, Assistant Secretary for Fish and Wildlife and Parks, Department of the Interior, nearly one quarter of all listed U.S. endangered and threatened species were added in 1984 and 1985. In 1985, 60 species were added to the list. Of these species, 58 are found in the United States. This followed 1984, a year in which 47 species joined the list.

The June 1986 issue of the *Endangered Species Technical Bulletin* contains 912 species listed as either endangered or threatened. Of these 912 species, 409 occur in the United States and 503 in foreign countries.

Some believe that animal and plant life serve as indices to the health of the environment we humans enjoy. If so, and if the number of endangered and threatened species is a barometer of this environmental

health, this Earth will be facing a serious crisis in the future!

### What You Can Do to Help

The common element involved when contemplating endangered or threatened species and their reasons for decline is the loss of critical habitat. While commercial over-harvest may be the reasons for some species decline, far more species are in trouble due to the loss of habitat caused by man's insatiable appetite for more land for shopping malls, condominiums, agricultural fields and pasture for domestic livestock.

While it is difficult to stop this so-called progress, it is possible in many cases to modify it in order to benefit endangered or threatened species. In Florida, several communities have considered gopher tortoise colony sites in formulating their zoning restrictions. When Mother Nature

TABLE II  
List of Candidate Animal and Plant Species Found in Alabama

<b>Fishes</b>		Alabama Red-Bellied Turtle	(2)	Barbara's Buttons	(2)
Lake Sturgeon	(2)	Flattened Musk Turtle	(1)	Alabama Sandwort	(2)
Gulf Sturgeon	(2)	Gopher Tortoise	(2)	Anglepod	(2)
Alabama Shovelnose Sturgeon	(2)	Black Pine Snake	(2)	Rattleweed	(2)
Blue Shiner	(2)	Florida Pine Snake	(2)	American Fern	(2)
Blue Stripe Shiner	(2)			Flyr's Nemesis	(2)
Cahaba Shiner	(1)	<b>Birds</b>		Chapman's Butterwort	(2)
Palezone Shiner	(2)	Reddish Egret	(2)	Barratt's Sedge	(2)
Blue Sucker	(2)	American Swallow-Tailed Kite	(2)	Heart-Leaved Plantain	(2)
Freckle-belly Madtom	(2)	Southeastern American Kestrel	(2)	Ozark Chinquapin	(2)
Spring Pygmy Sunfish	(1)	Southeastern Snowy Plover	(2)	Large Leaved Joint	
Crystal Darter	(2)	Appalachian Bewick's Wren	(2)	Croomia Weed	(1)
Coldwater Darter	(2)	Migrant Loggerhead Shrike	(2)	Lady's Slipper	(2)
Trispot Darter	(2)	Stoddard's Yellow-Throated		Harperella	(2)
Tuscumbia Darter	(2)	Warbler	(2)	Prairie-Clover	(2)
Elk River Darter	(2)	Bachman's Sparrow	(2)	Meadowbeauty	(2)
Goldline Darter	(1)			Coneflower	(2)
Freckled Darter	(2)	<b>Mammals</b>		Beaked rush	(2)
Pygmy Sculpin	(1)	Southeastern Bat	(2)	Wild Buckwheat	(2)
		Southeastern Big Eared Bat	(2)	Conebrake Pitcherplant	(2)
<b>Amphibians</b>		New England Cottontail Rabbit	(2)	Spider-lily	(2)
Flatwoods Salamander	(2)	Eastern Woodrat	(2)	Stonecrop	(2)
Hellbender	(2)			Rosin Weed	(2)
Dark-sided Salamander	(2)	<b>Plants</b>		Glade cress	(2)
Tennessee Cave Salamander	(2)	False Foxglove	(2)	Florida Water Parsnip	(2)
Sipsey Fork Waterdog	(2)	Panhandle Lily	(2)	Lyrate bladderpod	(2)
Dusky Gopher Frog	(2)	Little Amphianthus	(2)	Synandra	(2)
		Flax	(2)	Flame Flower	(2)
<b>Reptiles</b>		Price's Potato Bea	(1)	Trillium	(2)
Alligator Snapping Turtle	(2)	Boykin's Labelia	(2)	Arrowwood	(2)
Barbour's Map Turtle	(2)	Small Rock Cress	(1)		

### Code

- 1 - Service has substantial information on biological vulnerability and threats to support listing species as endangered or threatened.
- 2 - Service has information which may indicate listing species as endangered or threatened is appropriate.



