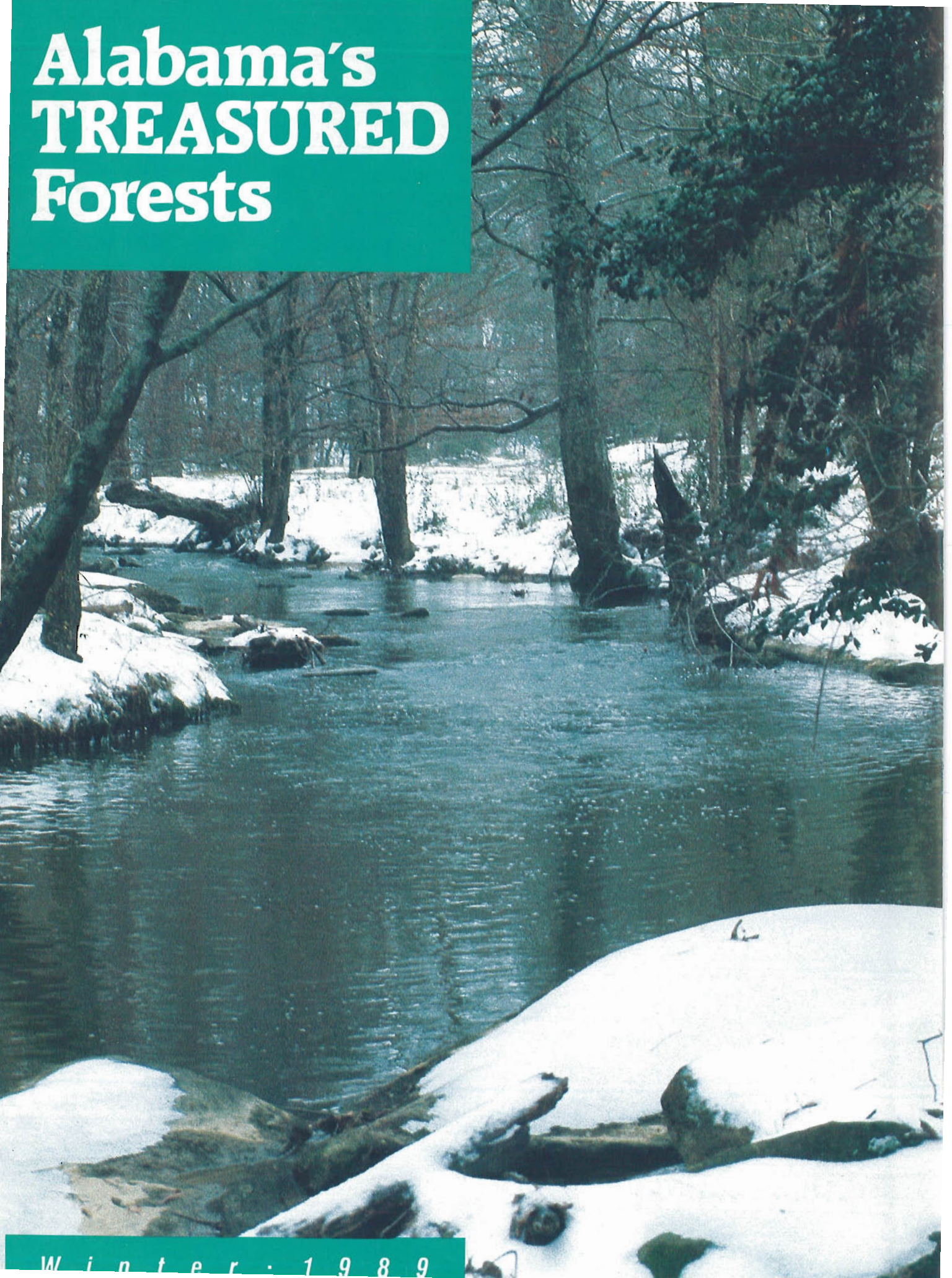


Alabama's TREASURED Forests



Winter: 1989

STATE FORESTER'S MESSAGE

by C.W. MOODY



About a year ago Governor Hunt led a delegation to the Far East, and I was privileged to be a member of this group. We visited Japan, Taiwan, and Korea. The purpose of the trip was to attend meetings on trade and commerce in those countries along with governors and their representatives from six other Southeastern states. It was a very interesting trip, and we were particularly well received in Taiwan, Republic of China. Since that time Taiwan has sent a trade delegation consisting of about 25 furniture manufacturers to Alabama to look at our forests and furniture industry.

I have just returned from another visit to Taiwan led by the Alabama Development Office. We were accompanied by some of Alabama's own furniture manufacturers who were interested in looking at the furniture industry of Taiwan. We explored opportunities for joint ventures, as well as our furniture makers seeking new markets for their products. We found that the forests of Taiwan are almost depleted. Making furniture is one of their major industries and they are running out of raw materials for it. Amazingly, they are having a problem with labor shortages. There is also a surplus of U.S. dollars in Taiwan because they sell us more goods than they buy from us.

All these things in combination make this a situation which can be very beneficial to Alabama. I believe that in the not to distant future some of those furniture manufacturers will be back in Alabama to find specific joint venture partners and build factories here.

This Taiwan-Alabama connection will be good for many reasons. Using Taiwan technology, marketing experience, and capital, along with Alabama forest products, labor, and market access to the United States, we can help both sides.

This is one of the efforts in which we are aggressively seeking secondary manufacturing of forest products in cooperation with the Alabama Development Office, International Trade Center, Auburn University, and others. This is of interest to TREASURE Forest owners because it can ultimately increase demand for timber. It is significant to all Alabamians because the effort will provide more jobs before products leave our state.

TREASURE Forest owner Dan James has been serving for some time as Forest Regeneration Chairman for the Alabama Soil and Water Conservation Districts. He is doing a great job, again proving that TREASURE Forest owners are good citizens who are willing to serve their fellow man.

Sincerely,

A handwritten signature in cursive script that reads "C.W. Moody". The signature is written in dark ink and is positioned above the printed name and title.

C.W. Moody
State Forester

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

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Cover Photo: Most Alabamians witnessed scenes like this in January 1988 when a snowstorm blanketed forests and fields for days. This beautiful photograph of Mud Creek in Cullman County was taken by Coleen Vansant.

Alabama's TREASURED Forests

Volume VIII

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CONTENTS

A Home—an Occupation—a TREASURE 5
By CYNTHIA K. PAGE, Editor-in-Chief

Alabama Resource Information at Your Fingertips 7
By STEVE NIX, Resource Analyst, Alabama Forestry Commission

**Permanent Firelanes
More Than a Break from Fire** 8
By DAVID A. HOGE, Productivity Forester

**Timber Producers Suffering Drought Loss Eligible for
Federal Assistance** 10
By DAVID A. HOGE, Productivity Forester

Southern Pine Beetle Battle Continues 12
By JAMES R. HYLAND, Chief, Forest Management

What About Pond Management? 14
By JOHN W. JENSEN, Fisheries Specialist, Alabama Cooperative Extension Service,
Auburn University

Landowners Legislative Alert
NATIONAL—By MELINDA COHEN, Legislative Liaison,
National Association of State Foresters 16
STATE—By FRANK SEGO, Legislative Liaison, Alabama Forestry Comm. 17

White-Tailed Deer Management and the Spike-Antlered Buck 18
By DR. M. KEITH CAUSEY, Department of Zoology and Wildlife Science and Alabama
Agricultural Experiment Station, Auburn University

Finding Help May Be Easier Than You Think 19
By DAN JAMES, TREASURE Forest Landowner

Modern Timber Bridges—an Attractive Option 25
By JIM GOBER, Utilization Specialist

Soil Conservation 27

Set Your Sites on the Best Results 28
By DAVID A. HOGE, Productivity Forester

Drought and Forest Productivity 31
By DAVID A. HOGE, Productivity Forester

DEPARTMENTS

Editor's Understory 6

In Memorium 10

Activities 20

Calendar 22

Planning Guide 24

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Dorsey Taylor's Land Has Been His Life

A Home — An Occupation A TREASURE

by CYNTHIA K. PAGE, Editor-in-Chief

Some TREASURES you help to *make* and then others you just happen to *find*,” remarked Marion County Supervisor Tony Avery as we turned into Dorsey Taylor’s drive. In the background towered some of the prettiest pines you could ever hope to see. “He (Taylor) had already done most of the work, and all we (Marion County Forestry Planning Committee) had to do was inspect it and turn in a nomination.”

