

**Alabama's  
TREASURED  
Forests**

*S p r i n g · 1 9 8 6*

# STATE FORESTER'S MESSAGE

by C. W. MOODY



**I**t seems to me that only issues which have developed into a crisis get attention in Alabama. For example, we have crises in Mental Health, Prisons, education, Medicaid and more recently Pensions and Securities. Taking a second look, there are other areas which probably are in crisis, too, but lack that stigma of emotionalism associated with those just listed.

The time has come to declare a *crisis* in forestry, while making clear the reality of emotionalism which we have so long overlooked. Imagine your world without wood or wood products! Furniture, paper, houses, clothing, chemicals, energy, wildlife, clean water, jobs—all of these would vanish without our forest resource, which supports the leading manufacturing industry in the state! Close to 50,000 people work in this area which accounts for 13% of all of the manufacturing jobs in Alabama and generates more than \$4 billion to our state's economy each year! This industry's tax base helps to meet State Government's attempt to solve the crises in Mental Health, Prisons, Education, Pensions and Securities, and any other crisis that might arise.

So, why am I alarmed? You may be surprised to learn that we are cutting more pine trees in Alabama than we are growing and are fast approaching the time when we'll be cutting more hardwoods than we grow as well! What will happen when our forests can no longer meet the demands of this important industry which generates wealth, provides jobs, and provides taxes? This may not take place in my lifetime or yours, but rest assured if action is not taken it will happen! I am, therefore, declaring this emergency on behalf of my children, your children, and future generations!

How can we combat this impending crisis?

1. Private landowners, who own 75% of the forestland in our state, can become TREASURE Forest landowners.
2. Alabama citizens who own or use our forests can be more careful with fires.
3. Elected and appointed officials should understand this and support programs which afford protection to our woodlands from the ravages of fire, insects, and disease.
4. Elected officials also should recognize the need to continue to encourage reforestation through the retention of capital gains taxes, timber tax credits, and other such measures.
5. Elected officials also should remember that programs which assist landowners such as the Alabama Forestry Commission's tree seedling program, the Forestry Incentives Program, the Conservation Reserve Program, and the Alabama Resource Conservation Reserve Program should be continued.

With your help and support, we can respond to the challenge before us so that future generations can inherit a strong and viable state which will meet their needs not only for forest products, but for jobs and taxes which will help to address those other social crises which surely will develop!

Sincerely,

A handwritten signature in cursive script that reads "C. W. Moody". The signature is written in black ink and is positioned below the word "Sincerely,".

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

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Cover Photo: Wild flowers mark the coming of spring in Alabama's TREASURED Forests.

# Alabama's TREASURED Forests

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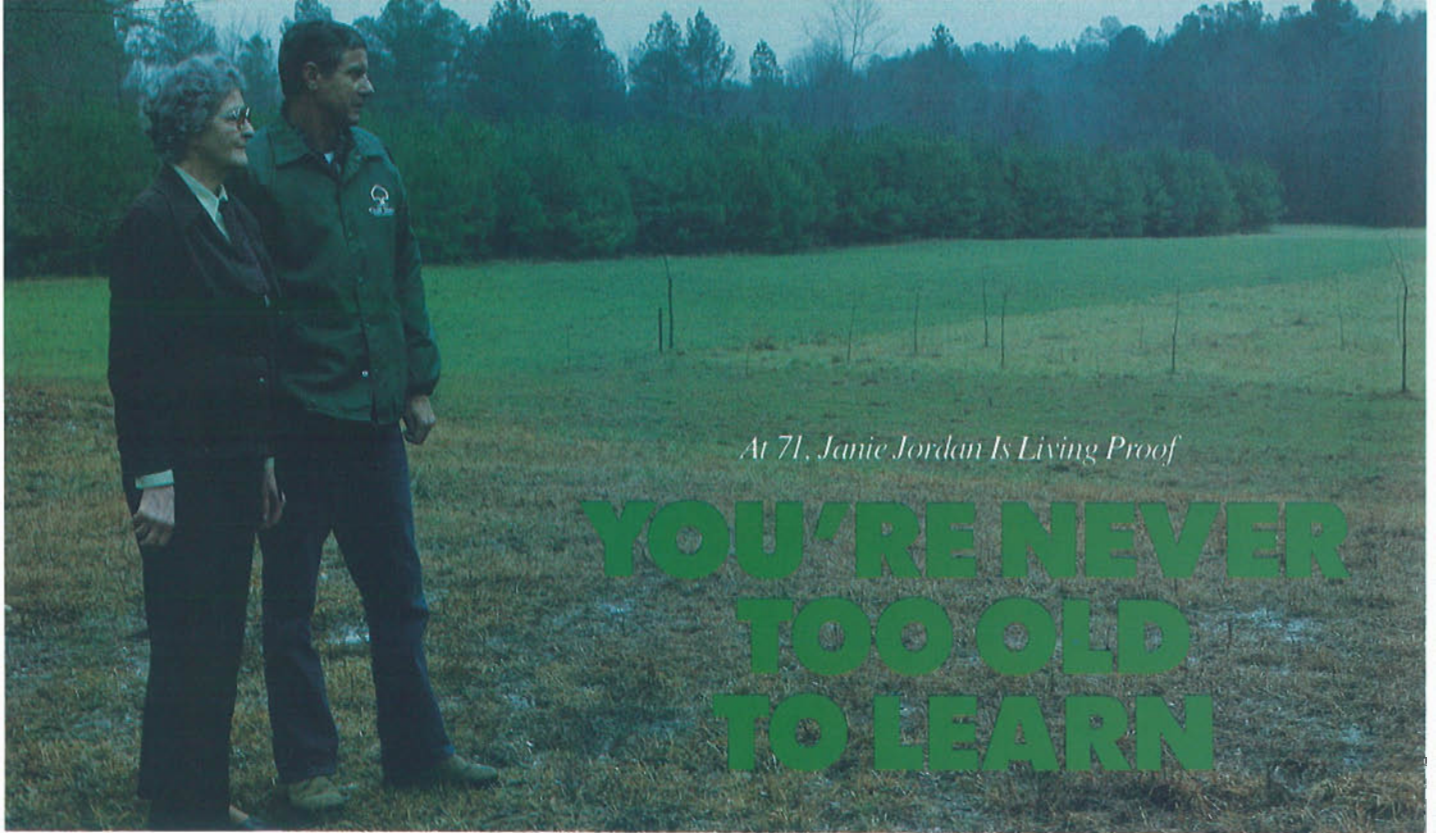
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*At 71, Janie Jordan Is Living Proof*

# YOU'RE NEVER TOO OLD TO LEARN

by CYNTHIA K. PAGE, Editor

**L**. M. JORDAN HAS BEEN DESCRIBED by many as a “man ahead of his time.” Neither he nor his wife Janie graduated from high school, but each felt the need to grow intellectually through reading, studying, and taking short courses. Because of their commitment to each other and their dedication to good stewardship, there’s a 550-acre TREASURE in Marengo County!

## Stewardship Inherited with the Land

In 1818, Samuel Landrum is said to have ridden his horse around and around the large opening he had come upon in Marengo County. Taken by the surrounding beauty, he remarked, “This is where I want to settle!” Almost 170 years later, the Jordan family still owns the Landrum Place. Besides that, there is also the Jordan “Home Place” some distance away which was purchased in 1881 by L. M. Jordan’s father. Though separated by space, the two plots are joined by the philosophy of land management which has been passed down through six generations.

“My husband always cared about the land. An example of such was when he first planted vetch in the 1920’s,” chuckled Mrs. Jordan. “Everybody thought he was crazy! He knew it would restore the fertility and keep down the erosion. He also encouraged our neighbors to follow his suit in doing select cutting for the benefit of producing better timber. As a farmer and

a contract logger, he believed in looking after the land and replacing whatever he took from it. His interest definitely had an influence on my son Roy and me.”

When L. M. Jordan passed away in 1976, “Miss Janie” (as she is affectionately called) was 62 years old. Both of her children—Grace Murton of Birmingham, and Roy Jordan of Demopolis—asked her to come and live with them. “I just couldn’t leave here. It’s a part of me,” she pondered. “My husband and I were married for 45 years and spent our lives here. I wouldn’t be comfortable anywhere else.”

Miss Janie’s children have played key roles in the management of the land. Being

the nearest in distance and vocational interest, Roy has spent considerable time and energy “following in his father’s footsteps.” He and his wife Nancy along with their children (Glenda and Lee) have spent weekends and vacations working on the land site preparing, planting, whatever else had to be done. Grace, her husband Chandler, and two children (Gary and Sharon) also have participated, particularly in firewood cutting. The entire family has had a hand in developing this TREASURE.

## Managing for Income

As already stated, L. M. Jordan was a good steward of the land. He had already



*These were among the first trees cut by Janie and Roy Jordan.*

set the stage for his son Roy to follow. Undesirable hardwoods had been removed and selective thinnings every 10-15 years had left room for the pines to grow into quality timber. As Roy pointed out, "The soil here is rich and ideal for growing trees. My father was very fortunate not to have had wildfires, insects, diseases, or other natural disasters as the crop grew."

After the elder Jordan's death, the decision was made to cut the timber to provide income for Miss Janie. Being an engineer for Gulf States Paper Corporation, Roy knew the advantages of sealed bids on timber sales. The pine sale brought \$118,391.20 from Scotch Plywood; Linden Lumber Company bought the hardwood saw logs for \$13,945.95; and finally the tree tops and damaged trees sold for \$3,738.62 as pulpwood. When harvesting was complete, Roy realized that there was so little young timber left that his best step would be a complete clearcut followed by planting. International Paper bid \$16,731.68 for the remaining trees. Total income was close to \$153,000 from 190 acres!

Photos document the size of some of those first pines—85 feet long and 8 feet in circumference. Just imagine, some folks thought L. M. Jordan didn't know what he was doing!

Miss Janie turned over all of the management decisions to Roy and legally gave him her estate rights so that work could proceed. The Old Home Place was pretty busy from the spring of 1980 through the summer of 1981. Roy hired Jerry Loftin to site prepare about 70 acres, and then secured the services of A. W. "Buck Compton, Jr. to plant 105,000 Livingston Parrish loblolly on that land and also on a few acres of open pasture which would no longer be grazed.

Just hankering to be involved himself, Roy purchased a D-6 dozer, and he and his son Lee became pretty good operators despite Miss Janie's reservations! Wet weather hampered the progress, but the family planted 11,000 seedlings. The dozer was sold for exactly what Roy had in it after all the work was finished. The only costs were for the fuel and chemicals for brush control.

In March, 1982, Buck Compton planted another 31,000 improved loblolly. When this job was complete, 196 acres had been reforested with 147,000 trees! With cost sharing from the Forestry Incentives Program (FIP), the cost per acre to the Jordan family was \$38! (TABLE I)

Roy expects that the initial income from these planted trees will coincide with his retirement. "It's my desire," he said "that all future income be used wisely and that

TABLE I

	Caring Cost	# of Trees	Cost of Trees	Planting Cost
1980	\$5,690	105,000	\$1,158	\$4,000
1981	\$1,700	11,000	\$220	\$650
1982	-0-	31,000	\$669	\$990
TOTAL	\$7,390	147,000	\$2,047	\$5,640
TOTAL COST				\$15,077
FIP PAYMENT				\$7,629
ACTUAL COST TO LANDOWNER				\$7,448
\$7,448 / 196 acres = \$38 per acre				

one-tenth be returned to the Lord's service since He has blessed us with this land and beautiful trees!"

### Wildlife—A New Investment

"My husband didn't believe in running a fire through the woods," Miss Janie pointed out. "As progressive as he was, he just wouldn't consider it!"

"I remember once when a fire started near the road," Roy related. "Even Mother went down to help put it out. The brush was so thick that it really burned! My father thought it was disastrous! As it turns out, that's probably the best thing that ever happened to that plot!"

Now prescribed burning is carried out on a two to three year rotation. "Besides increasing our timber production, it has tremendously helped the wildlife," Roy explained. "We've got a lot of deer, turkey, and quail. We don't just count on the prescribed burning, though, we also plant food plots. We've got about eight plots in

all planted in chufa, bahai, wheat, oats, and rye. Mother's starting to complain about the deer eating her flowers, so the population is getting pretty close to status quo. We don't want it to get so heavy as to damage the environment, so we've just started a hunting club."

Not far from Miss Janie's house stands the Landrum Creek Hunting Lodge. "The house belonged to Thomas Jordan who is a partner in the hunting venture," said Roy. "We really needed to do something with it, so the logical solution was a lodge for commercial hunting purposes! After we planted the food plots, we built several shooting houses at green fields close to creek bottoms. We also built a skinning-cooling facility behind the lodge. The next step was to develop a brochure and letter of invitation to prospective hunters."

Roy and Thomas try to reserve the lodge exclusively for parties of two, three, four, or five for the four-bedroom lodge. Meals are not served, but there is a fully-equipped kitchen for the patrons' use. The cost per person is \$150 a day.



Roy measures a walnut in a natural grove.



Shooting houses are placed near green fields.

## A Walnut Venture

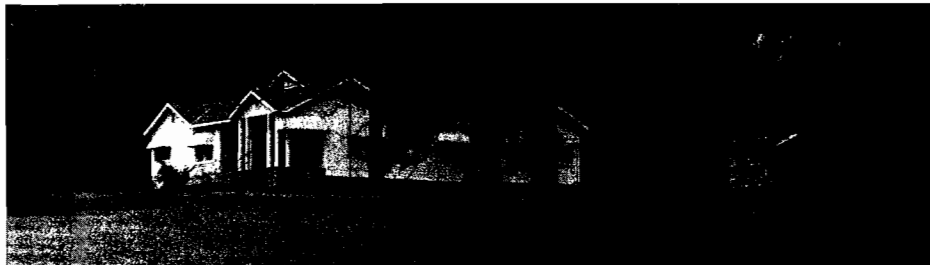
Located on the Landrum Place was a natural walnut grove. Realizing the market, the decision was made in 1977 to harvest a few of the mature trees and allow the release of the young seedlings underneath.

One of the trees cut was a 55-year-old beauty, base diameter of 27 inches with some of the boards sawn being 18 inches wide! Family members decided that this family tree had to stay! It did, in the form of a grandfather clock, table, bed, bowls,

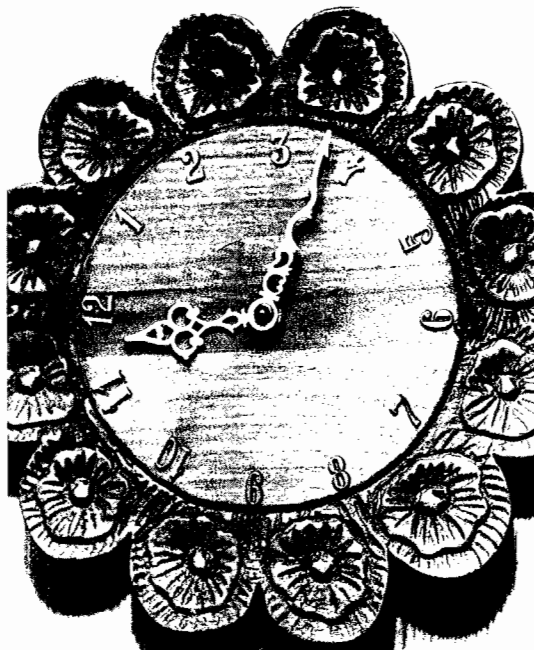
gun stock, and other items! "Craig Nutt of Northport near Tuscaloosa is an excellent craftsman," said Roy. "We'll all cherish the walnut pieces he made out of that tree."

Once those trees were cut, Roy thought it would be interesting to try planting walnuts. Miss Janie deeded him 10.6 acres near Landrum Creek for the project. Selected nuts were planted in 1978. The trees are now between 12-15 feet high!