Recovery efforts supported by contributions to Alabama's Nongame Wildlife Program have helped re-introduce bald eagles to elements of its former range in Alabama. Photograph courtesy of USFWS.

fails to supply suitable habitat, artificial structures such as nest boxes for blue birds, flying squirrels and wood ducks can be added to the environment to aid in the recovery effort.

Perhaps the biggest hurdle to overcome in preventing habitat destruction for certain species is the knowledge gap. Many landowners simply do not know all the various animals and plants that live on their homestead. Though most of you can probably identify the various threatened birds and mammals, I dare say some of the fishes and plants are virtually unknown to you.

Numerous publications are available from the various agencies of the Alabama Forestry Planning Committee which address endangered and threatened species and provide information to aid in the identification of such species. One of the most recent and helpful is the *Vertebrate Animals of Alabama in Need of Special Attention* published by the Alabama Agricultural Experiment Station in cooperation with the Game and Fish Division of the Department of Conservation and Natural Resources. Available also from the Experiment Station is a publication entitled *Endangered Threatened and Special Concern Plants of Alabama* which contains numerous color photographs helpful in plant identification.

Should you desire additional information about these publications or about endangered or threatened species in general, feel free to call on the author at the State Headquarters of the Alabama Forestry Commission in Montgomery, telephone number (205)261-2526. ♣

Panhandle lily is a likely candidate for listing in the not too distant future. Photograph courtesy of Auburn University and Doug McGinty.



## YOU Ought To Be In Pictures!

**T**REASURE Forest landowner Jim Freeman was caught wearing his TREASURE Forest cap at a recent Monsanto Chemical-demonstration held on his Eagle Ridge Farm. Also pictured is Walker County Supervisor Charles Hall. Freeman manages his forest for aesthetics and timber production, both of which make a lovely addition to the beautiful surroundings of the Lewis Smith Reservoir. ♣



**A**FTER RETIRING, my wife Janet and I moved into our present home out in the country near Greensboro. In January and February of 1981 I noticed that pairs of wood ducks frequented the large trees which surrounded our home. I thought little of it at the time.

During the same months in 1982 the ducks returned. I knew that wood ducks nested in hollow trees and of course it takes a large tree to have a hollow large enough to accommodate a wood duck. It occurred to me that they must be scouting for nesting sights so I decided to build some houses for them.

I got the specifications from our local Conservation Department and finally got around to building two houses in the summer of 1984. By December I had one in place on each of two large pecan trees just outside and in full view of our back den window. They were placed about 15 feet above the ground.

I positioned the houses so that the entrances were partially visible from my window and also visible to the ducks from the edge of the yard. This way, the scouting ducks could spot the openings and Janet and I could observe any nesting activity.