A Home

Dorsey Taylor was raised on 160 acres that’s split by County Road 25 in Marion County. His parents had been raised here, too, just a little piece down the road. One could say he’s spent his whole life in one spot, something that wouldn’t excite most folks. But Taylor got excited, especially after he and his wife Lois purchased the property—160 acres—just four years after they married.

About that time, in the mid 1930’s, the country had just come out of a severe depression. Neither Taylor nor his wife had ever finished high school, but they were strong believers in the “great American dream.” As it turned out, that dream—owning land—is exactly what kept their family on top.

Taylor sold part of the property to his brother Garvis who also still lives nearby. He and Lois raised their family of eight sons and a daughter on the same homeplace that his parents had raised him and their parents before had raised them!

An Occupation

It was the *best* of times; it was the *worst* of times, as money was not plentiful. The young couple had a large family and with another war and subsequent depression, Taylor found that he could make more money sawmilling (1942-1957) than he could farming.

“I cut the place two or three times while I was sawmilling,” Taylor recalled. “Fortunately, I got good stocking naturally in both hardwoods and pines. Looking back, I don’t believe I’d ever clear-cut anymore. What I’d rather do is mark it and cut out the culls so that

I’d have high quality timber.”

Lois recalled that her husband was just a “natural born manager.” “He worked for 75 cents a day and with his sawmilling saw an opportunity to make considerably more.”

Taylor explained with some satisfaction how he made a living. “I would buy land with timber on it. Then, with my own sawmill, it was easy to cut the timber. Sometimes I’d get enough out of the timber to pay for the land with some left over! Then, I’d turn around and sell the land again!”

For 18 years, Taylor’s own land was growing a new crop of trees while he worked at the 3-M plant. Shortly after the plant went on strike, he built a store across the road from his house and ran it for another 15 years!

A TREASURE

Stretching behind the 6-acre home site sprawls a 26-acre loblolly pine plantation. “After we quit farming so intensively, I decided to plant some trees,” said Taylor. “I had sericea planted already to hold down on the erosion, and then I



A portable sawmill provided extra income for the Taylors.

planted corn. Afterward, I planted the pine throughout that. For a long time I kept between the pine bushhogged. This not only kept them from being choked out, but it also reduced the fire hazard and kept wildlife food closer to the ground.”

Another 44 acres has a pine-oak stocking. Hardwoods are favored on natural hardwood sites. Also, dogwoods have been left scattered all over the property for aesthetics.

Wildlife is abundant on the property because of Taylor’s timber management strategy. His primary interest is rabbits, but deer, squirrels, and quail are cohabitants.

“I used to love to hunt rabbits,” Taylor grinned. “All you’d have to do is turn out the beagles and it wouldn’t be long before the rabbits would be running and hopping everywhere! Never did eat ’em, though; I’d just give ’em away!”

When asked about the deer, he laughed, “The only deer I ever killed was while I was rabbit hunting! I never did like to just sit; I liked to move around!”

There’s also a two-and-a-half acre fish pond about a half-mile behind the house. “I had the pond built in 1951. It’s got bream and bass. We let folks fish in it on an honor system. Most folks are pretty good.”

Water quality in the streams and in the pond is excellent. Taylor has *always* left buffer zones when he cut.

Looking over the property, it’s hard to believe that the first plan was written just eleven years ago. Everything just seems to belong right where it is. “I’m impressed with it,” said Taylor. “It’s given me and my family a great deal of pleasure and a good living. My dream is that I can live to make it even better and to continue to enjoy it.” ♣

Dorsey Taylor died on October 25 at the age of 77. Although he is no longer with us, it can be assured that his land will continue to flourish and others will enjoy the fruits of his labor. It is hoped that this story will serve as a lasting tribute to him.

EDITOR'S UNDERSTORY

by CYNTHIA K. PAGE, Editor-in-Chief



Dorsey and Lois Taylor

Fifty-five years is better than half a century. During that time, there have been two world wars, two depressions, numerous other wars and recessions! Through it all, an unyielding couple with limited formal schooling—Dorsey and Lois Taylor—fought obstacles and emerged with as strong a devotion to each other as two people could possibly share.

I grew up hearing an old expression, “Love goes out the door when hard times come through the window.” Come they did, too, for Dorsey and Lois. Instead of considering them as obstacles, though,

they simply became opportunities. Hand in hand they made a good life together and gave their nine children, 17 grandchildren and five great grandchildren a heritage of which to be proud.

Both grew up in a time when a man’s word was how he was measured—a time when a work ethic was much more than an eight-hour-a-day sit-down job. It was a time when a marriage meant “...to honor and to cherish...in sickness and in health, till death do us part.”

I watched Dorsey Taylor, carefully studying his character as he raised up on the sofa. Pride would not let him stay down. He had been ill for several months, but continued to speak with as much interest and enthusiasm as the first time I met him five years ago.

I studied Lois, too, as she cast concerned glances toward her husband. “I don’t know anybody in Marion County who has as many friends as Dorsey Taylor,” she fondly shared with us. “Why, as many as ten or twelve people come by here everyday.”

I almost felt like I was stealing a part of their life as I walked the property without them. I stood in the field Dorsey Taylor planted. I looked around at the modest brick house that faced the road on one side and a little country store labeled “TAYLOR” which faced it on the opposite side. Peach trees, apple trees, and grape vines were all around the back. Limbs on the fruit trees had given way and broken under the weight of the prolific crop. Still some apples were clinging like waterdrops about to fall.

Watermelons lay burst open in the fields. I wondered how many people had ever eaten fruit off those trees, tasted the grapes, or pushed their faces into water-

melons grown by Dorsey and Lois Taylor.

How many people have been at their house and marveled at a special relationship. At least nine children, seventeen grandchildren, and five great-grandchildren have!

I ate an apple from the Taylor tree. ♣



Alabama Resource Information at Your Fingertips

by STEVE NIX, Resource Analyst, Alabama Forestry Commission

Alabama is experiencing what the recent Fourth Forest Study terms a "restructuring" of her forested resource. Very simply, we are treading closely to something foresters call a volume drain on both softwood and hardwood growing stock. This drain phenomenon, however, is regional in scope and the study's prognosis is that our state will increase overall growth rates by 60 percent between now and 2030.

Holding at Number One

New value-added figures (the difference between associated product costs and retail value) for 1987 show that forestry is Alabama's number one industry and contributed \$2.4 billion to the state's economy last year. Obviously, any change in a resource supporting 16 percent of all manufacturing jobs in Alabama should be followed closely. A healthy concern must be voiced when any situation adversely affects forest productivity.

The question is, do we know how our resource is faring? Do we have effective methods to determine resource availability? My answers respectively are yes and yes—in the form of the Alabama Forest Inventory Survey. This inventory survey is a major tool to be used as resource managers grapple with these and other tough issues.