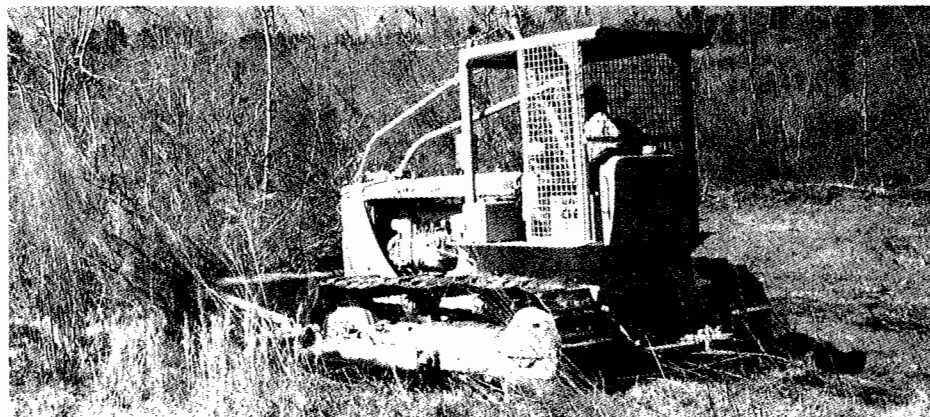
"We hope," said Roy, "that there will be a demand after the turn of the century. Single walnut trees have been known to sell for tens of thousands of dollars!"



The 4 bedroom hunting lodge can accommodate up to five hunters.



Several items were made from a large walnut cut on the Jordan property.



Roy clears the land with a family purchased dozer.



Roy stands at the entrance to Landrum Creek Hunting Lodge.



L. M. Jordan had a pond constructed for fishing.

## More Than Income

"We try to be good stewards of everything," said Miss Janie. "We improved the roads and replaced the wooden bridges. Why, we even hauled stone out of Birmingham to cover the culverts!"

"I guess our only real problem has been with the beavers. So far, we've just allowed contract trapping. If it gets too bad, though, we'll consider other steps."

"We have a great deal of respect for what we have. Over the years we've had a lot of help from the Soil Conservation Service, the Forestry Commission, and others like Buck Compton. We haven't just made money from our land. We've enjoyed it, too. Family picnics, fishing, hunting, and just walking through the woods are favorites with us. We want to protect it, to improve it, and to be good stewards of what God has entrusted to our keeping."

A grin spread across Miss Janie's face, "I probably won't live to see these trees mature, but my children and their families will enjoy the rewards."

# EDITOR'S UNDERSTORY

by CYNTHIA K. PAGE, Editor



I'M NOT SURE WHAT I expected when I got to Half Acre. All I knew was what I had been told about Janie Jordan. She is 71 and has just recently earned TREASURE Forest status for her 550 acres in Marengo County. Also, she is considered rather "special" by those who know her.

Good enough. There was the big white one-story country house surrounded by winter-killed flower beds. "Not so unusual for rural Alabama," I thought. Out the door strolled Roy Jordan, a tall, dark haired man with a warm smile and extended hand. The welcome was genuine and the apology for the threatening weather was also sincere, but still nothing really unusual was apparent.

Upon entering the neatly kept house, a faint odor of gas heaters greeted us. This quickly vanished as the aroma of hot coffee drifted into the room. Okay, almost all little old ladies are good housekeepers and good cooks.

Then Miss Janie walked in! Her smile

quickly melted the shock that must have been on my face! At 71, Miss Janie would easily pass for early-to mid-fifties. Her hands were smooth and her face only showed signs of personality rather than the wrinkles of age. I don't know what her formula for youth is, but I'd like to patent it!

She's also quite an energetic person! When she found herself widowed at age 62, she considered going back to school. "We seriously discussed it," said Roy, "but she decided there really wasn't much point in it, so she took up painting instead! I really didn't even think she could draw. You see what a judge of character I am!" Indeed, I could. All of those lovely paintings on every wall in the house had either "Janie Jordan" or "J. B. Jordan" written as the signature! When questioned as to why she started using the initials, she laughed, "Well, my art teacher said that nobody would take a woman seriously!"

Miss Janie is also quite an advanced

horticulturalist. Her flowers have won numerous awards in fairs and Garden Clubs. She is president of the A.A.R.P. (Alabama Association of Retired Persons) in Marengo County. She pointed out, "You never stop growing. It's a shame when old people sit down and rock and fold their hands!"

Another of her favorite projects is teaching Sunday School. "I've always enjoyed teaching Christian values. Working with young people is a joy."

I had the opportunity to spend a few minutes separately with both Roy and Miss Janie. Her sense of humor never faded even as rain started to fall. On our drive over to Ezell's Catfish Camp, she pointed out the new "industry" going up—a small wood-framed antique store. She quickly changed tones, though, when speaking of her children. "I'm very lucky. Both of my children have been good to me, better than most would have been. Having Roy nearby to help manage this place has meant so much to me."

Roy, too, spoke fondly of his mother in her absence. "She realizes the importance of stewardship and has already legally cleared the way for work to continue on this place. It's been in the family for so long. We have land grant deeds dating back to John Quincy Adams, Andrew Jackson, and Martin Van Buren. She wants to see our family tradition continue." They both have a great deal of respect for each other.

The day passed and a cold rain began to pour. Stories of the Old Home Place and Landrum Place filled our minds with pictures of days gone by as our appetites were satisfied with the best catfish that can be served anywhere!

With the rain still falling, we went out to see for ourselves the young pines, the walnut grove, the log house, the pond, the old cemetery, and the shooting houses. Miss Janie went, too. With wet feet and a plastic rain bonnet, her spirits were never dampened.

I did find in her something very unusual toward life itself. The lady refuses to grow old!



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*Farm Bill Encourages Reforestation*

# CONSERVATION RESERVE PROGRAM

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*Much of Alabama's one million acres of marginal cropland is being targeted for tree planting under the Conservation Reserve Program.*

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by LOU HYMAN, Chief, Forest Management

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**L**AST FALL, Alabama's *TREASURED Forests* contained an article about the new state cost-sharing program, "A Helping Hand", *ATF*, Fall, 1985). The Alabama Resource Conservation Program (ARCP) has as its goals the elimination of erosion from farmland and the increase in productivity of Alabama's forests. The ARCP has been quickly accepted by Alabama's land-

owners. To date about 1300 landowners have signed up for tree or grass plantings.

The ARCP cannot do the job alone. In Alabama there is about 1.15 million acres of cropland that has excessive erosion (erosion exceeding twice the tolerable level). This 32.1% of our cropland accounts for 61% of our erosion! Much of this heavy erosion occurs on marginal cropland, areas where

the cost of growing a crop is greater than the revenue generated. The farmer cannot make a profit and the base of our most valuable resources—the soil—is washing away.

Soil erosion from marginal cropland is a nationwide crisis. Congress has attempted to address the problem in the 1985 Farm Bill. One part in particular is important to all landowners. The *Conservation Reserve*



*Program (CRP)* is designed to retire all marginal cropland in the United States within the next five years. The goal of this program is to help the farmer two ways—by planting marginal cropland into trees or grass thus lowering erosion, and by lowering the production of basic crops so as to increase commodity prices.

The immediate target of the CRP is to retire the worst land first. In order to be eligible for CRP, *a person must have owned the land for at least three years. The land must have been cultivated two out of the last five years. Finally, the field must be eroding at a rate three times the tolerable level(3T), or be in land capability classes VI, VII or VIII, as defined by the Soil Conservation Service.* There are about 850,000 acres that meet these criteria in Alabama. The 1986 goal is to retire 60,600 acres this year and another 120,000 next year. The smallest eligible tract is three acres.

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## CRP Practices

When a field is accepted into CRP, the farmer agrees not to cultivate it again for at least ten years, during which time a ground cover of trees or grass is planted and maintained. During this ten year contract, the farmer will receive an annual rental payment from the government in cash or in commodities such as corn or feed grains. The maximum rental payment is \$50,000 per person per year.

The landowner will receive a cost share of 50% of the actual cost of establishing a cover crop in addition to his annual rental payment. The practices allowed under CRP are as follows: *establishment of permanent grasses and legumes, tree planting, and creation of permanent wildlife habitat.*

The tree planting practice can include light site preparation (burning or bush-hogging), tree planting, and herbaceous weed control during the first year. *No cost sharing is allowed for fire lanes, roads, fences, and Christmas trees.* The plantations must be protected from wildfires and grazing for the ten years of the agreement without any additional cost-share money. Planting must be done within the first year.

Landowners can elect to plant grass instead of trees. However, the land *cannot be grazed or harvested* for ten years.

From a land management point of view, the best route for a landowner in Alabama is to plant loblolly pine trees on these marginal cropland sites. By planting genetically improved trees such as those produced by AFC nurseries, you can take advantage of loblolly's fast growth. This growth will get a boost from residual fertilizers in the

soil left from recent cultivation. This can result in the trees you plant on cropland being pulpwood size in about 12 years.

Recently new herbicide technology has pushed this growth even faster. Herbaceous weed control means reducing the amount of grasses and weeds from around the seedlings. This enables the trees to establish good root systems quickly and to begin rapid height growth immediately. Studies have shown that weed control during the first year can reduce the time until the first commercial thinning by one-third (up to five years). If you use herbaceous weed control chemicals such as *OUST* by DuPont on marginal cropland plantations, you can have a stand of pulpwood size trees by age eight or ten. The chemical is sprayed in three foot bands over the tops of the seedlings during March, April or May right after planting. It does not affect pine seedlings and if sprayed in bands, will not increase erosion. The cost of such treatment is about \$17 per acre.

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## How to Apply

To apply for the Conservation Reserve Program, a landowner must sign up at the County Agricultural Stabilization and Conservation Service (ASCS) Office. He selects what practice he would like to do (grass or trees) and the annual per acre payment he will accept. The Soil Conservation Service (SCS) will review his application to insure that it meets the definition of marginal cropland.

The bid on the annual rent is a critical part of the process. The program will only be able to treat a limited number of acres. All applications will be placed in a statewide bidding pool where they will be ranked based on the annual rent bids. Applications will be approved beginning with the lowest rent and continuing down the list until the target acreage is reached.

Thus, the key factor in getting an application approved is the annual payment bid. The best way to bid would be to estimate the net income presently coming from the field and add to that the cost of any maintenance required for the conservation practice. Maintenance of a young tree plantation is only fire prevention, which means possibly bush-hogging a fire break around the stand each fall.

Once an application is accepted, the landowner and the District Conservationist from the SCS will develop a conservation plan for the field. If trees are to be planted, a forester from the Alabama Forestry Commission will inspect the property and develop specifications for the planting and maintaining of the trees.

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## CRP and Other Programs

Only the most highly erodible lands in the nation will be retired under the CRP. In the late 1950's there was a similar program called the Soil Bank. It was intended to adjust the supply of farm products by taking any cropland out of production. No attempt was made at that time to restrict the program to highly erodible lands. By being more restrictive and targeting the money, the CRP should reduce erosion more sharply than the Soil Bank.

There are a lot of farmers who would like to retire fields from row-crop production who do not meet the requirements of the CRP. There are other programs that can help. The state funded *Alabama Resource Conservation Program (ARCP)* will give a one-time 60% cost-share to landowners who want to plant trees on open land. Another federal program, the *Agricultural Conservation Program (ACP)* will fund tree planting on marginal cropland as well as other erosion practices where the erosion rate exceeds two times tolerance (2T). It gives a one-time payment of 60% of the cost.

Landowners with cut-over forestland can get help, too. The *Forestry Incentives Program (FIP)* will give a one-time payment of 65% of the cost of site preparation, tree planting, and timber stand improvement. The ARCP will also cover these practices with a 60% cost-share, but it is a lower priority.

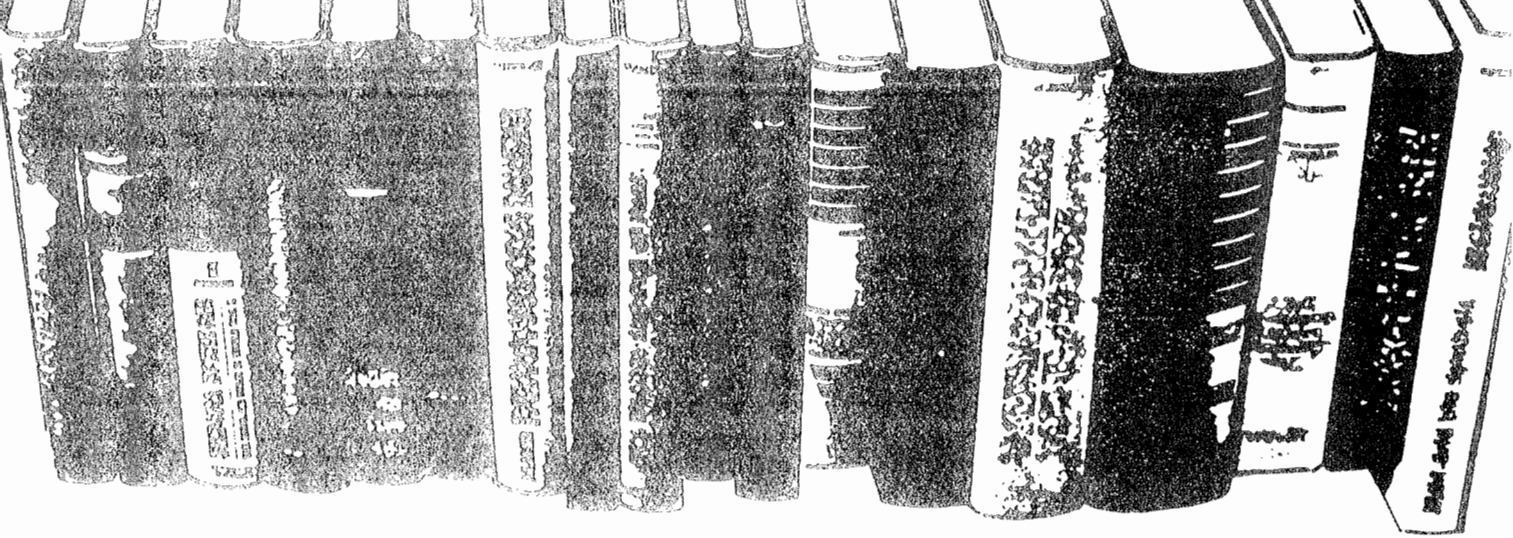
If a landowner has marginal cropland that has been planted to trees since December, 1985, he can still apply for CRP. He must be able to show that he had produced agricultural crops for two of the five years between 1980 and 1985, and that his land had significant erosion greater than 3T at that time. If accepted, the landowner may receive the annual rental payments for ten years, but cannot get any cost-sharing money. He must also follow the requirements that he not graze or harvest anything from that site during the ten year contract.

One source of income that will be allowed is leased hunting rights on the property. This is a good source of income to cover the carrying costs of the property. (See "Managing Wildlife for Income", *ATF*, Fall, 1985).

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## For More Information

If you would like to learn more about the Conservation Reserve Program, get in touch with your County ASCS office. Other sources of information are the County Alabama Forestry Commission Office, the County SCS Office, and the County Agent with the Extension Service. ♣



# STARTING A HOME FORESTRY LIBRARY

by NEIL LETSON, TREASURE Forest Coordinator

**G**O TO ANY BOOKSTORE or library and you'll find material on just about any topic. We are literally living in the age of information.

This is also true for forestry. There are books, magazines, and pamphlets being published that can tell you the latest and best ways to manage your forest. If you are like me, you're a pack rat when it comes to all this material and will hoard any and everything you can find on forest management. You may find, though, it's not easy to retrieve information when it is needed. I learned very quickly that if I intend to use the volumes of forest management information I've collected to better manage my forest, I better have it organized. It's the same way with any forest landowner serious about managing his property, and the best way to go about this is to start a home forestry library.

## What Is a Home Forestry Library?

A home forestry library is a collection of books and other printed material or graphic materials for use by the landowner in managing his forest. It is the forest landowner who makes the collection meaningful. A home library also can provide an organized source of reference materials that can be used by the forest landowner in carrying out special projects or in looking up answers to special problems on his property.