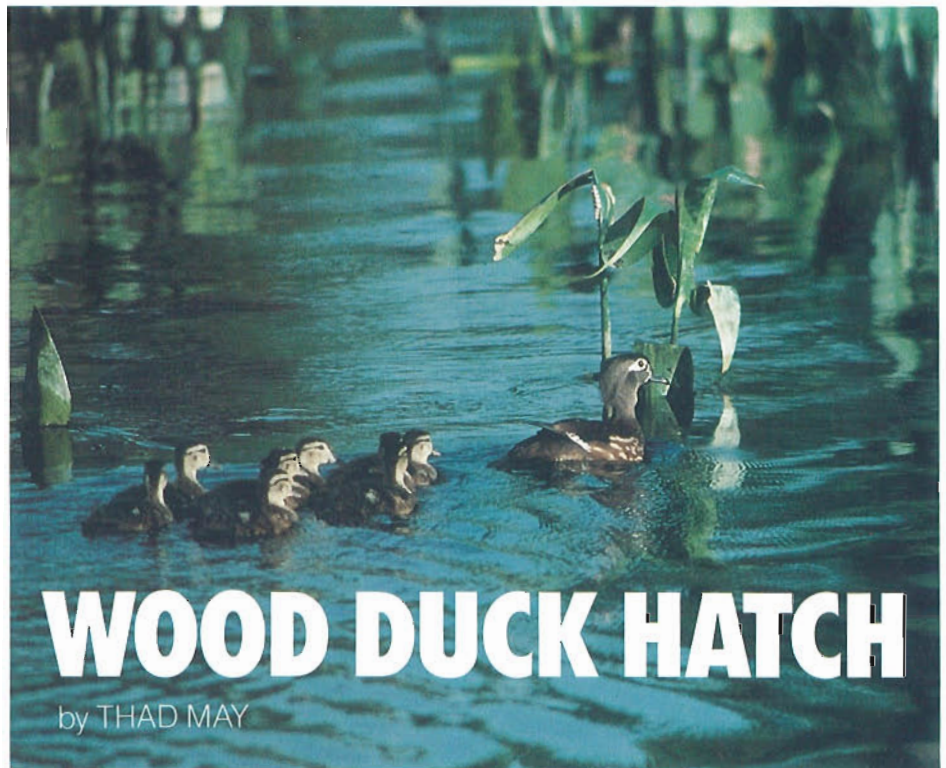
In January of 1985 the ducks returned and it wasn't long before they were observed flying into the houses. There was a lot of activity for the next two months and then they left. I was not sure if they had actually nested, so in early summer I inspected the houses. I found evidence in one that nesting had taken place, but we never saw the brood.

In January of this year, the ducks again returned but it has been a different story this time.

After hanging around in the trees for a week or so we began seeing the hens entering the houses on a sort of irregular basis. We also observed a lot of mating rituals. The rituals involved facing each other in close proximity and craning their necks up and down and towards each other. We speculated that during this period, which lasted ten days or more, the hen was laying eggs.

About the first of March there was a more regular routine at the outer house and likewise at the nearer house about two weeks later.

It went about like this. The hen would spend the night in the house and fly out at the crack of dawn to feed. She would somehow manage to rendezvous with her mate because when she returned at around 7 a.m., he would always accompany her. She would fly directly into her nest and he would keep on flying and leave the area, going towards the pond located a short distance back of our house.



She sat on the nest the rest of the day until about 4:30 p.m. when she would again fly out to feed.

At about sundown, she would return, again with her mate. She would fly into the house and he would again fly on by leaving the area. It was as if he was shepherding her safely to her nest for the night before returning to the pond.

After this regular activity continued for about three weeks, I knew that very soon a brood would be ready to depart the nest. I have too many daily chores and activities to permit a constant vigil. However, when I was at home I kept one eye on the duck house and I was lucky.

On the morning of March 25 at exactly 8:30 a.m., I was sitting at my desk in the den writing a letter. I paused for a moment and turned my head towards the window just in time to see the hen duck fly from her house to the ground beneath. I knew what was about to happen so I grabbed my camera and ran to the back door. During the next few minutes I saw one of nature's exciting dramas which few human beings will ever be lucky enough to see.

Although I could not hear her, the mother duck must have made some kind of clucking noise. Immediately the little ducklings started "bailing out" in rapid succession. Their little wing stubs were outstretched, but with no feathers they were useless. They hit the ground and bounced like rubber balls. I was too busy taking pictures and too excited to count, but I estimated there were about a dozen.

Suddenly there was a lull. This was the

mother duck's cue to follow her instinct and lead her brood downhill. We have a spring fed branch some 100 yards back of our house. I watched as they quickly followed our walking path and within a minute they were out of sight.

At that moment, to my surprise, another little duckling jumped to the ground. He just sat there, bewildered, not knowing which way to turn. I waited and watched for about two minutes, curious as to what he would do? He never moved.

The thought occurred to me that I might be witnessing one of nature's basic laws as at work, "The survival of the fittest." Not only was he the last one to climb out of the nest, he was slow about it. Maybe in nature's scheme of things, he was not meant to survive. I was glad my oldest daughter Roxanne wasn't here to watch all this. She would have shed a bushel of tears. She's so softhearted she cries when she reads her children the story about the ugly duckling.

Notwithstanding nature's prerogatives to keep all of her species fit, I felt sorry for the little fellow so I attempted a rescue. When I approached him he didn't move. When I picked him up and cradled him in my hands he did not resist.