Old Methods Improved

The Forest Inventory and Analysis Research Unit of the Southern Forest Experiment Station, USDA Forest Service (SO-FIA) has maintained a data bank on Alabama's forested resource since the late 1940's. An evolutionary snowball built on experience continues to roll and numerous improvements to the system and its access have been made during the first five surveys. It is felt, leading into the sixth survey, that sampling methods have attained a new precision.

Sophisticated regression equations, increased number of sample points, field data recorders, improved removal in-

formation, interactive computer access, and a myriad of other improvements present the next survey as the best yet.

I am most excited, however, by the access given to state, industry, and private foresters through INGRES—a relational database management system—on SO-FIA's Digital Equipment Corporation VAX computer. The system can be utilized by any interested party at a nominal charge which includes a short seminar covering the system's use. More information can be obtained through the data request coordinator, Southern Forest Experiment Station or by contacting the Alabama Forestry Commission office in Montgomery.

EZTAB and INGRES

Any authorized user of this Midsouth forest resource data, called an operator, has immediate and very powerful command over state of the art forest resource statistical retrieval. Components of the system include EZTAB, a user friendly program that provides user choice of standard format tables for geographical areas selected and a county-level database which provides detailed forest resource information using the INGRES database management system.

EZTAB allows access to over 40 SO-FIA table formats requiring a minimum of computer proficiency. The latitude/longitude defined format allows for specific "customized" retrievals in circles or polygons around any area of concern. These custom reports include data on forest area, volumes, growth, removals and mortality. Only formats selected by the user are produced, avoiding the retrieval of superfluous data.

INGRES allows for more detailed, county-level information on forest area, inventory growth, removals and mortality. It is a query language used to make retrievals from the database that EZTAB tables might not access completely. The downside to all of this is still the need for timely numbers. We are working with the 1982 survey using eight-year-old information.

The Sixth Survey

The Alabama Forestry Commission is preparing to assist the U.S. Forest Service with the 1990 Alabama Forest Inventory Survey. These long awaited numbers will be available to resource managers through an announced 6.5 year survey cycle—reduced from eight years as needs have increased and the survey technology has speeded up the process.

We have never needed numbers more. And we have never been as prepared to utilize them as we now are.

Dan Bertelson, Project Leader, USFS, Southern Experiment Station in Starkville, Mississippi, announced that the 1988 Tennessee project is well underway and approximately 20 crews will be available to move into Alabama in May of 1989. It is anticipated that the project will be initiated in Southwest Alabama and the entire state completed by October of 1990. Obviously, the more crews working at any given time means an earlier completion date.

The survey boundaries and plots will be much like they were during the 1982 survey. Looking at the map of Alabama, Unit 4 and Unit 6 (units defined by the USFS Survey) will be target kickoff areas. Notice the number of plots associated with each county. Vance Few, USFS Field Chief, says that it will take each two-man crew approximately one day to complete an individual plot. His work is cut out for him.

With this announcement we are requesting assistance from landowners who might host survey plots, industry who may be asked for crew members to assist USFS crew leaders and other agencies who might assist and provide support. Anyone interested may contact me at (205) 240-9361.

We enthusiastically await new numbers that will define the strengths and weaknesses of our fine Alabama forested resource. It will give us a sound kick into the 90's and will most likely bring some surprises. ♣

A photograph of a forest with a clear firelane path cutting through dense vegetation and trees. The path is a narrow, cleared strip of land, likely used for fire management. The surrounding forest is lush with green foliage, including tall trees and dense undergrowth. The lighting suggests a bright, sunny day, with sunlight filtering through the canopy.

Permanent Firelanes More Than a Break from Fire

by DAVID A. HOGE, Productivity Forester

Numerous articles have appeared in previous issues of this magazine extolling the virtues of fire in pine timber management. A properly conducted prescribed burn serves several purposes, some of which are the following:

- Understory hardwood control
- Fire hazard reduction
- Seedbed preparation
- Wildlife habitat enhancement
- Open access and improved visibility

Normally, prior to engaging in a prescribed burning activity, a plowed firebreak is established around the area to be burned. These firebreaks are usually made by a plow unit being pulled by a small bulldozer or similar type equipment. Firebreaks created like this are narrow, being only about two feet in width and temporary in nature. Leaves and other debris will fall into the break and in a short period of time the firebreak is no longer useful.

Many landowners, to avoid the aggravation of having to replot firebreaks every two or three years, and for greater assurance against possible wildfire occurrence, are establishing permanent firelanes. Firelanes differ from firebreaks in that they are wider, longer lasting and more functional. Generally firelanes are of sufficient width (10-12 ft.) to allow passage of farm equipment and the like. Periodic maintenance ensures that the firelane will last a number of years. In addition to the role played in fire suppression, firelanes can improve aesthetics, recreational opportunities and wildlife habitat.

Firelane Specifications

Permanent firelanes should be cleared to the mineral soil. Trees, not harvested or otherwise utilized, and other material impeding access, need to be removed or pushed aside. A tractor of D-4 size or larger equipped with a straight blade should be used. Firelanes constructed should be at least ten feet in width.

Efforts should be made to avoid having the lanes run against the contour of the land wherever possible. Where this is not possible, a diversion such as a water bar must be used to slow water movement across the ground surface. It is essential for any lane running against the contour to have adequate ground cover to prevent erosion. These areas should be checked frequently to ensure erosion is not occurring.

As a suitable fall and winter cover

practice, cleared firelanes should be seeded with Pensacola bahai grass at a rate of 40 pounds to the acre and ryegrass at a rate of 45 pounds per acre. The normal planting season for this combination is November 15 through February 1. The seeded area should be limed at a rate of 2 tons per acre and mulched at a rate of 1.5 tons per acre. The seeded area should also be fertilized at a rate of 800 pounds of 13-13-13 per acre.



For spring and summer planting, cleared firelanes should be seeded with Pensacola bahai grass at the rate of 40 pounds to the acre and common Bermuda grass at the rate of 8 pounds per acre. The normal planting season for this combination is March 15 through June 30. Liming, mulching and fertilizing rates for spring and summer planting are similar to fall and winter planting.

Other Considerations

Landowners wishing to improve aesthetic qualities of their land and wildlife habitat may get somewhat fancy and establish native or exotic grasses, weeds and herbs. Once introduced to an area, many species need only periodic burning or disking to reestablish themselves. Examples of grasses, weeds, or herbs which may be established in firelanes to benefit aesthetics and wildlife include beggarweed, milkpea, partridge pea,

cowpeas, vetches, chufa, and the various clovers. The Extension Service publication entitled *Wildlife Planting and Practices* is a valuable reference containing seeding rates and planting dates. Remember though, several species require sufficient sunlight for development. Contact a professional wildlife biologist or botanist to determine the species selection best suited for your situation. Also, it will frequently be necessary to have a

soil test done. Additional liming and fertilizing may be necessary to establish ground cover desired. Cultivation for reestablishment purposes may also be necessary. The fancier you get with your firelanes, the costlier it will be.

A number of landowners across the state are installing permanent firelanes in order to protect and enhance their treasured forests. Some help is available to landowners in the form of cost-share assistance through the Alabama Resource Conservation Program. Cost to construct permanent firelanes will average about \$210 per mile.

Permanent firelanes are functional. In addition to protecting against wildfire damage, firelanes can also be developed and maintained so as to improve aesthetic qualities and wildlife habitat.