A home forestry library is not a dumping ground for material which other people or organizations discard. It should contain

printed material of direct application to the landowner's forest management scheme. It is also not a means of collecting information on one limited subject area. It should contain materials on a broad realm of topics of interest.

## Organizing

Set aside a permanent area in your home to locate your library. There may be furnishings and equipment you will want to use in your library, and these should fit the size of your quarters. There are some suggestions for setting up your library. These include the following:

1. Adjustable steel or wooden book shelves. These are recommended because of economy and ease of installation. Also, printed material of different sizes make the adjustable type of shelving far more practicable.
2. Reading table and chair. A home library is not only for storing and organizing printed materials, but should be designed for studying or reading.
3. Card files. Using three inch by five inch file cards with a storage box is an ideal way to record titles of books and articles for easy research.
4. Adequate lighting. Desk lamps or overhead lighting is essential.
5. Vertical file cabinet. Useful in keeping records, clippings and pamphlets.

All of these items are easily found at retail stores. Another source would be

from a local library supply house. Your personal needs, finances and space will dictate what additional items you may wish to buy.

## Sources of Printed Materials

Books will probably make up the bulk of your library and will give you a broader source of reference information. Many good books on general forestry are available at local bookstores. Books that are written directly for the landowner are published by some forestry organizations. The American Forestry Association is an example of this and has an excellent selection of books from which to select. Technical books on forest management are available from major publishing companies. Many of these companies will send you a list of these books with brief summaries upon request.

Periodicals are an important part of any home forestry library. They are available through subscription. Some subscriptions entitle you to membership in an organization which provides added benefits and printed material at sometimes reduced cost.

Pamphlets will be the most abundantly printed material for your library and are published by a variety of sources. These include government agencies, forestry-related organizations, private sources (consultant foresters and forest industry), and professional organizations.

Newspapers can be a good source of information for your library. News items, feature articles and forestry-related col-

Items of interest to you should be clipped and filed for future reference.

Any maps or photographs you have of your forest should also be stored in your home library. If you're handy with a camera, picture-taking will be something you can do. Good accurate maps are best done by a professional (consultant forester, etc.).

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### Taking Care of Your Books

Any new addition to your library should be checked to see that it is in good condition. Any book with a missing page or other imperfection should be returned for replacement. Some minor damage can be repaired. Minor tears in pages can be repaired with transparent tape. Cloth book repair tape can renovate and strengthen book covers.

New books will last longer if opened properly. To do this, simply hold the book upright with the back on a table. Let the front cover down, followed by the back while holding the pages of the book with one hand. Press down a few leaves at a time, some at the front of the book and some at the back, until the center is reached. Repeating this will improve the book's flexibility.

On all your books, magazines and pamphlets be sure to put your name and address. This can be done by hand, with a rubber stamp, or with an embosser. Labels can also be placed on your printed materials.

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### FORESTRY MAGAZINES FOR THE HOME LIBRARY

*AMERICAN FORESTS*: American Forestry

Association, 1319 Eighteenth Street, NW, Washington, D.C. 20036

*ALABAMA'S TREASURED FORESTS*: Alabama Forestry Commission, 513 Madison Avenue, Montgomery, AL 36130

*ALABAMA FORESTS*: Alabama Forestry Association, 555 Alabama Street, Montgomery, AL 36104

*ALABAMA CONSERVATION*: Alabama Department of Conservation and Natural Resources, 756 Administrative Bldg., 64 North Union Street, Montgomery, AL 36130-1901

*FOREST FARMER*: Forest Farmer's Association, P.O. Box 95385, Atlanta, GA 30347

*THE AMERICAN TREE FARMER*: The American Forest Institute, 1619 Massachusetts Avenue, NW, Washington, D.C. 20036 ☛

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# OAKS One of Alabama's Handsome Hardwoods

by TOM CAMBRE, Hardwood Specialist, Alabama Forestry Commission

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**O**AKS ARE FAMOUS throughout the world, but especially in Alabama. The dependence of man and animal on this versatile tree makes it the most widely used hardwood in the United States!

A mature oak forest is truly an inspirational sight! Huge boles looming up through dark shadows as they reach toward the sunlight gives one a feeling of reverence and peace. What better place exists to find solitude and contentment?

These majestic beauties are divided into two major groups—white oaks and red oaks. Even though they are of the same family, each has very distinctive characteristics. White oaks have tight cooperage, which means that the wood can be cut into staves for barrels to hold liquids, such as a whiskey barrel. Red oaks, on the other hand, are very porous (loose cooperage) and will not hold liquids. This wood may be used for nail kegs.

White oak leaves have round leaf lobes, while the red oaks have pointed lobes which are often tipped with bristles or spines. Freshly cut red oak has an unpleasant odor in contrast to the white oak which does not.

Oaks in both classes are familiar to many people. In the red oak family, most of us would recognize the cherry bark oak, water

oak, willow oak, black oak, and blackjack oak. In the white oak family, we find post oak, swamp white oak, live oak, overcup oak, and swamp chestnut oak. Of course, there are others in both of these groups.

The versatility of these trees makes them ideal for many purposes. Some of the products include railroad crossties, trailer beds on transport trucks, fine furniture, flooring, paneling, pallets, lumber, firewood, and fine paper stocks.

Many game and nongame wildlife species depend on oaks as a food supply. Some of the dependent game species are deer, turkey, quail, ducks, squirrel, and raccoons. Nongame species which rely on oaks are rats, mice, flying squirrels, and birds such as the bluejay.

Once established, oak management is similar to that for other hardwoods. In the South, a shelterwood is recommended for landowners who want to increase the oak component in a future stand. Oaks *must* already be present in the understory as advanced regeneration prior to the final cut in order to have oaks in your stand. The amount of acorns produced in any one year will greatly affect the establishment of oak seedlings. Generally, an abundance will occur every four to five years.

Oak seedlings must have direct overhead sunlight for a period of at least 2-3 hours each day to maintain height growth. Once the desired amount of seedlings is attained, the landowner should gradually open the forest canopy to allow them to grow. Too much sunlight, however, will encourage other competition. Generally, a three-step shelterwood is recommended. The first cut would reduce the overhead stand to 70-80%. Two years later, a second cut would reduce stocking to 40-60%. The final cut would then occur 5 years after the initial cut. This last cut would include removing all stems 2 inches or above in diameter. During regeneration stages, hardwoods should be protected against overpopulated deer herds and cattle grazing.

In the management of hardwood forests, the landowner should be aware of the value of the trees, both in terms of money as products and also as the food supply and habitat for wildlife. Always consider your objectives and the overall impact on other benefits derived from your hardwood stand.

Oaks, as well as other species in our hardwood forests, are essential to our way of life. Those little acorns which we so often take for granted may one day grow into giant oaks! ☛

# ACTIVITIES

## DISTRICT

# 1

The Guntersville firemen voted volunteer **Jack Lay** AFC in Marshall County, as **Fireman of the Year**. The award goes to the man who is thought to have contributed the most to the department during the previous 12 months. Both full time and volunteer firemen vote. Lay has been a forest ranger for 14 years. He first became a volunteer fireman at age 16 when he was growing up in Glencoe. He joined the Guntersville department about 5 years ago. He was president of the Guntersville Firefighters Association last year. He has been a very faithful firefighter. "Chief Dewey Wales said. He has also worked with us in getting equipment from the Forestry Commission.

**David Morris** Calhoun County, met with the county **Emergency Management** coordinator and discussed the new radio system and how it should be used in fire season. EMA gave all RCFP units including AFC some radios for fire use only.

**Jack Wingate** has recently developed a slide tape program on safety. If anyone is interested in receiving a copy, please see Jack.

Career Day was held at the **Gadsden Mall**. All eleventh and twelfth grade students from **Etowah County** attended. One hundred and fifty students showed an interest in forestry.

**Marshall County** proclaimed the week of Oct. 20-26 as "Forest Products Week" and received a certificate of appreciation from local Forest Rangers **Larry Parker** and **Jack Lay**. Parker expressed appreciation to "the current administration" for its support of the Forestry Commission.

A public meeting was held in **DeKalb County** to determine the need for an acreage assessment of 10 cents an acre on forestland.

**Ed Eldridge** Jackson County, organized a Tree Trimming Workshop for the **City of Scottsboro** and utility employees. This was a very successful workshop. The workshop helped to ease the minds of Scottsboro residents as the utility company started its winter tree trimming program.

## DISTRICT

# 2

**Louise Mechaw** Clerk Typist I in Cullman County, completed the Basic Emergency Medical Technician Course at Wallace State Community College last fall. She is currently a Rapid Responder with the **Battle Ground Volunteer Fire Department**.

**Phearthur Moore** Jefferson County Supervisor, has received a **Container Corporation Scholarship**. Congratulations, Phearthur!

**Mike Wilcox** Shelby County, is taking a course in acrylic painting to enhance his talents in wildlife and decoy painting.

Shelby County's **Kenny Thompson**

is getting a shop ready for his taxidermy projects.

**Johnnie Tidwell** Radio Operator in Shelby County, has been appointed as a Grand Officer in the State of Alabama's Order of the Eastern Star. She will be serving as one of the Five Star Points as Grand Esther.

Shelby County Supervisor **Daryl Lawson** hosted a welcome party for the new rangers assigned to his county on New Year's Eve.

St. Clair County welcomes **Ranger Randy Hurst**. Besides fire control, he has already been involved with the volunteer fire departments and equipment maintenance.

## DISTRICT

# 3

The **Fayette County Forestry Planning Committee** held a forestry field day on October 16. Stops on the tour featured various methods of site preparation and the impact of prescribed burning on soil, wildlife and reforestation. Sixty-five forest owners attended the field day and enjoyed the meal sponsored by local forest industries.

Congratulations to **Fayette County** forest owners **Gene Deal** and **Joe L. Smith** for being certified as **TREASURE** Forest owners and **F. D. Miller** and **Charles Atkinson, Jr.** for being recertified as **TREASURE** Forest owners.

**Lamar County** has continued their successful media campaign to alert forest owners in Lamar County to the Southern Pine Beetle situation by running update articles in the local newspapers.

**Snokey Bear** and handout materials have been used in several fire prevention programs for school groups in **Lamar County**.

**Greene County** personnel have given lectures on timber stand improvement to two landowner groups and have demonstrated proper planting techniques with a dibble to three landowner groups. Newspaper articles updating the SPB situation, advertising seedling sales, and safe firewood harvesting have been run in the local newspaper.

**Hale County Forestry Planning Committee** held a prescribe burning demonstration on Nov. 15 for local forest owners. Proper techniques of prescribe burning were demonstrated in the "hands on" demonstration.

At the **Farm-City Week Banquet** held Nov. 14, **Hale County Forester Landre Tomlinson** made a **TREASURE** Forest presentation to landowner **Bill Wagner**. Three hundred landowners were in attendance with several signing **TREASURE** Forest Creeds.

The **Tuscaloosa Forestry Planning Committee** held its annual forestry field day on October 5. Held at the farm of **Harvell and Hoyt Montgomery** the field day was attended by 102 forestland owners. Exhibits of chain saws, small tractors, a portable sawmill and consultant firms were viewed by the landowners. Stops on the tour included discussions on SPB, prescribed burning, and wildlife management. **District Forester Wayne Strawbridge** spoke briefly on the importance of the **TREASURE** Forest program and its impact on Forestry in Alabama.

**TREASURE** Forest presentations were made to **John Foster Sr., Harvell Montgomery** and **Hoyt Montgomery** following the barbecue lunch sponsored by local forest industries.

**Pickens County** personnel have stressed proper seedling storage and handling in tree planting demonstrations held throughout their county. Proper planting techniques with both machine and dibbles have been shown to the landowners in each meeting. Following each meeting, landowners were given a dibble and some trees to plant, and then these trees were inspected for proper planting by **Forester John Sutton**.

A cooperators' meeting with **Weyerhaeuser Company** was held on November 15. Their company's reorganization and how it would affect fire control activities were discussed. Cooperation and utilization of all fire control resources including state, industry and volunteer fire departments were emphasized. A barbecue lunch was served by the company and enjoyed by all.

**Tuscaloosa County** won first place with their float in the **West Alabama Christmas Parade**. The parade was viewed by a crowd estimated to be over 25,000. The parade was covered by **WDBB TV 17** and **WCFT TV 33**. This is the third first place trophy received by Tuscaloosa County within the last four years with honorable mention the first year. **CONGRATULATIONS, Rangers Moore, Elmore, Colburn, Brown, Dockery and Harryman!**

## DISTRICT

# 4

A district staff meeting was held at District 4 Headquarters on January 14. **Dean Gillespie of Resource Management Service, Inc.** presented a program on herbicides.

The district county supervisors and some members of the D-4 Headquarters staff attended a meeting of **Multi-Agency Training/Orientation** on the Alabama Forestry Planning Committee's **TREASURE** Forest Program.

**Tom Cambre** State Hardwood Specialist and District Management Staff Specialist, attended the meeting and training session held in Oxford on January 31.

On December 18, **Forest Ranger Ronnie Ray** conducted a control burn on the property of **Leonard L. Blanton**. This was a TSI burn for 70.0 acres. **WSFA-TV** of Montgomery aired the event on Alabama Almanac during the Christmas Holidays, and Channel 6 in Birmingham aired it on the evening news.

**Clayton Schwind**, Chambers County Forester, successfully completed the S-390 course taught in Cullman the week of December 9-13.

Work is progressing well on the small Hardwood Nursery being developed at the Chambers County Highway Department building. The nursery is a joint project of the **Chambers County 4-H Club, Chambers County Forestry Planning Committee, Alabama Forestry Commission, and Chambers County Extension Service**.

Two more **TREASURE** Forests were certified in Chambers County during December. The landowners are **Mr. Leonard Blanton** and **Dr. David Hall**.

Control burning, fire-break plowing, and checking ACP, FIP, and ARCP plantings are keeping the **Chambers County AFC** personnel quite busy.

The **City of LaFayette** has been nominated for **TREE CITY USA**. The form was sent to Montgomery for the State Forester's approval, and then was sent to the national office where it was certified.

The **Chambers County Fire and Rescue Association** held its quarterly meeting on January 20. The new officers for 1986 are **Keith Wilkerson** president; **Byron Pigg** vice-president; **Dr. John Crowder** secretary; and **Cecil Crenshaw** treasurer.

**Earl Smith** Clay County Forester, participated in County CRD meetings every third Monday. Smith is chairman of the Clay County Forestry Planning Committee which held a meeting on March 20 at the Clay County Farmer's Market. The topic for discussion was forest landowner tax laws.

**W. N. McCollum, FRHII, and Earl Smith** have completed 40 hours of structural fire training. This course was taught by the **Alabama Fire College** to members from six of **Clay County's Volunteer Fire Departments**. Funding was provided by the Alabama Forestry Commission.

The **Cleburne County Association of Volunteer Fire Departments** held their monthly meeting (December) with the **Ranburne Volunteer Fire Department**.

A **TREASURE** Forest meeting was held at the Courthouse in Rockford in Coosa County. **FRHII Joel Neighbors** presented **TREASURE** Forest certificates to **Robert Teel**, Rockford Attorney; and **Dr. Douglas McGinty** of Huntingdon College. Twenty-five people were present.

The **Randolph Leader** began the New Year featuring a front page article and photograph concerning the 1986 fire season.

**Tree Tips**, a regular column of The **Randolph Leader**, is written by **Steve Nix** Randolph County Forester. This column has recently featured the following subjects: Law Enforcement, Tree Bazaar in Roanoke, Roanoke's Foster holly, Southern Pine Beetle, Canadian timber situation, and wildfire prevention.

The **Randolph County Forestry Planning Committee** kicked off a regeneration pilot project sponsored by the State Forestry Planning Committee. **Jerry Johnson** SCS forester, gave a pep talk.

**Charles Sikes** has made arrangements with the **Randolph County Volunteer Firemen's Association** to help build a tanker shed and a forestry workshop and storehouse.