I followed the walking path to the footbridge that crosses the branch. When I released him he immediately turned and started swimming downstream just as if he knew what he was supposed to do. I like to think he caught up with and joined his family. ♣

# GARBAGE, GARBAGE, EVERYWHERE

by JACK HONEYCUTT, Chief Solid Waste Section,  
Alabama Department of Economic Development

**T**HE NECESSITY for proper waste disposal is nothing new. The first mandate for adequate waste disposal is recorded in the Bible in Deuteronomy. We also read in the Bible of the garbage dump "Gehenna" outside Jerusalem where the waste was deposited and burned.

There is also evidence in the early days of our country of the problems with the disposal of garbage/solid waste. Indian tribes settled along rivers or in other areas where there was adequate water and protection from the elements and their enemies. They piled debris (fish bones, animal skins, etc.) around the village until the odor and the lack of space required them to find another place to settle.

As the nation became more populated and man became more civilized and affluent, the need for the management of solid waste also arose. It was evident there was a need for an organized system for the collection and disposal of solid waste. In 1882 the City of Milwaukee paid a collector \$42.75 a day to provide 19 wagons, drivers, horses, and labor to collect garbage on 19 routes within the city. He was required to transport the collected garbage outside the city for disposal.

Now, let's get closer to home and more up to date. The first Solid Waste Law was enacted by Congress in 1965. This law mandated that all states make a survey of solid waste disposal practices within their state. Such a survey was undertaken by the Alabama Department of Public Health in 1968. The survey was specifically designed to locate all officially recognized disposal sites (dumps, landfills, etc.). Four hundred eleven (411) such sites were located in Alabama. This did not include the thousands of dumps located along roadsides and in the woods and streams.

About this time, a group of ladies representing the "Women's Committee of Alabama Farm Bureau" became interested in the rural blight caused by dumps. Through their efforts and with support from the survey of the State Health Department, the first State Solid Waste Law was passed by the legislature in September, 1969. This

law required every city and county government to establish a system for the collection and disposal of solid waste. The law designated the Health Department as the enforcing agency.

There were tremendous strides in solid waste management in the state from 1970-1975. County and city governments were establishing collection programs and developing sanitary landfills for the disposal of solid waste. By 1976 almost every county within the state was in compliance. Every citizen within the state had some type of collection and disposal system available to them. County governments were also taking an active role to clean up the unauthorized dumps along the rural roads and in the woods and streams.

In 1976 one county challenged the Solid Waste Law. The Alabama Supreme Court ruled that city and county governments did not have to provide a system for solid waste collection. The decision had very little impact at that time since virtually every city and county had already established a collection and disposal program.

The status of solid waste collection, however, has dramatically deteriorated in the state over the past several years. In the mid '70's some type of collection system was available, even in rural areas, to all citizens. This, however, is not the case at



**Trash and garbage in our forests create fire hazards.**

present. There are several counties that have no organized collection available in the rural areas. Many other counties have very poor participation in the collection services offered by the county governments. As a result, dumps by the hundreds are springing up along the rural roads and in the woodlands. These dumps are not only a blight on the land but in many cases contribute to stream pollution. In addition, these dumps are major contributors to forest fires over the state.

The question arises, "What is the cause of this proliferation of dumps recently over the state?" Certainly one factor is the Supreme Court ruling that it was not mandatory that city and county governments provide a collection system. This has resulted in discontinued programs and poor participation in collection services. Another factor is the reduction/elimination of General Revenue Sharing Funds. Many of the solid waste programs are funded in whole or partly by revenue sharing. When these funds are no longer available, necessary programs will be curtailed or eliminated, including the solid waste program. As a result, unauthorized dumps will continue to grow over the state causing pollution to our land and streams and contributing to forest fires.

What is the solution? There is no quick, easy answer. The obvious solution is for each county to provide adequate garbage collection services to all its citizens. This would take money and lots of it. County governments for the most part are already strapped for funds.

The State Solid Waste Law authorizes county governments to establish a solid waste collection program and charge a fee to the users. This, however, is easier said than done and many county governments are reluctant to make collection mandatory. While there are over 120 approved disposal sites (sanitary landfills) in the state with at least one in every county, roadside dumps continue to grow in rural areas. Many citizens simply will not haul their garbage to these landfills but will use roadside dumps which are illegal.