For additional information concerning permanent firebreaks, please contact your local county office of the Alabama Forestry Commission. ♣

Timber Producers Suffering Drought Loss Eligible for Federal Assistance

by DAVID A. HOGE, Productivity Forester

It is common knowledge to Alabama timber producers that spring droughts have been a frequent occurrence the last few years. These droughts, immediately following the completion of planting season, have had an impact on forest tree seedling survival. A recently conducted telephone survey revealed that seedling survival rates for one year old pine plantations on non-industrial private land ownerships average about 70-75 percent statewide. Forest industry is reporting seedling survival rates 10 to 15 percentage points higher. Overall, the reported survival rates are higher than expected and a welcomed surprise. However, there are local areas and several individual producers that did experience significant drought loss.

As a relief to drought stricken farmers nationwide, President Reagan signed into law the Disaster Assistance Act of 1988 on August 11, 1988. In addition to its other provisions, Title II of the Act (*Public Law 100-387*) authorized the Tree Assistance Program (TAP) to help commercial tree producers who have suffered a loss in fruit, nut, Christmas, timber, wood and syrup seedlings. Under the TAP, the Commodity Credit Corporation will reimburse eligible producers for the cost of replanting tree seedlings planted in 1987 or 1988 which were lost

due to drought in 1988. Seedlings include cuttings, grafts, nursery stock and direct seedings. Three practices are eligible under TAP:

- TAP 1, Drought Relief—Wood/Timber Seedling Reestablishment
- TAP 2, Drought Relief—Christmas Tree Seedling Reestablishment
- TAP 3, Drought Relief—Fruit, Nut, and Miscellaneous Seedling Reestablishment

Cost sharing is intended to assist small to medium sized producers, defined as owners of at least one but not more than 1,000 acres of planted commercial trees and having less than \$2 million in annual qualifying gross revenue.

TAP payments will cover 65 percent of the cost of replanting that portion of the seedling loss which after adjustment for normal mortality exceeds 35 percent. For Alabama, normal mortality has been set at 10 percent. Therefore, to be eligible for TAP, mortality must exceed 45 percent and cost share assistance is limited to 65 percent of the reestablishment costs of the seedling loss in excess of 45 percent mortality. Maximum payment to any individual producer is limited to \$25,000.

Seedlings established under the Conservation Reserve Program are *ineligible* for this program. Seedlings established under the Forestry Incentives Program, Agricultural Conservation Program and other Federal and State cost-share assistance programs are *eligible* for TAP. Producers are encouraged to reapply drought-affected areas under respective programs from which they received previous cost-share assistance. Only producers not reaccepted into other programs or those which had previously planted without benefit of cost-share assistance should consider TAP as a suitable alternative.

Implementation of the TAP is the responsibility of the United States Department of Agriculture—Agriculture Stabilization and Conservation Service (ASCS). Technical forestry advice and assistance will be given to Alabama ASCS committees by the Alabama Forestry Commission. Sign-ups for the TAP are currently in progress at county ASCS offices through June 30, 1989. All TAP practices must be completed by June 30, 1990.

Producers believing they qualify or desiring additional information concerning TAP are urged to contact the local county office of the ASCS or the Alabama Forestry Commission. ♣

In Memorium

Cleveland Burdette, Chilton County TREASURE Forest landowner, passed away November 5 at the age of 55. Cleveland was the father of Don Burdette, who works for the Alabama Forestry Commission in District 9. He is shown here receiving his TREASURE Forest sign from Tim Albritton, Chilton County ranger, and Tom Lang, management specialist in District 5.



Prescribed Burning—What Can You Expect?

by MELISA V. HIMEL, Registered Forester

Prescribed burning has been lauded as one of the cheapest and most effective means available for site preparation and fuel reduction in the forest. There has scarcely been a forest management plan written that has not included prescribed fire as a management tool somewhere: for seedbed preparation before natural regeneration of pine, as additional site preparation following mechanical or herbicide site work, or for fuel reduction or pre-harvest site preparation under older pine stands. The list can go on. Burning is scheduled every three to five years on some properties. Yet few first time users of prescribed fire know what costs or results to expect when they hire a forester to burn on their property. What can you expect?

First, expect to pay for what you get. Estimates of prescribed burning costs are sometimes seen listed as \$3-\$5 per acre. Unless you get below cost or subsidized fees, expect to pay considerably more. Plowing firelanes alone can easily amount to \$3 per acre on a 100-acre tract with irregular boundaries. A 1985 survey by *Forest Farmer* magazine listed burning prices averaging from \$3-\$12 per acre. The top end figures are closer to what you can expect to be charged by a competent prescribed burner.

There are risks inherent to burning that you need to reduce as much as possible by hiring a forester who is:

- experienced in burning
- insured for burning
- using a tractor-plow unit to stand-by while your fire is burning.

A landowner will always have some degree of liability, but the additional \$2-\$4 per acre you may have to pay for experience, insurance, and a tractor stand-by unit is worth the reduction in risk.

Also expect to pay a higher price per acre for your burn if you have a small tract (under 20 acres), irregular firelanes, or other special circumstances. Some costs of burning are fixed and remain the same when either a 10-acre or a 150-acre tract is being burned. With the smaller tract, these fixed costs are spread out over less acres, so that the basic burn cost per acre starts out higher than with a larger tract.

Tractors used in plowing firelanes must be paid for by each hour of use. The more miles of fire lane you want plowed, the higher your per acre burn cost will be. Irregular exterior fire lanes and special interior lanes around food plots, houses, ponds, etc. increase your total per acre cost of burning. Remember, expect to pay for what you get.

There are two basic types of prescribed burning: 1) burning of open land, and 2) burning under a stand of desirable trees. Open land consists of clearcuts, pastures, chopped or herbicide areas, and windrows. In a prescribed burn, everything in the open area will be burned as completely as possible. When burning open land, expect the forester to choose a day when a hot fire can be maintained, yet controlled. Some days in the spring or summer may be good. Often these burns are done in the fall when it is cool, yet dry. Expect the forester to light the fire on the exterior boundaries and also to light fire in interior areas that do not get burned from the fires lit on the outside. Do not expect every acre of chopped, herbicide, or clearcut area to be thoroughly burned. Do expect the fire to be set in a grid pattern so that each one half to one acre has had a fire set in it.

When burning under desirable trees, a forester must use more caution than when burning open land. The prescribed fire must get hot enough to spread out and burn the undesirable vegetation, yet not destroy the desirable overstory trees. Expect the burn to be done on a cool or cold, breezy winter day. Sometimes these fires are done in the spring in order to kill more young hardwoods, but if done in the spring, expect more damage to your desirable overstory trees.

Expect mainly backfiring to be used when burning under trees. The lower flames and more controlled movement of a backfire assist the forester in protecting the desirable trees. Even so, do not be surprised to see some scorching of desirable trees in limited areas. Black marks on the trunks and browning of the lower limbs of pine trees may sometimes be observed. If a fire is hot enough to spread and burn the understory, its heat will occasionally build up enough to

scorch overstory trees. This is especially true when thinned stands with piled logging debris are burned. Piles of burning treetops and limbs radiate a tremendous amount of heat.

Expect a good job, but do not expect a miracle. Select a forester you can trust, and then trust that forester to do his professional best. Fire is a natural phenomenon. Man can study fire and predict what should happen during a prescribed burn. But like predicting the weather, man's predictions concerning fire can never be totally accurate. Fire behavior is highly dependent on that fickle factor called weather. Burning is therefore said to be an "art" as much as a science. Few perfect burning days exist in a season. Expect your forester to select a good day to burn, but remember that getting a fire hot enough to burn and spread, and then keeping it from burning too hot or spreading too fast, is a delicate balance.

Last, expect smoke. Whenever a fire is lit, there will be smoke to manage. Your forester should make every effort to predict wind patterns and stagnation indexes, so that smoke will not be an overwhelming problem. Help him by letting him know about sensitive areas and/or neighbors who may be bothered by the affects of smoke.