The **Tree Board of Roanoke** announced the first **Tree of the Season Award**. The fall display of a beautiful sugar maple owned by the **Howard M. Manley** family was the winner.

A guest editorial written by **Steve Nix** and published in the **Registered**

Forester News Bulletin brought responses from Georgia and Alabama.

Charles Sikes continues to assist the Randolph County Volunteer Firemen's Association with grant application help.

The Tallapoosa County Association of VFD's held a 16-hour arson investigation class, January 13-16, 1986. Twenty-six firemen received certificates from instructor Dave Thomas of the State Fire College and Association President Scott Phillips.

## DISTRICT 5

On November 15, TREASURE Forest certificates, signs, and caps were presented to Mr. and Mrs. L. G. Ferguson (157 acres) and Ms. Janie Jordon (550 acres) by the Marengo County Forestry Planning Committee.

On December 18, Mr. and Mrs. E. T. Clapp and son, Clement were presented TREASURE Forest certification for their 488 acres of forestland near Maplesville in Chilton County. Also, Tobie Mayfield Chilton County Supervisor, received his TREASURE Forest certification for his 50 acres of forestland south of Clanton.

January 13, the Weblos in Selma were presented a slide program on wildlife in Alabama and the role of the AFC in developing Alabama's forestland.

January 18, District 5 personnel assisted Selma Weblos and Boy Scouts in planting pine seedlings and in a tree identification study.

November 21, Autauga County personnel gave Virginia pine seedlings to approximately 200 people during a Farm City Week luncheon which was held in Prattville.

January 13, the 1985 Black Walnut/White Oak tree seedling contest sponsored by the AFC was won by the Prattville Tree Commission. The seedlings given as the prize will be used by the Prattville Tree Commission to establish "see, pick and eat nut tree groves" in three city parks.

December 6, Smokey Bear appeared in the Linden Christmas Parade.

November 7, the Marengo County Fire Department Association presented \$500 to the newly formed Jefferson Fire Dept. to help with initial costs.

December 12, free pine, white oak, and bicolor seedlings were given away in Pine Hill and Camden by the Wilcox County Soil and Water Conservation District, the SCS, and AFC personnel. Also, during December, the Wilcox County Extension Office distributed several thousand pine seedlings donated by MacMillan Bloedel Inc., to thirteen 4-H clubs (300 boys and girls) in Wilcox County.

## DISTRICT 6

The Dale County Forestry Association held its first quarterly meeting of 1986 in Ozark recently. TREASURE Forest landowner H. C. Jordan welcomed the group and conducted the business session in which fellow landowner George Wright was elected interim-chairman. A program dealing with Forestry Taxation was presented by Ms. Jean McDaniel who works for

H and R Block in Enterprise.

Barbour County Forester Don VanHouten reports some good and bad news from his county. The "good" news was that over 200 Boy Scouts and 300 elementary students were presented programs on forest management and wildfire prevention during the first quarter of the fiscal year. The "bad" news is that the Eufaula radio station that plays fire prevention spot announcements burned down, and that the proposed acreage assessment was defeated.

TREASURE Forest certificates and signs were presented to four Coffee County landowners in a ceremony featuring Ernie Todd State Conservationist for the Soil Conservation Service. James and Dan Pridgen and Haywood and Doug Watkins were the recipients bringing the number of TF's in Coffee County to seven.

Henry County Supervisor Kenneth Blalock and Ranger Tommy Haynes have been busy promoting Tree City USA and fire prevention to area groups. Approximately 265 kindergarten children heard Smokey's message while Tree City presentations were made to the Abbeville City Council and Abbeville Garden Club by the county personnel and Urban Forest Coordinator Barry Lawrence.

The newly certified TREASURE Forest of Jimmy King in Pike County was the site for a TF field day which drew over 50 interested people. Mr. King and his son, Kinny were featured speakers on the tour along with TF landowner Larry Trotter giving the luncheon address. Representative Steve Flowers made the TF presentation to Mr. and Mrs. King and their son during the luncheon. This effort was a cooperative venture of the Pike County Forestry Planning Committee.

Pike Countians also were exposed to the Tree City, USA program through an AFC exhibit displayed at the annual Pike County Fair. Slide programs detailing wildflowers, wildlife management and wildfires were also shown during the five-day event which several thousand people attended.

During the month of January the Alabama Forestry Commission and Extension Service personnel in Geneva and Pike Counties cooperated to bring forestry into the classroom for several thousand 4-H'ers. County Supervisor Ronnie Hickman was the guest speaker for all 5th, 6th, 7th 8th grade 4-H'ers in five Geneva County schools. He indicated that the opportunity to discuss forestry with these future leaders and landowners was a gratifying experience.

The City of Ozark was the host site for the District's TREASURE Forest Orientation meeting held in late January. Local members of the Alabama Forestry Planning Committee met and were given a review of the TF program. Specifics detailing the mechanics and opportunities for cooperation were also discussed.

Mike Seivering, wildlife biologist from Brewton, gave a talk on Wildlife Management to the Houston County Landowners' Association.

Tracy Lawrence presented a program

on poisonous plants to the Ashford Adult Education Class. The program consisted of a slide program identifying poisonous plants with a question-answer session following.

Richard Murphy of the Houston County Extension Service and Ranger Tracy Lawrence visited the County Schools with a film on the evolution of forestry. A question-answer session followed on forestry in Alabama and job opportunities in forestry.

## DISTRICT 7

Conecuh County Supervisor Victor Howell was elected Chairman of the Conecuh County Forestry Planning Committee.

A TREASURE FOREST orientation was presented by the State Forestry Planning Committee in Evergreen on January 16th.

The Escambia County Forestry Planning Committee sponsored a prescribed burning demonstration on Dec. 3. This burn was done by Custom Air Service of Jasper, Texas using helicopters.

Escambia County Supervisor Robert Knowles presented three Smokey Bear programs during the month of January.

Mr. Robert Gandy a representative with Resource Management Service in Birmingham presented a program on herbicides at the District 7 Staff Meeting in January. This program was very informative to all who attended.

District 7 has 7 TREASURE Forests certified: Cecil and Wilonese Prescott Conecuh County; City of Greenville Sherling Lake Park and James Alexander Butler County; David Miller, Broox Garrett and Lillie Parker Escambia County; and Charles Raymond Floyd Monroe County.

The Crenshaw County Forestry Planning Committee held two prescribed burning demonstrations in Crenshaw County on December 19 and January 23. Supervisor Tim Money Ranger Johnny Mims and Laborer David Kelley assisted with both of the burns.

County Supervisor Tim Money presented Smokey Bear programs at Brantley School and Highland Home School in Crenshaw County.

District 7 welcomes Forester Blake Kelley to our Headquarters Staff in Brewton. Blake transferred from District 1 Madison County.

The Monroe County Forestry Planning Committee sponsored a hardwood meeting in Monroeville on January 28.

The Alabama Legislative Forestry Study Committee held its quarterly meeting at Alabama River Woodlands in Monroeville. Monroe County Supervisor Gary Cole and Staff Forester Blake Kelley assisted Georgia-Pacific and Alabama River Woodlands in hosting the meeting.

The AFC personnel in Covington County prescribed burned about 1700 acres during the month of January.

Mr. Jimmy Smitherman a member of Covington County Forestry Planning Committee has been transferred to Bullock County. The Forestry Com-

mission wishes him the best of luck in his new assignment and new area. Jimmy worked with the Covington County Extension Service.

As of January 30, 1986 District Seven has had 268 wildfires, 1,214.5 acres burned with a District average fire size of 4.53 acres.

Forester Gib Burke and Escambia County Ranger Randall Blackwood held a short course in forestry for W. S. Neal FFA students on January 31. This is in conjunction with the forestry judging contest.

## DISTRICT 8

A large crowd turned out for the Jackson Wildlife and Forestry Festival that was held November 2, 1985.

County Supervisor Mike Hinson and all the other Clarke County personnel had a forestry information booth, assisted with the chain saw contest and other activities.

John Martin and James Travis made a fire prevention presentation to six classes at Robertsdale Elementary School in Baldwin County on October 10, 1985. A Forestry Commission fire suppression unit was displayed and fire prevention literature was distributed.

Clarke County personnel made a fire prevention presentation at the Coffeetown Elementary School on October 10. Smokey Bear also made an appearance.

Washington County Supervisor Otis Evans made a fire prevention presentation to 20 students from the Choctaw Friendship School on October 25.

Three hundred Boy Scouts, Girl Scouts and 4-H Club members learned more about the importance of conservation at the Youth Appreciation Day sponsored by the Youth Conservation Corps on October 19. Mobile County Supervisor Patrick Waldrop is one of the officers of the Youth Conservation Corps.

Neil Letson, Patrick Waldrop and John Martin made a presentation to the Eastern Shore Institute of Life Long Learning on TREASURE Forest and fire prevention. The presentation was made on October 29.

Alabama Forestry Commission personnel in Mobile County distributed fire prevention and forest management literature and sponsored a visit by "Smokey Bear" at Farm Bureau's Farm City Week at Bel Air Mall October 21, 22, and 27.

Baldwin County Supervisor John Martin and Forest Ranger James Travis made a presentation on fire prevention and TREASURE Forest to the fourth grade class at Rosington Elementary School on October 30.

Mobile County Supervisor Patrick Waldrop was a guest at a wildlife program conducted at the Mobile County Environmental Education Center on December 17, 1985. The program was attended by approximately 50 adults and 25 children.

The Baldwin County Forestry Committee hosted a meeting on the use of forestry herbicides. Mr. Charlie Fitzgerald presented the program. A large crowd enjoyed the program and

barbecue dinner provided by Mr. Richard Cox and the Baldwin County Farm Bureau.

## DISTRICT 9

**Dr. John Pritchett** Head, Zoology Department, Auburn University and a member of the W. Kelly Mosley Awards Selection Committee, was in the Quad-Cities on January 6, to present the Mosley Award to **Mrs. A. N. (Chess) McKinney**. Mrs. McKinney, a local garden club member and a special friend of forestry, was nominated by **Hammie Stamps and Louise Bone**. Mrs. McKinney was honored at a luncheon held at the Holiday Inn. **State Senator Bobby Denton** spoke to the group about Mrs. McKinney's accomplishments and his sponsoring the "Save the Butterfly Day" resolution written by Mrs. McKinney.

The second multiple use forestry workshop will be held at the **Bear Creek Education Center** in late May. The workshop is funded by the **W. Kelly Mosley Awards** and will cover all phases of multiple use and the FFA Forestry Judging Contest materials. Instructors from the **Alabama Forestry Commission, U. S. Forest Service, local industry and consultant foresters** will assist with the two-day workshop. **Tony Avery and Louise Bone** will direct the workshop. For more information call 767-1414.

The **Lauderdale County Fireman's Association** held its annual meeting recently. **Steve McEachron** Lauderdale County Forester, was selected "Fireman of the Year." "I don't know of anybody who has put forth more to this association than Steve," said **Sam Blackmon** of the **Underwood-Petersville Department** as he presented Steve the honor.

In Tusculumbia, fireman **Bobby Malone** who volunteers for the **Colbert Heights RCFP** and the **Tusculumbia City Department** was recognized as "Volun-

teer Fireman of the Year." The **Times-Daily** newspaper recognized Steve and Bobby in an editorial entitled "Saluting Valor."

**Art Salter and Debra Wilson** two of the area's most popular radio personalities, have taken a special interest in our forestry programs. Art Salter recently broadcast a special interview with **District Forester Gerald Steeley**. They covered our Southern Pine Beetle program and fire detection. They also report District 9's fire situation on a regular basis.

**Hamilton's** two weekly newspapers give special coverage to all forestry programs in **Marion County**. Marion County Forestry personnel make the front page of almost every issue.

The **Treasure Forest Subcommittee** recently approved Marion County's 13th **Treasure Forest—the Clyde Holcomb** property.

Plans have been made to celebrate **ARBOR WEEK** in all cities in **District 9**. Tree planting programs have been arranged, and photographs along with appropriate narratives have been planned. The Arbor Week activities have been planned to coincide with a push for **Tree City USA** in these cities.

A "Free Seedling" give-away was held at District 9 Headquarters. **Staff Forester Don Burdette** greeted landowners at the front entrance of our office. This arrangement gave people an opportunity to see our new office, talk over their forestry projects, and ask questions. Many landowners requested further assistance on their property as a result of this give-away program.

## DISTRICT 10

**Montgomery County's Forestry Planning Committee** is holding a seminar for financial institutions regarding forestry and land investments. Bankers and investment businesses learn more

about the potential of forestland as an ongoing opportunity for their clients. The meetings are conducted by **Dr. Bill McKee** forest economist from Auburn University, who has been bringing a similar message to landowners for the past several months in our District. Dr. McKee explains future supply and demand projections for wood products and their effects on standing timber prices. Other topics covered during the sessions include the following: how much an investor can afford to pay to acquire forestland and to prepare it for planting with commercial tree seedlings; what can be expected as the rate of return from a forestry investment; is there a profit in growing trees on land purchased with borrowed money; and how putting money into forestry compares with buying certificates of deposit or other revenue bearers.

TF owners, both certified and potential, were among the first in **District 10** to get telephone stickers showing the toll-free permit and wildfire reporting number and their correct section-township-and range numbers. Individual and personal contacts are being made by fire control people of the Commission with **TREASURE** owners, and their phone's location is indicated on a county map. Other residents in these areas are also being contacted, but each TF owner is a leader in forest interest in his community, and a natural "key contact" for fire control and prevention efforts.

Perfect **TREASURE** is planned for the property recently purchased by wealthy industrial contractor **Jim Wilson** of Montgomery if the goals of District 10 TF coordinator **Robert Wiggins** and Macon County Supervisor **Jerry McGhee** are reached. The two have hopes that the 4,000-plus acre place in central Macon can be built into the ideal "how-to-do-it" demonstration **TREASURE** Forest from purchase through

land clearing and shaping, to wildlife habitat development, special protection areas, appropriate site plantings and harvesting and management practices. They are working closely with **Mickey Easley** resident forester and wildlife biologist on the Wilson property, in developing plans for the years ahead that maximize all landowner objectives.

Unavoidable changes in landowner needs, management practices, and ownership can raid the numbers of **TREASURE** Foresters in a district over a period of time, even though the actual **treasurefulness** of the property itself may not have been affected. Three deaths, a land sale within an estate, and an unexpected need for capital have taken five TFs off the District 10 list during 1985.

Landowner tours and demonstrations have been set up over District 10 for this spring that should interest many area TFs. **Lee County Planning Committee** members named February 25 and 27 as dates for their overall look at forest economics led by **Dr. Bill McKee**. It was to include subjects ranging from the 1985 Farm Bill, timber sale contracts, supply and demand, foreign timber imports, leases to hunting clubs and conservation groups, to prescribed burning, erosion control and forest insects and diseases. **Macon County** will host a **TREASURE** field day and natural regeneration tour on selected properties showing the best examples of different management techniques. There will also be a fire by prescription short course on USFS land earlier in the spring, and a tree planting demo late next fall. **Bullock, Lowndes, Elmore and Russell Counties** also have a slate of events ready for this warm weather season, and Montgomery's **TREASURE** field day tour, and outdoor eating has become an annual event. All interested TF owners can get details from their County AFC office. ♣

## CALENDAR\*

**April 7-9**—Atlanta, Georgia, 8:00 a.m. Data Management Issues in Forestry. Exhibits, poster session, software swap, trouble shooting. Fee \$175. Call FORS at (205)767-0250.

**April 12**—Tannehill Historical State Park. Alabama Forest Owners Association exhibits, workshops, films—**ALL DAY LONG. EXHIBITORS CONFIRMED AT PRESS TIME**

Weyerhaeuser Co. Nursery, Hot Springs, AR  
Wood Mizer Portable Sawmill, Indianapolis, IN  
Resource Management Service, Birmingham, AL  
Gambrell Associates, Northport, AL  
Ferrari Tractors, Verona, WI  
Tilton Equipment Co., Atlanta, GA

**EXHIBITORS:** Register now. Call (205) 663-4138 or send a letter requesting exhibit space to AFOA, Box 104, Helena, AL 35080. Exhibit fee: \$40.