There appears to be a little light on the horizon to this dilemma. Recently, a group of concerned people were called together by Mr. Bill Moody of the Forestry Commission to discuss litter/dumping in rural areas. Committees were formed to address specific aspects of the problem. Through the efforts of these committees we can start to clean up our state. The problem, however, is bigger than this small group. All the citizens, the legislature, city and county governments, industry, clubs, and other affected groups must become involved if our state is going to be "Clean and Green."

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**DISTRICT 10**—David L. Duckett, District Forester, 2181 Federal Drive, Montgomery 36109, 261-5585; **Montgomery County**—F. Bruce Johnson, 2181 Federal Drive, Montgomery 36109, 261-5585; **Bullock County**—W. J. Green, Box 392, Union Springs 36089, 738-3040; **Elmore County**—Lynn Justiss, P.O. Box 799, Wetumpka 36092, 567-5486; **Lee County**—J. B. Coker, Box 502, Opelika 36801, 745-6824; **Lowndes County**—William C. Davis, Box 206, Hayneville 36040, 548-2402; **Macon County**—Jerry McGhee, Route 1 Box 204, Tuskegee 36083, 727-3783; **Russell County**—Melvin Phelps, Route 2 Box 4-N, Seale 36875, 855-3302.

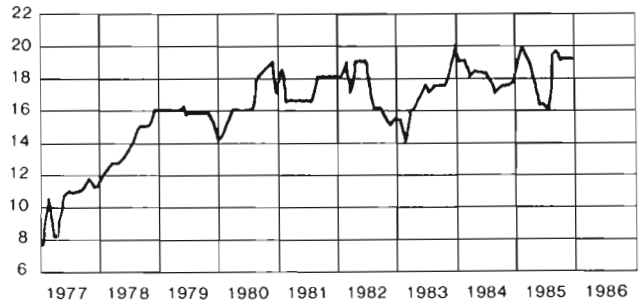
These charts show the average stumpage prices of Southern Yellow Pine in Alabama between 1977 and 1985. Prices were obtained by Timber Mart, Inc. through a broad field sampling system. Prices may vary within your area due to quality and quantity of product, economic and environmental forces plus other conditions.

SOURCE: 1985 YEARBOOK, published by Timber Mart, Inc. P.O. Box 1278, Highlands, N.C. 28741.

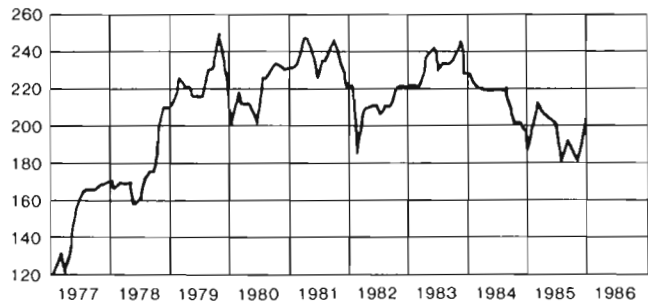
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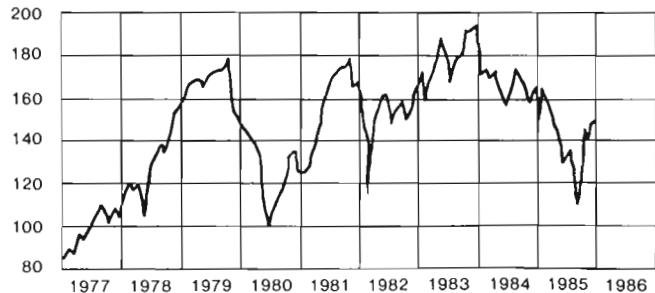
**ALABAMA** AVERAGE STUMPAGE PRICE OF SOUTHERN YELLOW PINE PULPWOOD (Dollars per Standard Cord)



**ALABAMA** AVERAGE STUMPAGE PRICE OF SOUTHERN YELLOW PINE POLE TIMBER (Dollars per MBF, Scribner Scale)



**ALABAMA** AVERAGE STUMPAGE PRICE OF SOUTHERN YELLOW PINE SAWTIMBER (Dollars per MBF, Scribner Scale)



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