One reminder—it is a requirement in Alabama to obtain a burn permit before a prescribed burn takes place. To obtain a permit, call the Alabama Forestry Commission. The number can be found on the inside cover of your telephone book.

Drop a note or telephone all adjoining landowners telling them to expect a burn on your property in the near future. Some of them may ask to be notified on the day of the burn, too. This notification process is the law in some states. It is a courteous thing to do regardless of the law.

Prescribed burning cannot perform miracles, but it can be an inexpensive, effective management tool. When you hire someone to burn on your property, know what to expect and you will be better prepared to enjoy the positive aspects of prescribed fire. ♣

Southern Pine Beetle Battle Continues

by James R. Hyland,
Chief, Forest Management

As of October 1, 1988, there were 51 counties with Southern Pine Beetle infestations. Forty-one of these are epidemic with 10 endemic. The number of spots and infested trees has increased dramatically during the summer months. The heaviest hit counties are in a band across central Alabama and up the west border to the Tennessee line (see map).

Aerial Data

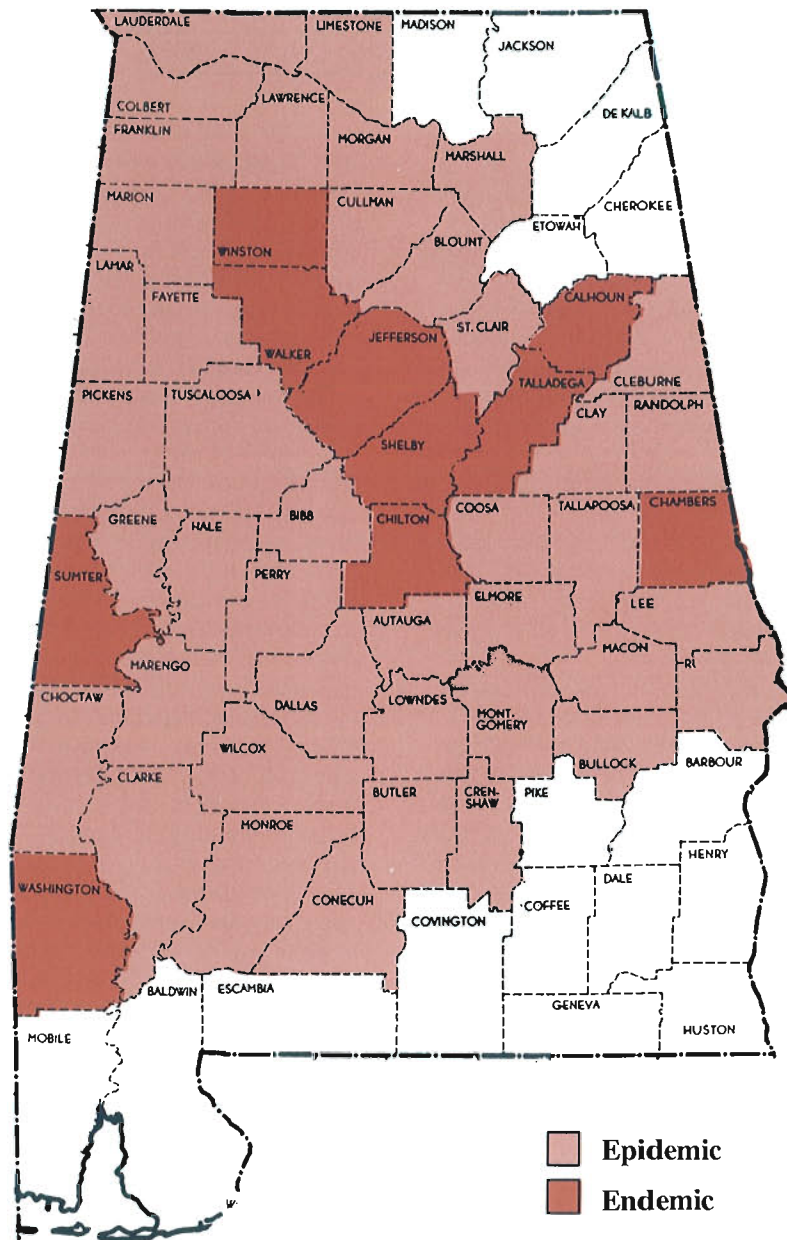
The statewide data in August was as follows: 44 counties flown, 34 epidemic, 10 endemic, 4547 spots, 160,228 trees, 35.2 trees/spot, 103 spots/county, and 13.61 trees/m. acres host.

The statewide data in September was as follows: 35 counties flown, 28 epidemic, 8 endemic, 3301 spots, 162,371 trees, 49.2 trees/spot, 94 spots/county, and 17.68 trees/m. acres host (see charts pages 13 and 14).

Salvage Effort

Even with the lower demand for pine from past years, the salvage effort was excellent. ♣

Southern Pine Beetle Air Data September 1988



Salvage Control Efforts—Jan.-Sept. 1988

District	Cords	MBF	Man-Days	Air Hours
1	-0-	-0-	85	37.6
2	5,715	250	159	83.3
3	7,548	20	241	127.7
4	8,751	-0-	177	110.7
5	9,326	538	268	68.0
6	-0-	-0-	25	9.0
7	-0-	-0-	405	36.3
8	4,586	148	72	53.8
9	14,898	369	335	107.3
10	4,299	-0-	359	135.3
TOTAL	55,123	1325	2125	769.4

SPB Air Data—August, 1988

Dist.	County	Host Acres	#Spots	#Trees	Trees /Spot	Trees /M Ac.	Dist.	County	Host Acres	#Spots	#Trees	Trees /Spot	Trees /M Ac.
1	Calhoun	254.5	45	390	8.7	1.53	7	Butler	351.1	13	190	14.6	0.54
	Marshall	180.0	51	620	12.2	3.44		Conecuh	382.6	12	600	50.0	1.57
		434.5	96	1010	10.5	3.32		Covington	395.6	6	140	23.3	0.35
2	Blount	168.8	25	995	39.8	5.89		Crenshaw	207.5	65	1440	22.2	6.94
	Cullman	229.4	143	5465	38.2	23.82		Monroe	434.8	89	2395	26.9	5.51
	Shelby	380.4	18	235	13.1	0.62		1771.6	185	4765	25.8	2.68	
	St. Clair	281.3	20	490	24.5	1.74	8	Choctaw	430.8	41	1460	35.6	3.39
	Walker	371.4	30	1040	34.7	2.80		Clarke	571.4	32	1145	35.8	2.00
Winston	315.1	6	105	17.5	0.33		1002.2	73	2605	35.68	2.59		
	1746.4	242	8330	34.4	4.76	9	Franklin	249.3	189	7090	37.5	28.44	
3	Hale	178.9	40	1625	40.6		9.08	Lauderdale	82.1	57	1485	26.1	18.09
	Lamar	227.2	160	12805	80.0		56.36	Lawrence	130.1	130	2330	17.9	17.91
	Pickens	395.4	48	4060	84.6		10.27	Limestone	23.3	23	500	21.7	21.46
	Fayette	273.5	147	5635	38.3		20.60	Morgan	124.0	114	2065	18.1	16.65
	Greene	139.8	24	585	24.4	4.18		608.8	513	13470	26.2	22.12	
Sumter	301.2	22	386	17.5	1.28								
	1516.0	441	25096	56.9	16.55	10	Montgomery	145.8	124	3720	30.0	25.51	
4	Chambers	268.1	8	55	6.9		0.21	Bullock	232.7	30	605	20.2	2.60
	Clay	314.6	74	2020	27.3		6.42	Elmore	239.3	407	26448	65.0	110.52
	Cleburne	315.6	140	4250	30.4		13.47	Macon	180.3	212	6993	33.0	38.79
	Coosa	343.7	200	12300	61.5		35.79	Russell	260.4	224	7898	35.3	30.33
	Randolph	271.2	89	3815	42.9		14.07	Lowndes	203.0	355	7718	21.7	38.02
	Talladega	263.3	32	370	11.6		1.41	Lee	175.1	193	4258	22.1	24.32
	Tallapoosa	370.5	92	2920	31.7	7.88		1436.6	1545	57640	37.3	40.12	
	2147.0	635	25730	40.5	11.98		11770.9	4547	160228	35.2	13.61		
5	Bibb	321.3	68	980	14.4	3.05							
	Dallas	247.0	409	8926	21.8	36.14							
	Marengo	287.2	220	8791	40.0	30.61							
	Perry	252.3	120	2885	24.0	11.43							
	1107.8	817	21582	26.4	19.49								