### ANNUAL MEETING SCHEDULE

9:00 Exhibits open, first film begins.

9:30 Oil Gas Leasing Workshop, Marvin Rogers, State Oil Gas Board. (indoors)

9:30 Chainsaw Safety, Steve Lucas, Tilton Equipment Co.

10:30 Timber Cruising-Class Session, Carroll Gambrell, Consulting Forester.

**NOON AFOA Annual Business Meeting and Luncheon.** Guest Speaker, Charles Tomlinson, "Why a Consultant?". Mr. Tomlinson is a forest owner and consulting forester from Cherokee, AL. Luncheon - \$6.00 advance, \$7.50 at the door.

1:30 Chainsaw Safety, Steve Lucas, Tilton Equipment Co.

2:30 Timber Cruising-Class Session, Carroll Gambrell, Consulting Forester.

2:30 Income Estate Tax Planning in a Changing Environment. (indoors)

4:30 Drawing for Prizes.

**AFOA MEMBERS WISHING TO ATTEND THE LUNCHEON SHOULD REGISTER NOW. SEND \$6.00 TO AFOA, BOX 104, HELENA, AL 35080. \$7.50 AT DOOR.**

**April 12-13**—Fort Deposit, AL. Fifteenth Annual Calico Fort Arts and Crafts Fair. Gates will be open from 9:00 a.m. to 5:00 p.m. and admission is \$2.00 for adults and \$1.00 for children.

**April 16-18**—Mobile County. Southern Forestry in a Changing World. Call Forest Farmers Association, (404) 325-2954.

**April 24**—Tuscaloosa County, 7:00 p.m. Forest Herbicides. Call Mark Beeler, 333-1590.

**May 3**—Small Timber Harvesting Equipment Demonstration Day on the John W. Starr Memorial Forest near Starkville, Mississippi. Demonstration by Swedish logger Soren Eriksson. Contact Frank Shropshire, Mississippi Forestry Commission.

**May 17**—Tallapoosa County Spring Festival, Union School grounds. Donations accepted.

**May 20-23**—Forsythe, Georgia. Training course in "Ground Application of Forest Herbicides." Designed for vendors, consultants, and forest supervisors. \$35 registration. Sponsored by U.S.D.A. Forest Service and Georgia Forestry Commission. Call Jim Miller (205) 826-8700.

**July 8-9, July 22-23, and August 5-6**—Microcomputer applications in forestry, Extension Hall, Auburn University, Alabama. Designed for those with little or no experience using microcomputers. The IBM PC will be used for hands-on training in timber inventory, growth-yield, investment analysis, and timber harvesting programs. The use of word processing, spreadsheets, and data base management in day-to-day forestry operations will also be covered. Contact Dr. Bill McKee, Extension Natural Resources, Auburn University, AL 36849, (205)826-5330. ♣

\* Any member agency of the Alabama Forestry Planning Committee can be contacted for more information about listings in this section.

# Integrating Timber Management and Cattle Grazing

by BARRY LAWRENCE, Cattle Grazing Specialist, Alabama Forestry Commission

**H**OW CAN TREE FARMERS and TREASURE Forest landowners cash in on their investment and land before the 12-14 years required for trees to grow large enough to produce their first source of revenue? One answer could be to integrate timber management and cattle grazing!

Many progressive private landowners are already successfully growing timber and cows together here in the South. Research has already shown that controlled grazing has little adverse effect on the timber growing operation and that most of the timber operations can offer substantial forage.

## Determining the Suitability of Your Land

How does one go about growing trees and cows together successfully? There are several factors to be considered and some planning needs to be done.

Before considering a timber-cattle operation, it must be determined if a grazing potential exists on the property in question. The *topography* or lay of the land is important. Very steep terrain definitely would not be suited to grazing. Gently sloping to flat terrain would be an ideal situation. The *overstory* of the present stand of trees needs to be examined. Forage is best produced in fairly open stands of timber. As the canopy closes, the amount of forage available for grazing decreases. *Compatibility with other land uses*, such as hunting or recreation, should be examined, also. Both cattle and deer graze basically on the same type of forage and overstocking an area could be detrimental to the deer population. Other items to be considered are *adequate fencing, watering areas, and supplemental feeding*.

If the landowner feels that there is a potential for cattle grazing after examining the above, he should next determine if adequate forage is available. A quick way to determine the amount of forage is to walk over the land and calculate what percent is open. If at least 25 percent or greater is open, then a good grazing opportunity would exist. TABLE I shows an average yield of forage for various stands. This will vary according to what management activities, such as prescribed burning, has been carried out on the land.

## Stocking the Cattle

Once the amount of forage has been determined, then the amount of stocking of cattle can be determined. TABLE II shows the suggested stocking for various forage production. It is assumed that a nine month grazing schedule is used, March through November, and then the cattle are moved to improved pasture or other areas for the remainder of the year.

## Considering Other Management Practices

Perhaps the most important part of the planning is the coordination of forest management practices. Unlike improved pasture, the forest forage must be manipulated in a different manner. This is best accomplished in the various forest management practices available to the landowner.

Let's begin with an area to be site prepared and planted. Realizing that some sacrifice will have to be made in timber production, fewer trees will be planted per acre than normal. A spacing of 6 ft. x 12 ft. or 6 ft. x 14 ft. is recommended for higher and longer lasting production of grasses. In a normally established plantation, a light cattle stocking may be

permitted if sufficient forage is available. An early thinning in the plantation will be necessary if the amount of forage produced is to continue at a high rate. This should be followed by a prescribed burn the following year.

If an area is to be clearcut, a chip harvester should be considered. By doing so, all merchantable and a large amount of unmerchantable timber will be removed. The soils will be less disturbed, also.

Prescribed burning is a very useful tool in the promotion of forage. Each stand will have to be looked at to determine the type of fire needed. However, late winter burns are best for forage production. Burning should begin when the trees are ten to twelve feet tall and a burning program of every two to three years should be established during the rotation. In large sawtimber stands, summer burns may be used to estimate understory hardwood brush. Prescribed burning should not be conducted at least four to six weeks prior to grazing.

Integrating timber management and cattle grazing can be accomplished through proper planning. Cattle grazing may or may not fit into every landowner's forest operation. However, where practical, the landowner should consider integrating the two.

TABLE I

Stand size class	Livestock Forage Production	
	Forage production range Pounds/acre, air dry	
Open-seedling and sapling stage	2,600 to 3,000	
Saplings up to 6-inch diameter breast height	1,400 to 2,600	
Poles and very young sawtimber	650 to 1,400	
Sawtimber	650 to 1,500	

TABLE II

Grass Production Pounds/acre, air dry	Suggested Stocking (Acres Per Cow) by Grazing Periods				
	Months				
	3	5	7	9	12
500	20	34	56	60	80
1,000	10	17	23	30	40
2,000	5	8	12	15	20
3,000	3	6	8	10	13

# LANDO

LEGISLATIVE  
ALERT

## NATIONAL



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

**B**UDGETS AND DEFICIT REDUCTION remain the center of Congress' attention in the Second Session of the 99th Congress. Anticipating a lengthy struggle to enact a budget for Fiscal Year 1987 and to keep the Federal Government's budget within the limits

imposed by the Gramm-Rudman-Hollings Act (officially known as the "Balanced Budget and Emergency Deficit Control Act of 1985"), Congress began the budget process earlier than usual.

The President's proposed budget was

submitted in early February calling for reductions in many domestic programs, including those which provide cooperative funds to the states to carry out assistance programs for private lands and for controlling forest fires, insects and diseases. The Presi-



## H.R. 3838 — Forest Products Industry Viewpoint

**T**HE FOREST PRODUCTS INDUSTRY is an interdependent network of thousands of small and large businesses from the largest paper and pulp mills to lumber or sawmills and even individual forest landowners. H.R. 3838 currently under consideration at the federal level would not only impact this industry, but private nonindustrial landowners as well.

Specifically, the legislation would have an impact in the following areas:

- Replacement of the Accelerated Cost Recovery System with a less favorable depreciation schedule
- Removal of the Investment Tax Credit
- Required capitalization of timber management expenses, taxes, and interest
- Elimination of all corporate capital gains and, separately, capital gains treatment for corporate timber
- Increases in the minimum tax rate for individual capital gains including timber
- Restrictions in foreign tax credits
- Increased burdens of the alternate minimum tax
- Removal of reforestation incentives

There are more than 200 sawmills and 16 paper and pulp mills scattered across Alabama. More than 50,000 people are employed in this state as a result of the forest industry. The annual payroll figures top out at more than \$841 million. This legislation could have a significant impact on the industry and the state's economy. Higher taxes paid by the industry would threaten the survival of some companies and expansion of others. Higher costs would be passed on to related industries who depend on wood products and general public consumers.

Also, if taxes on timber capital gains rise by 10% for individuals and 30% for corporations, the sustained yield for forestry will decline. Add to this the loss of the deduction for forest management costs, and the after-tax cost of planting and managing forests will rise for large growers by 100% and for small growers by 50%. Because H.R. 3838 requires companies to capitalize costs unrelated to timber growing, an adverse effect will be created: the capitalized cost basis of timber at harvest would actually exceed the sale price by at least two to three times! No

other industry is required to capitalize such business costs.

Current law treats timber like all business assets by allowing woodland owners to deduct annually the costs of fire protection, interest, property taxes, and insect and disease control. Since 1944, landowners have been able to pay capital gains tax on the proceeds of their 25-50 year investment, a measure which has clearly served the public's interest. Before 1944, the growing stock in our nation's forests had been declining at 7 billion cubic feet per year. Since 1944, the volume has been increasing, helping to meet the growing demands for wood products and forest recreation.

The capital cost recovery provisions approved in 1981 enabled paper and timber manufacturers to increase investments in new facilities, thus assuring woodland owners of a steady market for their timber.

H.B. 3838 jeopardizes industry, timberland owners, those employed in the industry and the consumer. Your voiced opinion could make a difference.



# WINNERS

dent's budget also calls for no funds for the Forestry Incentives Program for Fiscal Year 1987. The Congressional hearing process is underway and should be completed in late spring. At that point, negotiations will begin between the House, Senate and the Administration to agree upon the final amounts to be appropriated for the fiscal year beginning October 1, 1986.

Enactment of the 1985 Farm Bill, the "Food Security Act of 1985"—which has been under debate and discussion for several years—initiates perhaps the most significant Federal conservation program to be enacted in many years. The Conservation Reserve Program, Title XII of the Act, permits farmers to retire erodible croplands by placing them in a permanent vegetative cover. Trees are one such vegetative cover, and the reforestation program could result in 4 million acres being planted nationwide, with much of the effort expected to occur in the South. Cost-share and annual rental payments are the main features of this program. The instructions for the program have already been completed and are in place in the

counties, and is expected to get underway in March for the 1986 planting season.

The 1987 program should be initiated in the summer. The new conservation program of the Act also contains the so-called "sodbuster" and "swampbuster" provisions prohibiting farmers who begin tilling croplands and wetlands subject to erosion from receiving USDA farm program payments. The Act also includes a program allowing farmers holding delinquent loans from the Farmers Home Administration to reamortize those loans by planting trees on their lands and using the proceeds from the harvest of those trees to pay off the loan. Initiation of this program is not as certain as the conservation reserve program.

Another legislative issue of high interest to forest landowners is the reform of the Federal tax laws. The House of Representatives has passed a bill, *H.R. 3838*, that would make major changes in tax benefits that now accrue when growing or harvesting timber. In general, expenses from the management of timber, including taxes and interest, would have to be capitalized instead of deducted

annually as is now the case. Exceptions to this would be allowed for small timber producers. Capital gains treatment for the proceeds from the sale of timber is retained for individuals but repealed for corporations except in limited cases. This repeal would be phased in over 3 years. The investment tax credit applying to \$10,000 per year of reforestation expenses would be repealed and replaced with a 5-year straight line deduction of these expenses. On the plus side is the provision reducing tax rates for individuals and corporations. The Senate Finance Committee has begun work on this House-passed bill. Disagreements with the bill have already been made known, thus changes can be expected. It is not certain that the Senate will complete action on this tax reform in 1986. Much depends on Congress' ability to resolve the very difficult budget questions which it must face. Action on other pending and new legislation will be determined in large part by action on the budget. ♣

## STATE



by FRANK SEGO, Legislative Liaison, Alabama Forestry Commission

**T**HE FAMILIAR SHOUTS OF "Mister Speaker" and "Mr. President" are gone from the hallowed halls of the 135 year-old Alabama State Capitol. The historic rotunda separating the two houses of the State Legislature is strangely silent as the footsteps of legislators, their constituents, and lobbyists are heard no more.

It's 1986. A new era has dawned. The Alabama Legislature has left the scene where generations of lawmakers etched their names and their decisions on the history books of this state and nation.

To avoid a pun, the legislators have departed the southern marble halls, where a *Confederate* president once took the oath of office,

and crossed North *Union* Street to pitch camp in plush new quarters once occupied by the State Highway Department.

This 1986 Legislature now languishes on the top four floors of a building that has been renovated so elegantly to house all legislative offices and several state agencies. Some critics, and even lawmakers themselves, refer

to the lavishly furnished State House as Alabama's "Taj Mahal" because of the ultra modern decor and certain amenities that are provided in the structure.

It is estimated that more than \$19 million will be spent before final touches are applied to the newly renovated building. For the first time in Alabama history, legislators now have their own offices.

House member's offices are located on the fifth and sixth floors. Operators are available to take messages for members of the House. The senators occupy offices on the seventh floor. Upper chamber members have their own secretaries.

The House floor is located on the fifth floor, while the Senate conducts business on the seventh floor. Visitors may view deliberations of the House from a glass paneled vantage point on the sixth floor. The Senate can be seen in action from a similar setting that can be reached only by stairs from the seventh floor.

Each chamber is adorned with marble imported from Italy. Lawmakers cast their votes from custom built desks and lecterns built by Alabama prison inmates. The vote total board in the House chamber is equipped with an electronic message display and timer clock.

The number of committee rooms has increased from 6 to 14. This makes for easier scheduling and allows lawmakers more time to consider proposals before they reach the floor for vote. One joint committee room is large enough to accommodate almost 100 spectators. Equipment is available to videotape meetings with a large portable screen where visual effects can be shown.

Senate chambers are equipped with inter-communication devices for solons to establish contact with their secretaries. Senators no longer have to leave the chamber to receive or place phone calls.

Each of the 105 House members have microphones at their chamber desks enabling them to address their colleagues without going to the lectern at the front of the chamber. Speaker Tom Drake now has the ability to turn off a member's microphone if that member exceeds the time limit or attempts to speak out of turn.

The 35 senators have access to a computer screen and two TV screens where Senate actions are posted and the text of legislation can be displayed. There are four microphones in the Senate chamber where Lt. Governor Bill Baxley presides.

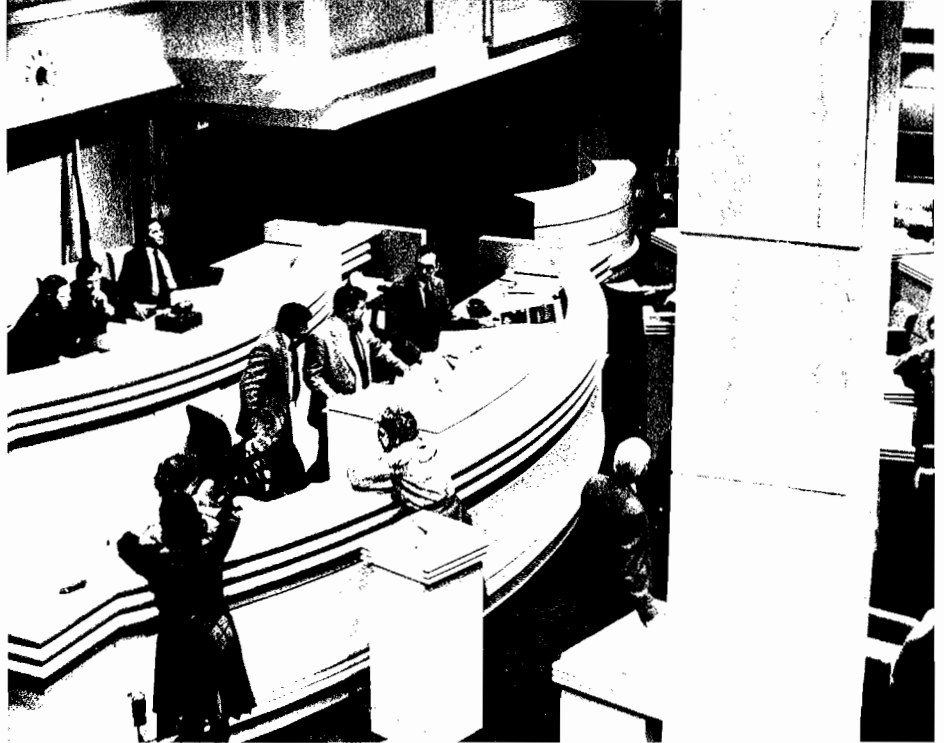
Public access to the legislators is not the same as it was in the Capitol where one could stand in the rotunda and catch a word with senators or representatives as they moved from one chamber to another. To buttonhole a House member, one has to

position himself in the foyer on the fifth floor. Accessibility to senators must be made in similar fashion on the seventh floor. The floor of each chamber is closed to the public 30 minutes prior to the opening of each daily session.

Although the State House was originally scheduled as a temporary meeting place for the legislature during the planned two year restoration of the Capitol, most everyone

feels that the lawmakers' new home will never be abandoned. One trip to the Union Street edifice and you'll understand why.

Landowners desiring to contact their legislators while they are in session may do so by writing the Alabama State House, 11 North Union Street, Montgomery, AL 36130. A representative can be contacted by telephone at 261-7600. Senators may be located by telephoning 261-7800.



Senate Chamber



House Chamber

# ANNOSUS ROOT ROT A NUISANCE IN ALABAMA

by BOB KUCERA and GEORGE W. RYAN

**A**NNOSUS ROOT ROT (ARR) is one of the most destructive diseases of pines in Alabama. The Alabama Forestry Commission (AFC) reported 97 cases of ARR between 1980 and 1984. Stands up to 400 acres have been clearcut to control the disease. ARR kills trees in thinned, high-hazard stands (Bradford *et al.* 1978b). Not only are the growth rates of infected trees less than that of healthy trees (Alexander *et al.* 1975, Froelich *et al.* 1977, Bradford *et al.* 1978a, Alexander *et al.* 1981), but southern pines infected with ARR are more susceptible to attack from southern pine beetles (*Dendroctonus frontalis*) (Zimm.) (Alexander *et al.* 1980).

Seventeen (46%) of 37 thinned, southern pine stands surveyed had mortality from annosus root rot (ARR), caused by *Heterobasidion (Fomes) annosum (Fomes annosus)*. The high incidence of mortality and statewide timber projected loss of \$17,485,600 (\$4,371,400 annual) have caused the Alabama Forestry Commission (AFC) to declare the disease to be epidemic. Information is presented for hazard-rating stands and for evaluating forest management practices to prevent the disease.

Trees become infected when wind-blown spores germinate on fresh-cut stumps following thinning or other selective harvest methods. Wounded surface roots may also be infected by spores that have penetrated the soil. The fungus colonizes the stump and root systems and progresses to adjacent trees through root contacts.

Losses can be reduced by applying known silvicultural management practices (Ross 1969, Ross 1972, Kuhlman *et al.* 1976, Froelich *et al.* 1977, Kucera 1985). Management techniques for controlling ARR are often not employed because economic information needed to justify these techniques has been unavailable. Therefore, we conducted a survey to quantify the statewide incidence and economic loss caused by ARR



**These trees have fallen victim to annosus foot rot.**

mortality. Our data proved to be within 10% of the correct range 68% of the time. We also tested the effectiveness of a soil hazard-rating method used to predict ARR losses.

## Methods

Twenty-three counties in Alabama were

randomly chosen, without replacement (i.e., no county is selected more than once), with probability of selection proportional to the percentage of the statewide total softwood volume (Beltz 1975, Cochran 1977). Within those counties, 37 randomly selected stands were sampled, using a strip cruise of 5% of each stand. The species,

**TABLE I.** Species, number, and area of selected stands

<i>Pine Species</i>	<i># of Stands</i>	<i>Acres</i>
Loblolly ( <i>Pinus taeda</i> )	22	596
Loblolly/Shortleaf ( <i>P. echinata</i> )	7	230
Slash ( <i>P. elliottii</i> )	5	92
Loblolly/Slash	2	64
Loblolly/Virginia ( <i>P. virginiana</i> )	1	70

number, and cumulative area of the sampled stands are displayed in **TABLE I**. A combined ratio estimator (Cochran 1977) was used to compute per acre estimates. The data collected were (1) volume of live trees and volume dead from ARR, (2) annosus soil hazard rating, and (3) years since thinning.

Detailed survey instructions (Kucera 1982) were provided to the survey crews composed of AFC county and district personnel. Classroom and field training for ARR diagnosis and soil hazard rating had previously been provided. Also, many field personnel had been involved in diagnosis and evaluation of specific ARR problems in their working area.

Volume data was obtained by tallying live and dead trees by 2-inch diameter classes, and either pulpwood or sawtimber product classes. Trees were identified as dead-from-ARR when some combination of signs or symptoms of the disease were present. For field purposes, the only useful sign is the conk of the causal fungus (visible fruiting body of the tree fungus), *H. annosum*. Symptoms include groups or rows of dead trees; crowns with thin, yellowish, short, tufted needles; windthrown trees with stringy, white decayed roots; and resin-soaked roots (Alexander and Anderson 1982). If a symptomatic tree still had green needles it was tallied as "live." Dead trees were tallied if they were standing in the strip or if they had fallen but partially remained in the strip. Mortality other than that attributed to ARR was not tallied.

Annosus soil hazard rating was determined by examining soil texture and evidence of mottling (spotted, discoloration caused by poor drainage) in the top 12 inches of soil. The soil was sampled by either using 12 inch soil probes, digging, or examining otherwise exposed soil. Soils rated as high-hazard soils had well-drained, deep (equal to or greater than 12 inches), sandy topsoil. All other soils were rated as low hazard soils.

The number of years since thinning was recorded when known, or otherwise estimated by observing growth-ring patterns and stump deterioration.

Volume data was applied to statewide acreage estimates of thinned stands and an estimate of the economic loss was made using average stumpage values. The average number of years since thinning was then used to estimate the average annual economic loss. The percentage of all stands sampled having ARR-caused mortality provided the estimated incidence. The effectiveness of the described method of hazard rating was evaluated by determining if the low hazard stands had average losses less than the cost of prevention, and if the high hazard stands had average losses greater than the cost of prevention.

## Results

The largest coefficient of variation (ratio of standard error to mean) in the sample of all stands is 33%, and 75% in a subset of the 17 stands which had mortality caused by ARR. In practical terms, this means the survey results have at least a 2 to 1 chance of being correct within 10% of the actual statewide values we are estimating.

The summary of volume results is presented in **TABLE II**. The amount of live wood is presented as information but was not analyzed. Individual stand results ranged from zero (20 stands) to 380 cubic feet per acre of ARR-caused-mortality.

The average loss to ARR-caused mortality in all stands, including the 20 with zero loss, was 0.357 cords of pulpwood and 81 board feet of sawtimber per acre. A special analysis by John Kelly, Alabama Forestry Commission, of the USDA Forest Service's Southern Forest Experiment Station indicates that there are 934,734 acres of thinned stands of the tree species listed in **TABLE I**, in Alabama. By applying the estimated losses per acre at current statewide average stumpage prices (Timber Mart - South, 1985) of \$145/MBF (thousand board feet) and \$19.50/cord to these 934,734 acres, the statewide economic loss was estimated to be \$17,485,600. The average time since

thinning in these stands is 4 years, indicating that the statewide average annual loss is \$4,371,400.

Seventeen (46%) of the 37 stands sampled contained ARR-caused mortality. The statewide incidence of thinned stands with ARR-caused-mortality is therefore, estimated at 46%. The average time since thinning in these stands was 5.6 years. The average per acre loss in stands with mortality was 0.733 cords of pulpwood and 166 board feet of sawtimber.

Twenty stands were rated as low hazard and six (30%) of these were infected. These infected, low-hazard stands averaged 0.720 cords/acre of pulp wood and 81 board feet/acre of sawtimber lost; a value of \$25.78/acre.

## Discussion

### Hazard Rating

Hazard rating is a method of predicting the likelihood of infection within a particular stand, and whether the prevention is worth the cost. Our method did not adequately predict hazard because the value of ARR-killed timber in 30% of the "low-hazard" stands could have been prevented for less than the cost of the loss.

### Improved Hazard Rating

Soil hazard rating for ARR is based on the degree of moisture stress. Drier sites represent higher hazards than do other sites. A better method of hazard rating would be to supplement the use of soil textures, depth, and mottling content with the use of the soil series drainage classifications provided by the USDA Soil Conservation Service. After determining that a site is low hazard by soil texture, depth, and mottling, the forester should also determine the drainage classification of the soil series. Soils that are drained excessively, or somewhat excessively, as well as those that are well-drained should

**TABLE II.** Volume of live and dead-from-ARR wood by hazard class

<i>All Stands N=37</i>	<i>Mean</i>	<i>Low Hazard</i>	<i>High Hazard</i>
Dead pulpwood - cords/acre <sup>1</sup>	0.357 (0.090)*	0.254 (0.078)	0.463 (0.175)
Dead sawtimber - MBF/acre <sup>2</sup>	0.081 (0.027)	0.028 (0.014)	0.134 (0.049)
Live pulpwood - cords/acre <sup>1</sup>	6.756 (1.109)	7.758 (2.234)	5.720 (1.039)
Live sawtimber - MBF/acre <sup>2</sup>	2.846 (0.422)	2.553 (0.558)	3.150 (0.691)
<i>Stands with Mortality N=17</i>			
Dead pulpwood - cords/acre <sup>1</sup>	0.733 (0.370)	0.720 (0.458)	0.740 (0.572)
Dead sawtimber - MBF/acre <sup>2</sup>	0.166 (0.124)	0.081 (0.089)	0.215 (0.177)
Live pulpwood - cords/acre <sup>1</sup>	5.022 (1.736)	5.723 (3.399)	4.609 (2.424)
Live sawtimber - MBF/acre <sup>2</sup>	3.269 (1.423)	2.450 (1.921)	3.746 (1.957)

<sup>1</sup> Merchantable rough cord

<sup>2</sup> Scribner log rule

\* The standard error is in parentheses.



A stringy appearance of the wood indicates annosus root rot.

be rated as high hazard. This process will identify droughty sites that could not be identified by surface soil texture, depth, and mottling content.

Another source of error in hazard-rating could arise by giving only one rating per stand. Stands with mixed high- and low-hazard soils may be incorrectly rated for that proportion of the stand which is not the basis of the rating. This problem may be avoided by either dividing stands according to soil-hazard types or by ensuring that stands with mixed soil-hazard types are rated as high hazard.

## Prevention

The results of this survey in Alabama indicate that ARR is a major factor to consider when thinning southern pine stands in Alabama. In making the recommendation to thin, a forester projects costs, revenues, and growth and subjects them to an economic analysis. Foresters should also determine the soil hazard-rating for ARR, project losses, and compare them with projected costs of prevention as part of the economic analysis.

The following example shows how this information may be applied in forest management. A forester has determined that a stand of loblolly pine should be thinned. The soil series is *Troup*, an excessively-drained, high-ARR-hazard soil. The forester wants to determine the amount of money that would be profitable to invest in ARR prevention. Local stumpage prices are \$145/MBF (Scribner) for sawtimber and \$19.50/cord for pulpwood. The alternative rate of return used to discount future values

is 15%. TABLE II shows that the average mortality on high hazard sites 4 years after thinning is 0.463 cords/acre of pulpwood and 0.134 MBF of sawtimber. With the stumpage prices and discount rate given, the present value of this volume of wood 4 years in the future is \$16.27. Under these conditions, it would be worthwhile to prevent ARR at costs up to \$16.27 per acre. Further benefits would be the avoidance of decreased growth rates of the residual stand and the avoidance of increased southern pine beetle susceptibility.

## Incidence and Impact

Because of the estimated number of pines killed by ARR in 46% of the thinned stands in Alabama and the current loss to mortality of over \$17,485,600, the AFC has declared the disease to be an epidemic. All future pine management practices by the AFC will necessarily consider prevention and control of ARR.

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# MANAGING NATURAL STANDS

by L. KEVILLE LARSON, Larson McGowin, Inc., Mobile, Alabama

**F**OR THE PAST TWO DECADES southern forestry has been preoccupied with pine plantations. Much of the literature gives the impression that trees can't be grown unless they are planted. In fact, forestry's success is often judged by how many acres have been planted. Numerous models have been developed to justify heavy capital outlays for site preparation and planting. Extensive advertising has been designed to convince owners to plant trees. Yet 75-80 per cent of the pine types are *natural stands* and most will stay that way!

In his paper, "Forests in the Long Sweep of History," Marion Clawson noted, "The capacity of natural forest lands to regenerate timber stands and the capacity of timber to grow, even in the absence of man's help and often in spite of his wishes, tend to be overlooked or ignored." There is little recognition of the fact that natural forests deserve the credit for the remarkable increase of southern timber over the past 40-50 years. The fact that managing those natural forests can be an excellent investment is likewise underestimated.

Most of the forestland in the South is held by private nonindustrial landowners who have variety of needs and objectives. For many owners and situations, managing the stand they have, even when understocked, is a perfect strategy, and planting should be used only as a last resort. **TABLE I** illustrates the economic advantage of letting a grossly understocked pine stand grow for 20 years. The "let grow" alternative preserved income opportunity at all times and exposed the owner to less risk of loss!

## What Is Natural Stand Management

Natural stand management is anything between no management and artificial regeneration. It includes all the major forest management systems and is frequently not the application of one system to a single tract. It includes uneven-aged management, all-aged management, and even-aged management. The planting and growing of successive crops of pine trees is frequently likened to agriculture. In contrast, managing natural stands is classical silviculture, "*Controlling the establishment, composition, constitution and growth of forests.*" This is the challenge for

foresters who want a chance to show their skill and judgement in manipulating the natural forest to obtain certain objectives.

Anyone can clearcut when the computer says to do it. It takes skill, nerve, faith and guts to depend on natural regeneration. Unusual perception and silvicultural understanding are required both by the decision making managers and the men in the woods. Managing natural stands is the intensive silviculture of treating each acre as it should be treated. It is not intensive management as the term is applied to plantation forestry, which really means capital intensive forestry and extensive silviculture. Managing natural stands is generally low cost, intensive silviculture.

## How Do You Manage Natural Stands?

The best management of natural stands may vary. You must be creative and know your silviculture. There is no one system. The basic aim is to keep your acres as stocked as possible, protect your reproduction and small trees, and cut less than growth until the optimum volume is reached. Professor David M. Smith of Yale recently discussed the fact there is no universally best silvicultural solution. He said, "Every system yet to be devised or to be invented has a place somewhere," and none are stylized routines because, "Each

logical system should be a free form solution designed to fit the circumstances." He believes the best silvicultural systems will be created by observant, analytical foresters on the ground, and will be formulated first and named afterwards.

I like to describe managing natural stands as selective management, because one must *select* the right methods, tools, treatments, and timing. There are three critical areas in selective management of southern pines—*hardwood control, harvesting, and natural regeneration.*

A commercial timber sale is the simplest hardwood control, but other methods such as fire, chemical, mechanical, and grazing provide a variety of options.