SPB Air Data—September, 1988

Dist.	County	Host Acres	#Spots	#Trees	Trees /Spot	Trees /M Ac.	Dist.	County	Host Acres	#Spots	#Trees	Trees /Spot	Trees /M Ac.
1	Marshall	180.0	85	2400	28.2	13.33	7	Butler	351.1	33	865	26.2	2.46
2	Jefferson	436.9	5	48	9.6	0.11		Conecuh	382.6	28	1120	40.0	2.93
	Blount	168.8	25	1420	56.8	8.41		Monroe	434.8	120	4576	38.1	10.52
	Cullman	229.4	85	4460	52.5	19.44		1168.5	181	6561	36.2	5.61	
	Shelby	380.4	20	275	13.8	0.72	9	Colbert	170.7	145	7675	52.9	44.96
	St. Clair	281.3	44	880	20.0	3.13		Franklin	249.3	227	21755	95.8	87.26
Walker	371.4	17	350	20.6	0.94	Lauderdale		82.1	35	1175	33.6	14.31	
Winston	315.1	11	260	23.6	0.83	Lawrence		130.1	160	3620	22.6	27.82	
	2183.3	207	7693	37.2	3.52	Limestone		23.3	16	230	14.4	9.87	
4	Chambers	268.1	19	390	20.5	1.45	Marion	362.0	98	13905	141.9	38.41	
	Clay	314.6	58	1945	33.5	6.18	Morgan	124.0	218	7445	34.2	60.04	
	Cleburne	315.6	65	2585	39.8	8.19		1141.5	899	55805	62.1	48.88	
	Coosa	343.7	178	12625	70.9	36.73	10	Montgomery	145.8	108	5400	50.0	37.04
	Randolph	271.2	63	2775	44.0	10.23		Bullock	232.7	11	260	23.6	1.12
Talladega	263.3	26	280	10.8	1.06	Elmore		239.3	499	37258	74.7	155.70	
	1776.5	409	20600	50.4	11.59	Macon		180.3	232	7919	34.1	43.92	
						Russell		260.4	72	4725	65.6	18.15	
5	Autauga	230.4	78	2925	37.5	12.70		1058.5	922	55562	60.3	52.49	
	Bibb	321.3	61	1225	20.1	3.81		9179.2	3301	162371	49.2	17.68	
	Chilton	286.0	12	215	17.9	0.75							
	Dallas	247.0	257	4510	17.5	18.26							
	Perry	252.3	89	2140	24.0	8.48							
	Wilcox	333.9	101	2735	27.1	8.19							
	1670.9	598	13750	22.9	8.22								

SPB Counties Worst to Best—August, 1988

Dist.	County	Trees/M Ac.	Dist.	County	Trees/M Ac.
10	Elmore	110.52	4	Tallapoosa	7.88
3	Lamar	56.36	7	Crenshaw	6.94
10	Macon	38.79	4	Clay	6.42
10	Lowndes	38.02	2	Blount	5.89
5	Dallas	36.14	7	Monroe	5.51
4	Coosa	35.79	3	Greene	4.18
5	Marengo	30.61	1	Marshall	3.44
10	Russell	30.33	8	Choctaw	3.39
9	Franklin	28.44	5	Bibb	3.05
10	Montgomery	25.51	2	Walker	2.80
10	Lee	24.32	10	Bullock	2.60
2	Cullman	23.82	8	Clarke	2.00
9	Limestone	21.46	2	St.Clair	1.74
3	Fayette	20.60	7	Conecuh	1.57
9	Lauderdale	18.09	1	Calhoun	1.53
9	Lawrence	17.91	4	Talladega	1.41
9	Morgan	16.65	3	Sumter	1.28
4	Randolph	14.07	2	Shelby	0.62
4	Cleburne	13.47	7	Butler	0.54
5	Perry	11.43	7	Covington	0.35
3	Pickens	10.27	2	Winston	0.33
3	Hale	9.08	4	Chambers	0.21

SPB Counties Worst to Best—September, 1988

Dist.	County	Trees/M Ac.	Dist.	County	Trees/M Ac.
10	Elmore	155.70	5	Perry	8.48
9	Franklin	87.26	2	Blount	8.41
9	Morgan	60.04	4	Cleburne	8.19
9	Colbert	44.96	5	Wilcox	8.19
10	Macon	43.92	4	Clay	6.18
9	Marion	38.41	5	Bibb	3.81
10	Montgomery	37.04	2	St.Clair	3.13
4	Coosa	36.73	7	Conecuh	2.93
9	Lawrence	27.82	7	Butler	2.46
2	Cullman	19.44	4	Chambers	1.45
5	Dallas	18.26	10	Bullock	1.12
10	Russell	18.15	4	Talladega	1.06
9	Lauderdale	14.31	2	Walker	0.94
1	Marshall	13.33	2	Winston	0.83
5	Autauga	12.70	5	Chilton	0.75
7	Monroe	10.52	2	Shelby	0.72
4	Randolph	10.23	2	Jefferson	0.11
9	Limestone	9.87			

What About Pond Management?

by JOHN W. JENSEN,
Fisheries Specialist,
Alabama Cooperative
Extension Service,
Auburn University

Each year pond owners ask hundreds of legitimate questions of county agents, state fisheries biologists and other fisheries specialists concerning management of their ponds. Unfortunately, some questions go unasked, resulting in poorly managed ponds.

The following are commonly asked questions. Hopefully, the answers will bring to light some management problems and possible solutions that will help you manage your farm pond better.

Question: Can I wait until late spring or early summer to fertilize my pond? It seems so cold and rainy now so I doubt that the fertilizer will work.

Answer: It's very important to begin fertilizing early in the year; late February or early March in Alabama. Even though the weather may be cold, it's important to increase pond fertility so that the food supply can increase in time for the bluegills to put on their best growth in March through May.

Question: How many times should I fertilize per year? Once or twice a year seems to be enough for my pond.

Answer: It's true that some ponds respond extremely well to fertilizer and need to be fertilized less than others. On average, however, most Alabama bass/bream ponds need fertilizer applications 10-12 times from February through October. Fertilizer should be added when water visibility increases to more than 18 inches.

Question: How much fertilizer do I add to my pond stocked with bass, bream and catfish? I am feeding the catfish regularly.

Answer: When feeding catfish regularly, averaging more than 5 pounds of feed per acre per day, it's usually not

necessary to fertilize the pond. Waste from the fish does that for you. It's best not to stock so many catfish in a bass and bream pond so that they must be fed. If possible, keep catfish numbers to 50 and 25 per acre in fertilized and unfertilized ponds, respectively.

Question: How much fertilizer do I use to kill pond weeds?