The second critical area, harvesting, involves many choices concerning the frequency, the intensity, type of equipment, timing of the operation, and products to be harvested. The basic choice for natural regeneration is between seed tree, shelterwood, clear cut or selection system, but timing methods and coordination with other activities involve many choices. This is, of course, nothing new and the experience and ideas of others such as Ernst Brender, Russ Reynolds, Ham Williston, Bob Farrar, Jim Baker, Roger Dennington and others is well documented and frequently shows average annual sawtimber growth of 400 feet Doyle per acre (**TABLE II**).

## Natural Stand Management Will Increase

There are a number of reasons more attention will be given to managing natural stands—some advantages and disadvantages. Most of the easy acres have been planted and the easy plantation converts capable of large capital outlays have been made. There is less concern over timber supply. In fact, to some there is concern about *over* supply. This could indicate advantages for the quality timber and low cost production associated with natural stands.

There is concern over the poor quality of plantation wood for lumber and pulp, site deterioration and long range plantation productivity. There is more concern over cost. There is less certainty about inflation and appreciation while return on investment

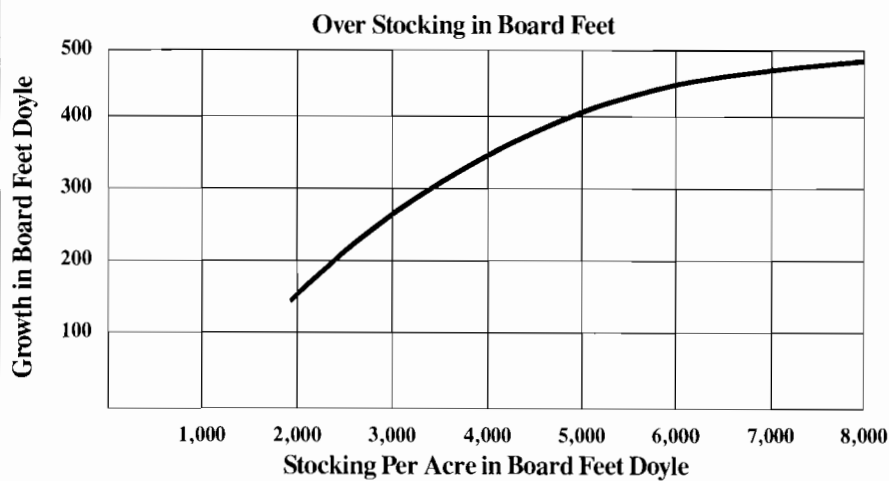
**TABLE I**  
**ALTERNATIVES FOR AN UNDERSTOCKED PINE SAWTIMBER STAND**  
**MERCHANTABLE VALUE/ACRE**

Year	Clearcut & Plant	Let Grow
NOW	\$198	\$198
10	-0-	\$427
15	\$300	\$628
20	\$600	\$923

### Assumptions:

Stocking	= 1,100 ft. Doyle
(22 trees 10-12" D.B.H.)	
Sawtimber Price	= \$180 Doyle
Pulpwood Price	= \$20 Cord
Sawtimber Growth	= 8%

**TABLE II Board Feet (Doyle) Growth Per Acre/Year (Ingrowth Incl.)**



is being scrutinized closer. Changing utilization and improved tools have created new opportunities for managing stands. More importantly, some economists believe it is not in the best interest of the country for large amounts of capital to be diverted from high to low rates of return and immobilized for long periods of time.

There are a number of silvicultural reasons that natural stand management makes sense. It is easier to work *with* than *against* nature. Understocked stands will grow to full stocking. Advanced growth can be preserved. A mix of species uses nutrients and soil effectively and can grow more volume. Uneven-aged stands make more efficient use of soil and space. The increasing market for hardwood and lower pine prices in some areas suggest letting hardwood grow until it can be sold, instead of spending money to eradicate it.

A listing of common sense advantages for managing natural stands include the following:

- Less capital investment
- Low front end investment
- Better spread of capital investment
- Quicker returns from invested capital
- Better income flow
- Higher value growth
- Better quality growth
- More flexible management
- More liquidity and income opportunity
- Better occupation and use of site
- More aesthetic appeal
- Less disease and insect problem
- Greater wildlife diversity

A listing of the major disadvantages of managing natural stands include these points:

- Is underrated and undersold
- Requires silvicultural understanding
- Requires more time
- Requires more planning
- Allows less spacing control

- Allows less genetic improvement
- Requires more demanding management

The greatest deterrent to managing our existing forests may be economists, not because they have proven it an inferior practice, but because they have ignored it and concentrated on creating and studying only pine plantation models. There are virtually no studies and models to analyze the returns from managing natural stands. Researchers and economists have taken the easy way and we have mislead ourselves into thinking it's the only way. Certainly the information needed to analyze the returns from a natural stand is complex. There are few yield tables or studies to predict such things as the effect of thinning on natural stands. However, we can't pretend the option is not there, and in the meantime we must use common sense to compare the alternatives of natural stands and plantations.

Of course, if common sense prevailed, West Coast foresters never would have bid \$400 per thousand when timber was selling for \$200. They depended on economic projection which was obviously dangerous. Any financial analysis we make has the same risk.

There are at least five or ten very basic assumptions necessary for making a projection of return from timber growing. These include interest rate, discount rate, prices, cost, products, survival, and growth. Every assumption is applied to each year of the 30 to 40 years in a rotation. This means literally hundreds of assumptions are made, not one of which is better than the estimate of the new year's interest rate.

Sometimes the assumption is made that without investment the land would grow nothing. This, of course, is very wrong. Most of the timber harvested in the past 50 years grew with little or no management on cut-over land. A landowner faced today

with a cut-over and understocked tract might have the extreme choices of doing nothing or spending \$200 per acre for site preparation and planting. If he spends the \$200, he might grow \$30 worth of pine pulpwood (1 1/2 cords at \$20 per cord), which according to some would produce a return of about 10%. If he did nothing and let nature take its course the land might conservatively be expected to grow about \$15 per acre (1/2 cord pine at \$20, 1/2 cord hardwood at \$10). Therefore for his \$200 expenditure he could only grow an extra \$15 per acre per year and would be better off putting the \$200 in a higher yielding investment with less risk or cost. My simplified illustration assumes no management of the natural stand. A skillful and knowledgeable forester could certainly increase those returns at very low cost.

Frequently existing stocking presents an excellent economic opportunity and using our common sense and knowledge of silviculture to manage natural stands may be the best investment in forestry.

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# SOUTHERN PINE BEETLE ALERT!



by JIM HYLAND, Chief, Forest Pest Management

.....ALABAMA HAS BEEN PLACED UNDER A SOUTHERN PINE BEETLE ALERT.....ALL COUNTIES IN THE STATE FALL WITHIN THE ALERT AREA..... SEVERE DAMAGE HAS BEEN REPORTED IN TEXAS AND LOUISIANA AND EXPERTS BELIEVE THAT ALABAMA MAY EXPERIENCE SIMILAR DESTRUCTION BY LATE SPRING OR EARLY FALL, 1986.....FOREST LANDOWNERS IN THE STATE ARE ADVISED TO TAKE PRECAUTIONARY MEASURES IMMEDIATELY TO REDUCE THE LIKELIHOOD OF EXTENSIVE DAMAGE ON THEIR PROPERTY....

This may sound pretty ridiculous, but the situation is, in fact, just *THAT* serious. Texas alone has suffered losses totalling \$51 million. Pulpwood in Louisiana has reportedly dropped to \$2.50 a cord because of the surplus of salvaged timber. Let's not let the same thing happen in Alabama! Measures can be taken to prevent major destruction.

Forty-eight counties in Alabama have shown evidence of an active pine beetle population. Of these, 26 counties have reached the epidemic stage. On October 1, more than 1500 spots with about 50 trees to a spot were reported statewide. No doubt

about it, *THE BEETLES ARE HERE!* With predictions calling for above average temperatures for this winter, their eggs will not be destroyed and spring can mean a new movement.

What can landowners do to reduce losses? *Cut those beetle spots now!* For each spot removed now, the landowner can prevent the formation of 10 new spots this spring. Landowners who cut spots now while the infestation is low will find a more favorable market situation. If they wait until late spring or summer when everyone is going to be flooding the market with beetle timber, prices

will drop and we'll be faced with the same problems as Texas and Louisiana.

Alabama Forestry Commission personnel have been flying counties and pinpointing southern pine beetle damage. Landowners who have infestation are contacted immediately and advised of the situation. Information is also provided as to the steps which should be taken.

If you have questions about the southern pine beetle, contact your local office of the Alabama Forestry Commission. ♣





# GROWING POLES and PILING

**G**ROWING POLES AND PILING in the South can be profitable to the forest landowner. During the last several years, nearly four million southern pine poles and about 20 million linear feet of southern pine piling have been purchased annually by treating plants. This represents more than 80 percent of the poles and piling treated in the United States.

Southern pine is preferred over all other species for utility pole use for the following reasons:

1. *Supply* - Southern pine has a south-wide range.
2. *Economical Harvest* - It usually occurs in dense, pure stands and is readily accessible to transportation.
3. *Year-Round Harvesting*.
4. *Strength/Weight Ratio* - It's one of the strongest of all conifers.
5. *Form* - It's reasonably straight and has a good average taper (approximately 0.12 inch per foot of length from butt to tip).
6. *Ease of Treatment* - It has a thick sap ring that is highly receptive to deep preservative treatment.

Longleaf pine is the preferred species for utility poles, but loblolly, shortleaf, and slash are acceptable. Not only does longleaf grow straighter, but a higher percentage of the trees will make poles—as many as 75 percent of the final crop in a stand that has been managed for poles.

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## Management Tips

If the timber grower wants to obtain maximum returns per acre, he should

manage for a product mix, including poles. Poles are best grown in even-aged, well-stocked stands. Dense stands will produce more lineal feet of poles than sparsely stocked forests, not only because there are more trees per acre but because more trees in dense stands will meet taper requirements. The increase in number of long poles produced will more than compensate for slower diameter growth. Two thinnings should put an average stand into shape for growing poles. When thinning, don't concentrate on proper spacing. Remove defective, crooked, and broken-topped trees from the stand. Timber markers concentrating on spacing have removed many straight co-dominants whose only fault was that they were growing next to a good dominant. Remember, too, that many trees will overcome moderate sweep.

The boles of trees on lightly stocked plots (55 square feet of basal area per acre, for example) may enlarge too rapidly for optimum pole development. Excessive diameter growth in relation to height growth leads to excessive taper. In addition, as taper increases, the stumpage price per thousand board feet decreases because additional volume is given for the same price. Rapid diameter growth shortens the time required to produce long poles but widely spaced trees must be inspected often so that they can be harvested before they grow too large for poles. The higher the basal area, the more trees you will have per acre, as well as more pole trees per acre.

The rate of growth and number of knots greater than a half-inch in diameter must

be taken into consideration in management. Trees up to 37.5 inches in circumference (11 inches in diameter) at six feet from the butt must have more than six rings per inch in the outer two inches. For larger trees, the same rule applies but in the outer three inches (except that more poles with four and five rings per inch are acceptable if 50 percent or more summerwood is present). The diameter of any single knot and the sum of knot diameters in any one-foot section must not exceed the limits set forth in the specifications.

Some large companies, previously committed to short rotations of 25 years, are now considering rotations of 40 years or more to take advantage of pole markets.

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## Marketing Tips

Five utility poles per acre is an *acceptable* cut—8-10 a *good* cut. Long poles are so scarce that one 80-foot pole per acre is well worth cutting.

The independent operator produces about half the poles. The rest are produced by contract crews or company crews. Treating plants will procure "white" (peeled) poles up to 300 miles away, and barky poles from a radius of 100 miles. Pole buyers like to select and cut poles first out of a stand that is going to be either partially cut or clearcut; but where this is not feasible, multiproduct tree length logging may be used.

For more information on growing poles or piling, contact the Alabama Forestry Commission, Extension Service, or a consultant forester. ♣



# DEVELOPING DOVE HABITAT

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

**D**OVE HUNTING IS A FAVORITE SPORT in Alabama! In fact, according to the Alabama Game and Fish Division, about 3.5 million of these birds are bagged annually in the state! Now that's a lot of doves by anybody's standard.

It's difficult to visualize just how many doves 3.5 million represents. An adult dove is about 12 inches long from the tip of his beak to the tip of his tail. If we laid all the doves killed in Alabama annually tail to beak, the line would be about 663 miles long, or the distance from Birmingham to Chicago!

If you're interested in getting your share of those birds, there are some things you can do to increase your chances. First, you need to understand a little about the mourning dove. Research at Auburn University shows that this little creature is almost totally a seed eater. Even the food of small nestlings is made of tiny seed mixed with "pigeon milk," a highly concentrated food produced for short periods by both parents. If you have the habitat to provide the seed source both prior to and during hunting season, you can attract more of the birds.

## Choosing the Seed

In Alabama, browntop millet is the crop most frequently planted and managed to attract doves for hunting in September, October, and early November. It's a choice food, and is adaptable to a variety of soils. However, it is best suited to well-drained soils with medium to high fertility.

Two plantings are recommended—one of about two acres in April or early May, and a larger planting somewhere nearby about ninety days before the start of hunting season. Ideally, the second planting should be either in the same field or adjoining it.



*A good food plot can often increase the doves for sport hunting.*

Seed for planting can be purchased at nearly all seed stores.

Browntop millet will reach a height of about 2-3 feet with seed maturing about 60-70 days after the plants emerge. Properly limed and fertilized millet planted in 36-inch rows will produce up to 1200 pounds of seed per acre.

The small planting in April will provide enough food for the local doves who have nested in the area and their offspring. This is extremely important because as these doves congregate in the small planting, they will attract larger numbers of doves

migrating southward in late summer and early fall. These migrators will provide for most of your shooting next fall. So, remember to plant the smaller area first!

The larger planting should occur around mid-June. Allowing 7 days for the plants to emerge, 70 days for the seed to mature, and 14 days afterward for the doves to become comfortable feeding in the field, you should be right on time for season opening on September 15! It is important that the birds be allowed the two weeks of comfortable feeding before the season opens.

## Planning the Fields

The first step is choosing the location of the field. The best site would be one that is fairly level. Since the field will require cultivation, the soil would be bare for short periods, and soil erosion could occur.

If possible, locate the plantings away from woods, cities, rivers, and large creeks. Competition from other animals in these areas, particularly starlings and blackbirds, would be discouraging to the development of a strong dove population. Doves also avoid areas where predators, such as hawks, nest. Another consideration is a heavy deer population, as they will destroy your browntop millet.

How large should the planting be? That depends on the number of shooters you expect to accommodate during the season. Plan on at least one acre per hunter, just enough to keep the birds flying but not to drive them away. So, a field for 15 hunters should have 17 acres, 2 planted in April or early May and another 15 acres planted about 90 days before the start of season.

The field should be broken or harrowed several weeks before planting. That way, the rains will settle the soil before planting. The seedbed should always be well-prepared, but firm.

## Planting and Caring for the Field

A conventional planter, like the kind used for planting corn or other row crops, is recommended for planting browntop millet. Plant 8-10 pounds of seeds per acre in rows which are 36-42 inches apart. Cover the seeds with 1 inch or less of soil.

Lime and fertilizer should be applied at the time of soil preparation according to soil test recommendations.

Weeds between the rows should be controlled. While pesticides may be used, cultivation is recommended. This may have to be done four or five times as doves usually don't scratch for their food like quail, turkey, and other game birds do. If the seed doesn't fall on bare ground where it is plainly visible, it will be of little value to the doves. Hunters also prefer fields with few weeds because the downed birds are easier to find.

## Harvesting the Doves

As we have already mentioned, a field which is heavily shot may drive the birds away. In some cases, however, the birds have been known to leave anyway. Obviously, some of the movement may be because of gun pressure, but some of it is simply normal migration. Since there is no way to be certain, some basic recommen-

dations should be considered for all fields under all conditions.