Answer: In most cases, pond weeds cannot practically be killed by broadcasting fertilizer over them. Usually fertilizer added to a weedy pond just makes the weeds grow faster. Fertilizing a pond before weeds grow establishes a "bloom" of microscopic algae which shades the pond bottom and prevents weed growth. If weeds are already established, *do not* fertilize until they are controlled by herbicides or grass carp (white amur).

Question: If I control the weeds, won't I be hurting my fish population?

Answer: No, it is a common misconception that weeds increase the amount of fish in a pond or lake. Actually, weeds rob nutrients that are used by microscopic algae which end up as food for bream and bass through the food chain. Many people may sense that weeds mean more fish but what they may actually be noting is the presence of more fish around weed beds where they seek cover in the case of bream or forage in the case of bass.

Question: Do I need to lime my acid pond if I lime the watershed?

Answer: Yes, lime moves poorly across soils and lime applied to the watershed will not add enough lime to the pond to be beneficial.

Question: I limed my acid pond by backing up a spreader truck in three locations around the pond and slinging lime onto the pond. Do you think it did the job?

Answer: Only a water test or soil test can tell for sure, but I doubt that applying agricultural limestone in restricted areas of the pond will do an effective job. Ponds should be limed by covering the entire pond bottom to neutralize acid soils. This can be done by shoveling or washing agricultural limestone with a pump from a barge.

Question: How do I kill the grass carp I stocked in my pond 4 years ago? Some weigh 30 pounds and are destroying the bream beds.

Answer: Large grass carp certainly can make some big wakes and may even frighten bedding bream, but there is no evidence that they eat bream (or bass) eggs or disturb bream to the point that they don't spawn successfully. There are

ways to eliminate grass carp from a pond, but usually their number dwindles in 4-5 years to such a point that no action is necessary.

Question: The bass in my pond are all yearlings. Where do I purchase more bass for stocking so that I can have a shot at catching some larger ones?

Answer: Adding more bass in this case would not help the situation. In fact, it would just put more pressure on a food supply that is already stretched to the limit. The remedy for this situation would be to catch more bass and keep them. Harvesting up to 10 pounds of bass per acre in unfertilized ponds and up to 30 pounds per acre in fertilized ponds would allow remaining bass to grow bigger because there would be less competition for a limited food supply. Harvesting bass at these recommended rates should be done over the entire year and not during a short period of time.

Question: Is crappie a good choice to stock with my bass and bream?

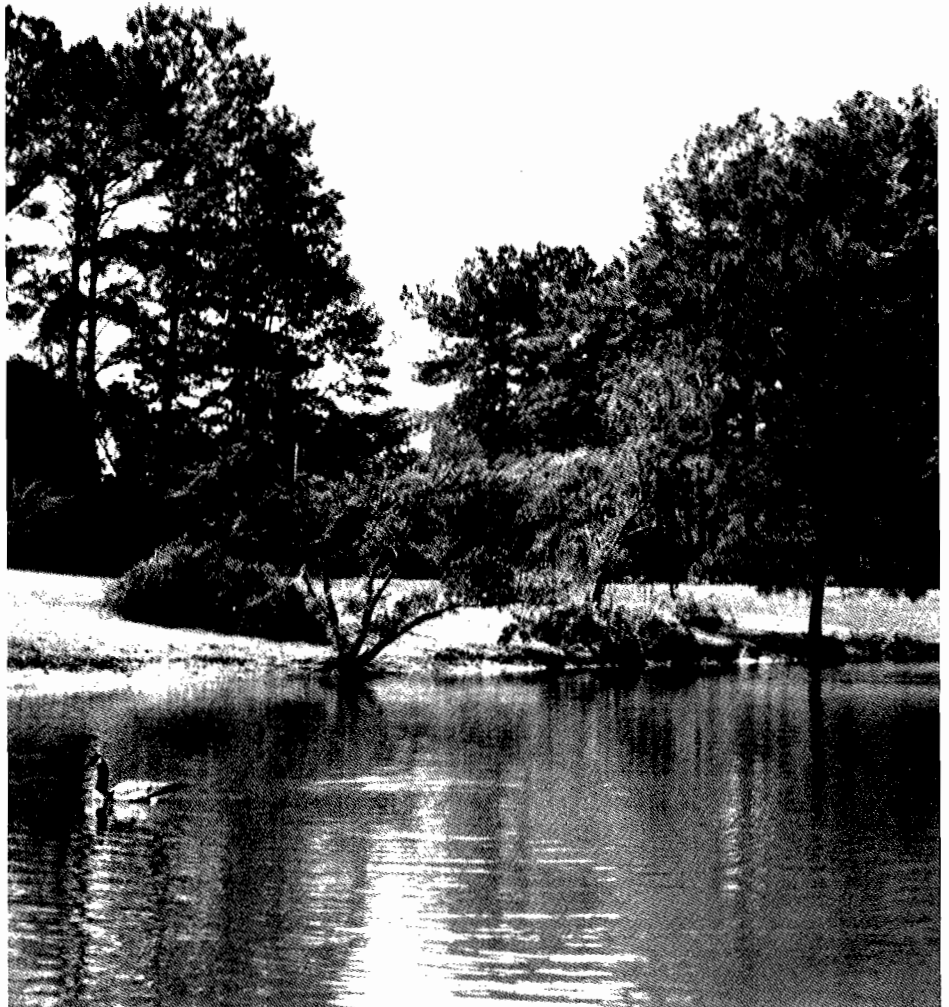
Answer: No! Crappie spawn at about the same time as bass, so it is difficult for young-of-the-year bass to eat young crappie and control their numbers be-

cause they can't get their mouth around them. Crappie in uncontrolled numbers then compete directly with bass and bream for food, eventually hurting the bass and bream fishing. Keep crappies out of bass and bream ponds.

Question: My bass and bream are at the surface, apparently suffering from low oxygen. My neighbor told me to apply 50 pounds of triple superphosphate fertilizer per acre to relieve the problem. Is this going to help?

Answer: No, triple superphosphate fertilizer will not help an acute oxygen shortage. The best thing to do when oxygen is low and fish are suffering is to aerate with an electric aerator or a tractor-powered paddlewheel aerator. If these are not available, you can use a rotary mower lowered to the water surface where the blade beats the water. An outboard motor with a propeller near the surface can also be helpful. Pumping water from a well or another pond or just pumping water from the same pond into the air will help alleviate a problem.

If you have questions, always feel free to call on your county agent. Keep the questions coming. ♣



LANDDOWN

LEGISLATIVE
ALERT



NATIONAL

by MELINDA COHEN, Legislative Liaison, National Association

Washington DC is in a state of transition. President-elect Bush will be taking office and continuing policies in the recent Republican traditions while a Democratic Congress returns.

What does the election mean for Southern forestry? It means there will be no grand swings of the pendulum and the status quo will remain. The leadership in Congress that initiates legislation that affects forestry will remain mostly unchanged except that Senator Byrd (D-WV) is stepping down as Senate majority leader to become Chairman of the Senate Appropriations Committee. The likely candidates to succeed him will be Senator Mitchell of Maine, Senator In-

ouye of Hawaii or Senator Johnston of Louisiana.

Senator Johnston should be the most sympathetic to Southern forest landowners.

A New Congress

There are several trends to look for in the 101st Congress. There may be an opportunity to get capital gains tax treatment back for forest landowners since President-elect Bush and Senator Bentsen (D-TX), Chairman of the Senate Finance Committee, are in favor of a capital gains tax. Even though both of these important politicians are in favor of a capital gains tax, the right opportunity will have to present itself for this to be accomplished. Unfortunately a capital

gains tax may be part of a package that ultimately raises taxes.

Although the vice president pledged not to increase taxes he will face a mammoth federal deficit and huge trade deficit. The federal government is also being called upon to spend billions of dollars to bail out the troubled savings and loan industry.