If you expect to have a *good* shoot every week for a month or more, you should consider only allowing the activity *one* time each week. Occasionally, a field will provide good shooting for several weeks with only three to four days in between. Shooting on several successive days will drive the doves away and reduce the number killed per hour of hunting during the rest of the season. Again, one hunter per acre is the standard recommendation.

Shooting should be confined to three to four hours each day with no shooting the last hour or two before sunset. This permits the birds to feed undisturbed prior to nightfall and will encourage their return to feed the next day.

Many people have concerns over the effects of sport hunting (legal shooting during hunting season) on the dove population. Careful research during the last few decades has revealed some interesting statistics on the annual mortality of these birds. A majority of each game species dies within the first year regardless of whether it is hunted. This is simply Nature's way of removing the surplus not needed to produce next year's population.

The annual mortality of the mourning dove is 70%, meaning that 7 out of every 10 doves in the fall population will die before next fall even if they are not hunted. At least 50% of the young will die within 90 days after they learn to fly. Again, whether they are hunted has no impact on

these figures. It would be virtually impossible to harvest by sport hunting more than the 70% which will die through the natural annual mortality.

Statistics show that sport hunting only accounts for about 10-15% of the mortality each year. Thus, annual mortality will then take an additional toll up to, but not exceeding, a combined total of 70%! This mortality figure will not vary. For instance, if you take as much as 50% of the doves in your fall population, mortality from all other causes will be 20% for a total of 70%. If you take only 20%, mortality from all other causes will be 50%. Even if no one takes a single bird from your population, the mortality rate will be 70%!

Wise use of the resource would indicate that your taking the birds would be more advantageous than allowing bugs, buzzards, or opossums to take them. You may hunt your doves heavily, lease hunting rights, or charge a daily fee for hunting without fear of harming your dove resource. This is especially true if you will follow the recommendations already mentioned on frequency of shooting, hours of shooting, and the number of gunners.

For more information on the mourning dove and on planting and maintaining crops to attract them, contact your local U.S.D.A. Soil Conservation Service, County Extension office, Alabama Department of Conservation Game and Fish Division, Alabama Forestry Commission, U.S. Fish and Wildlife Service, or other private consultants. ♣



**Bare ground between the rows of browntop millet makes seed easily accessible to doves.**

# YOU Ought To Be In Pictures!

**T**HE ALABAMA AGRICULTURE and Forestry Leadership Development Program (LEADERS) recently toured several countries abroad. The program, sponsored by the Kellogg Foundation, is designed to expose our state's potential leaders to agriculture and forestry issues at local, county, state, and national levels. Below are photos of some of the LEADERS participants wearing, of course, TREASURE Forest caps on their tour across China and Japan. ♣

1. Ervin Eatman, TREASURE Forest landowner from Greene County, displays his cap with pride in Nara, Japan.
2. David Gamble, Consulting Forester in Cullman, wore his cap while strolling through Inner City, China.
3. Jake Harper, TREASURE Forest landowner from Wilcox County, poses with his TREASURE Forest cap atop the Great Wall of China.
4. Even tour guide Eric Ung with Inner Pacific Tours wore the TREASURE cap! Alabama's unique program received terrific exposure!



Photos by Timothy C. Boyce, Alabama Forestry Commission.

## Governor Appoints Two New Commissioners For Forestry

**G**OVERNOR GEORGE WALLACE has named two new members to the Alabama Forestry Commission. They are Jack Hopper, of Eva, and Richard L. Porterfield, of Killen. Their five year terms were effective in November.

Hopper replaces Former House Speaker Joe C. McCorquodale, Jr., of Jackson. Porterfield succeeds William H. Stimpson, of Mobile, on the seven-member Commission. The terms of McCorquodale and Stimpson expired in November.

Hopper is a native of Cullman County. He is a prominent merchant, and owner of farm and timberland. He has served as a member of the Alabama Legislative Forestry Study Committee since 1983.

Porterfield is general manager of the Alabama Region of Champion International Corporation in Courtland. He is an Ohio native, having previously served as professor of forest economics at the University of Arkansas and Mississippi State University.

He received a masters degree in forest

economics at North Carolina State University and a doctorate in economics and forestry at Yale.

G. A. Gibbs, of Troy, is chairman of the Alabama Forestry Commission. Other members of the Commission are Homajean Grisham, Cherokee; Scott Langley, Lafayette; J. B. Neighbors, Autaugaville; and Kelly Sistrunk, Society Hill. C. W. Moody is the State Forester. ♣



Jack Hopper



Dick Porterfield

supply. Females also find few suitable areas for nesting under the canopy of a dense pine stand. To prevent this from occurring, ask your local forester about possible alternatives, such as wider spacing or using natural regeneration to reforest an area. Early thinnings and prescribed burnings have also proved helpful in reestablishing gopher numbers.

While gopher meat is a delicacy, commercial hunters often destroy entire colonies of gophers in order to supply the demand. Predation losses are crucial because of the low reproductive success rate. Populations which once could withstand human predation may not be able to do so much longer. Where it is still legal, limiting the taking of gophers should help alleviate this problem.

Urban development in Florida is also having a significant detrimental impact on gopher tortoise populations there. Similar problems can be avoided elsewhere if attention is focused on possible tortoise colony sites in proposed affected areas during the zoning and planning phases of urban expansion.

### Conclusion

While at first I was confused about what a "gopher" was, once I found out my confusion turned to concern. It appears that the species is in decline over much of its range. However, action is already underway to stop this trend. You, the landowner, can help in a number of ways:

1. Avoid harassing or taking gophers,
2. When planting, arrange rows and trees as far apart as practical and compatible with your objectives,
3. Set up a prescribed burning program, which should be done anyway for a number of other reasons,
4. Maintain a percentage of the total area in openings so as to provide burrow and nest sites,
5. Where suitable, favor longleaf pine in reforestation effects, and
6. Restrict grazing on prime gopher habitat.

For those desiring additional information about the gopher tortoise, feel free to contact me at the Alabama Forestry Commission, 513 Madison Avenue, Montgomery, Alabama 36130, telephone number (205) 261-2526.

**AUTHOR'S NOTE:** *The author wishes to thank the Game and Fish Division of the Alabama Department of Conservation and Natural Resources, the United States Forest Service, and the Gopher Tortoise Council for information used in the preparation of this article.*

# TREASURE SEEKERS • TREASURE FINDERS TREASURE KEEPERS

## TREASURE SEEKERS

Creed Signers  
(Between 9-13-85 and 12-12-85)

### SEEKERS

Rodney Dorothy Ellis (Morgan)  
Travis Smith (Etowah)  
Alton Smith (Etowah)  
H. F. White (Etowah)  
Burr Whorton (Calhoun)  
Ken Grissom (Calhoun)  
Thomas Nicholson (Cherokee)  
Austin DeBerry (Cherokee)  
Jim Bouchillon (Cherokee)  
Dr. Frederick Feist (Cherokee)  
Jim Ed Cavin (Cherokee)  
James Brothers Farm (Bibb)  
Terry Tedesco (Sumter)  
Mrs. Lon Vance (Greene)  
Joe P. Smith (Greene)  
Andrew Smith (Greene)  
Paul Crump, Jr. (Lamar)  
Craig Sizemore (Lamar)  
Mrs. B. G. Farris (Fayette/Walker)  
James Rotenstreich (Coosa)  
W. S. Phillips (Coosa)  
Doris Neeham (Clay)  
Joel Neighbors (Coosa)  
Rob Hendrickson (Coosa)  
William Chandler (Clay)  
Gerald Halpin (Clay)  
Kermit Brown, Jr. (Wilcox)

Richmond Burdette (Chilton)  
Mary Douglass Foreman (Crenshaw)  
Edwin Pate (Conecuh)  
James Sanders (Crenshaw)  
Bob McCreary (Conecuh)  
James Griffin (Geneva)  
Gerald Sutton (Barbour)  
Fletcher Jones (Barbour)  
C. E. Guice (Barbour)  
Jack Carpenter (Barbour)  
William Guice (Barbour)  
Grady Nunnelee (Pike)  
Joseph Griffin (Pike)  
Jerry Vinson (Pike)  
Dempsey Barefield (Dale)  
MTI Corporation (Marion)  
Gary Ward (Marion)  
Girl Scouts of North Alabama  
(Lauderdale/Marshall)  
Royce Mann (Marion)  
Joel Hiser (Marion)  
Bill Cooper (Lee)  
William Trussell, III (Lee)  
R. M. Harrington (Montgomery/Wilcox)  
Lindsay Mothershed (Elmore)  
Steve Estes (Elmore)

## TREASURE FINDERS

Certified TREASURE Forest Landowners  
(12-12-85)

FINDERS	OBJECTIVES	ACRES
Steve Tondera	1-Timber 2-Wildlife	234
Kenneth Neal	1-Timber 2-Wildlife	57
Gene Deal	1-Timber 2-Wildlife	312
Cecil Colson	1-Timber 2-Wildlife	360
Joe Smith	1-Timber 2-Wildlife	435
David Hall	1-Timber 2-Wildlife	810
Leonard Blanton	1-Timber 2-Recreation	750
Sherling Lake Park	1-Recreation 2-Timber	277
James Alexander	1-Timber 2-Wildlife	480
Charles Floyd	1-Timber 2-Wildlife	4,130
Mr. Mrs. Cecil Prescott	1-Recreation 2-Timber	48
The Holcomb Family	1-Wildlife 2-Timber	80

## TREASURE KEEPERS

Re-certified TREASURE Forest Landowners  
(12-12-85)

Harris Gordon	#81
Jerry Loftin	#89
David Miller	#91
Luther Rice	#92
Thomas Bradford	#94
J. R. Crosby	#96
Dr. Carl Booth	#97
Smith Newspaper	#98
F. D. Miller	#99
James Lancaster	#100
Robert Upchurch	#101
Charles Atkinson, Jr.	#103
Lillie Parker	#104
Broox Garrett	#105
W. J. (Jack) Huey	#109
Frank Carroll	#117

# The Gopher Tortoise

by DAVID A. HOGE, Wildlife Coordinator

WHEN I FIRST HEARD of “gophers” in Alabama, I immediately believed it to be some member of the rodent family. Boy, was I wrong! What the people were talking about was the gopher tortoise (*Gopherus polyphemus*), actually a land turtle belonging to the reptile family which also includes snakes, frogs, and the like.

## Distribution

While three species of tortoise are native to the United States, only the “gopher” is found in our Southeastern region. It inhabits portions of Alabama, Florida, Georgia, Louisiana, Mississippi, and South Carolina. In Alabama the gopher tortoise is listed as a game animal with no open season, a listing similar to that of the black bear, mountain lion, and alligator. While the gopher tortoise can be found in relatively healthy numbers in parts of Alabama, its declining population elsewhere in its historical range has prompted many scientists and herpetologists (those who study reptiles) to consider it a species of special concern. Some have even proposed to the federal government that the gopher tortoise be listed as “endangered” in portions of its range.

## Description

The gopher tortoise looks like a large box turtle 8-10 inches long, but it can reach a maximum length of 16 inches, with elephant-like hind feet completely without webs. The top of the gopher tortoise’s head is notably scaled and its front toenails are large and flattened. The shell is brown and the soft parts yellowish-brown in young, darkening to almost black in adults.

## Habitat

Gophers live in dry, sandy, habitats such as longleaf pine and scrub oak savannas, sand pine scrub, and wiregrass flatwoods. The greatest population densities are normally found in sandhill or longleaf pine-turkey oak associations. Tortoises can also live in some man-made environments such as pastures or roadsides. Suitable habitat requires well-drained sandy soils for digging burrows, sufficient low plant

growth for food, and open, sunny areas for nesting. Historically, gophers were found where fire was a common element of the ecosystem since fire promotes herbaceous growth and inhibits woody species.

## Habits

Gopher tortoises feed on low-growing plants that need abundant sunlight to grow well. Essentially, it is a grazing animal preferring broadleaf grasses and legumes, but also eating forbs, sedges, and fruits when in season.

The gopher tortoise’s entire life revolves around its burrow. It seldom ventures far from it unless moving to a new site. Adult gophers can excavate burrows 5 to 13 feet deep and up to 30 feet long. The burrow provides haven from danger and protects the tortoise from temperature extremes. A

the mouth of the burrow. The eggs hatch in September. The adults provide no parental care. Many of the offspring are lost to predation. Although one clutch of eggs is laid annually, an average of only one clutch per decade is successful.

## Reasons for Decline

Exclusion of burning from much of the gopher tortoise’s range has reduced gopher habitat quality. Scrub oaks, brush and thick leaf litter build up in the absence of fire. Mature herbaceous plants are fibrous and low in nutrition. Many historical gopher sites have been cleared for agriculture. Plantation forest management excludes gophers from many areas if density of stocking eliminates preferred foraging and nesting sites. Commercial overharvesting and human activities such as tortoise races



*A twelve-year-old gopher tortoise. Photo provided by Thagard Calvin, Alabama Department of Conservation and Natural Resources.*

number of other species also use the burrows for protection, hibernation, and nesting. These include the threatened eastern indigo snake and Florida gopher frog.

Gophers can live as long as 40 years. However, growth is slow, dependent on length of growing season and food supply. It also takes the tortoise a long time to mature. In Alabama, gopher tortoises begin breeding at around 20 years of age. Mating takes place in April, May, and June. The female lays as many as 15 eggs, usually at

have also been shown to have a dramatic impact on gopher tortoise populations.

## Recommendations

While many forestry practices are beneficial to gopher tortoises, such as periodic prescribed burns, others, such as planting at too close a spacing as to form a dense pine monoculture, are not as helpful. In such cases, insufficient sunlight reaches the forest floor allowing few grasses to grow, thus limiting the gophers’ food

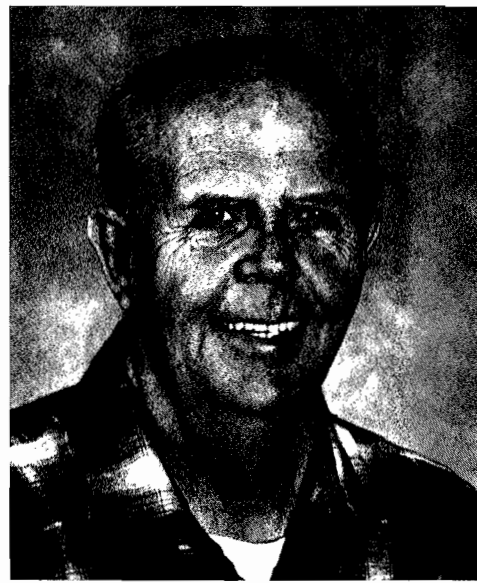
# MEMORIAL

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The Alabama Forestry Commission is deeply saddened by the deaths of two individuals who played significant roles in forestry in Alabama.



Harris M. Gordon, Shelby County TREASURE Forest landowner, died February 1, 1986. He was committed to good stewardship of his forestland and believed that every acre should provide multiple benefits, a philosophy which was taught to his children and friends. Because of this one person, many others now feel the extreme importance of an attitude which he lived by daily.



Herb Holeman, Motor Pool Dispatcher for the Alabama Forestry Commission, died February 20, 1986. His smile often brightened dark and meaningless moments for all of those whom he encountered. He believed that whatever he did should be done with a helpful and unselfish attitude, a credit to his strong belief in Christian values.

Our condolences are extended to the families of both of these men. May this page stand as a lasting tribute to each one's accomplishments and influence on our lives.

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*photo by Robert A. Tyrrell  
Ruby-throated Hummingbird*

#### INTERESTED IN HUMMINGBIRDS?

Robert and Esther Tyrrell have authored a book entitled *Hummingbirds: Their Life and Behavior*. This book is a photographic study of the North American species. Published in 1985 by Crown Publishers, New York, New York, the book sells for \$35.



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