The environment was a major campaign issue in this election. Even in the last days of the Reagan Administration the Environmental Protection Agency (EPA) had begun to move into wetlands regulation, enforcement of the Endangered Species Act and reduction of major air pollutants that are causing global warming.

This trend of increased environmental regulation will continue because the

STATE



by FRANK SEGO, Legislative Liaison, Alabama Forestry Commission

As State Forester Bill Moody stated so aptly to a group recently, "You have to have an understanding and a feeling for the legislative process." He was referring to a wave of criticism that followed the regular session and two special sessions of the 1988 Legislature before a general fund budget could be passed.

What many people overlooked was the fact that, for the first time in 112 years, a Republican governor and a Democratic legislature were locked in combat over fiscal matters before approving a compromised \$703 million operating budget in a record third attempt that ended 55 minutes before midnight on the final day of the 1987-88 Fiscal Year.

As he signed the budget, **Governor Guy Hunt** called it a momentous step forward in bipartisan cooperation. He said the idea that a Republican governor and a Democratic House and Senate cannot get along should have been put to rest by his signature.

Tax Measures Pass

One of the biggest hang-ups in the series of legislative sessions was the prolonged debate over proposed tax measures. A dog track tax bill commanded most of the attention. It also passed on the final night of the third session, levying a 1% tax on all track bets, a 2% tax on exotic bets where more than two dogs are involved, and a 5% levy on winnings over \$1,000.

Another measure would transfer part or all of Alabama's lodging and lease taxes into the State's general fund. Yet another bill was passed to reduce or remove State income tax exemptions for consumer loans and business travel. Before the smoke of the second special session had cleared, a total of \$92 million in new taxes had been approved by the legislature.

Cigarette Tax Fails Again

One tax proposal that failed to make it would have hiked the cost of a pack of

cigarettes to aid Alabama's nearly 1,000 volunteer fire departments. The fire fighters worked long and hard to gain passage of version after version of a cigarette tax that would have provided funds to upgrade equipment and facilities of approved volunteer fire departments. A similar tax measure barely missed passage during the regular session which ended on May 5.

A strong tobacco lobby thwarted each attempt to gain final approval of these measures which were sponsored in the House by Roanoke's hard working legislator, **Representative Richard Laird**, who is totally dedicated to Alabama's forestry program and to the volunteer fire departments.

The Forestry Commission, meanwhile, fared as well as many of the State agencies did with level funding approved for the 1988-89 Fiscal Year. One consolation was the inclusion of \$2.6 million to be administered by the Forestry Commission for the state's volunteer fire departments.

American people want a clean environment. Proper stewardship helps foster this type of environment and healthy growing forests are one of the few ways to counter global warming. Forests are the habitat for wildlife and also help produce and maintain clean water, and for all these reasons good forest managers ought to be given a break—a tax break!

Accomplishments

The 100th Congress passed and addressed legislation affecting forestry.

Appropriations for the Forest Service's State and Private Forestry and Research programs remained about the same as the previous years. A new tree planting record of three million trees was established. Many of them were planted

in the Conservation Reserve Program (CRP). The Drought Relief Act included emergency cost-share funding to reestablish one- or two-year old stands that were lost in the drought. The Federal Insecticide Fungicide Rodenticide Act (FIFRA) was also reauthorized and included language to test old pesticides on the market using current health standards.

The Forest Service released the South's Fourth Forest Study. It showed the South has the potential to increase net growth by more than 50 percent and insure further growth in the region's important forest products economy.

An interagency team was appointed to review the federal government's fire policy in wilderness areas and parks. This team is reviewing the actions that

took place in the Yellowstone Basin and other fires around the country that started on federal wilderness areas and threatened private lands. The new fire policy is expected to be open for public comment sometime in January and to be in place before next year's Western fire season. The National Association of State Foresters has a representative, Harry Layman, state forester of North Carolina, working with the federal team.

The first year, 1989, of the 101st Congress is expected to be a busy one. Much of the legislation introduced this year will make its way into bills that are expected to pass in 1990 such as the Farm Bill. The forestry community in Alabama should contact Congressional delegations and make their needs known!

Severance Tax Increase Approved

The Forestry Commission further benefited from the passage of HB 106 by **Representative Allen Layson** of Reform. The bill, which was signed into law by the governor during the first special session, amends the Code of Alabama 1975, which provides for the severance tax on forest products. Layson's bill provides for a 25% increase in the severance tax, with proceeds earmarked for the Forestry Commission's forest fire protection program. It will amount to almost \$1 million annually.

State Forester Moody said this was a long-awaited relief that could finally allow the Commission to place an additional fire crew person in each of the 67 counties. Presently, there are some counties that still have only one man to fight a forest fire, and Moody declares this practice "downright criminal."

Forestry Commission employees received further encouragement, as did their fellow State workers, when the legislature gave its final nod to a bill by

Representative Joe Ford of Gadsden during the first special session, granting a 7.5% pay raise, effective October 1, 1988. It was not until the second special session, however, that the necessary funding could be approved for the raise.

Legislative Analysis

Considering all things, it would have to be said that forestry in Alabama did benefit from the three sessions of the 1988 Legislature. Volunteer fire departments got some support. Forestry Commission fire crews got an additional

fighter in each county. The Alabama Forestry Commission survived the possibility of a deep cut in the general fund budget and employees received a 7.5% pay raise. Add to this the fact that forestry and volunteer fire departments are gaining the attention they deserve from more members of the legislature. That's the real bottom line. And forestry will gain further benefits in future sessions.

Next session: Tuesday, February 7, 1989.



Rep. Perry Hooper, Jr., of Montgomery was recognized for his role in assisting Alabama's volunteer fire departments and the Forestry Commission during the 1988 sessions of the legislature. A presentation was made to him at the Capital City Kiwanis Club by State Forester Bill Moody as Smokey Bear looked on. Said Moody, "Even though his district had but a few volunteer fire departments, Perry Hooper was mindful of the need to support a statewide volunteer program."



White-Tailed Deer Management and the Spike-Antlered Buck

by DR. M. KEITH CAUSEY, Department of Zoology and Wildlife Science and Alabama Agricultural Experiment Station, Auburn University

There is considerable discussion today among wildlife biologists, land managers and sportsmen concerning the great number of spike-antlered bucks in some of our deer herds. The presence of such bucks on most hunting areas in Alabama, and elsewhere for that matter, is a clear and simple biological statement. It's Mother Nature telling us we have too many deer. Yes, too many deer—especially if our management goals are to have branch-antlered, big-bodied (120 lb 1) yearlings and even bigger bodied and better antlered older-aged bucks. If spike-antlered yearling white-tailed bucks become common on your property, you can be almost certain it is because you are carrying too many deer and the herd's nutritional needs are suffering.

Yes, some of the "spikes" you and your hunters harvest are "fat as butterballs" and well they should be in late fall and early winter. But be aware, if these young deer had been well-fed throughout their first year and had been conceived and carried by well-fed dams, they would in all likelihood have had nice, but small, multiple point racks and weighed from 120-150 pounds.

Now there are reasons other than poor nutrition that cause yearling male white-tailed deer to have "spike" antlers. Among those are "yearlings" produced from breedings of 6-month-old does, "yearling" bucks produced by adult females that breed as late as February and March; or probably the least likely cause, genetic abnormality. This means that most spike-antlered yearlings are not "locked-in" to this condition and have the potential to become good quality bucks in subsequent years.

There is virtually no way hunters can tell which spikes result from environmental versus genetic conditions. Therefore, we can hardly justify routinely culling spikes in an effort to improve the "genetics" of the herd. In our research pens at Auburn University we have seen

yearlings that had "spikes" catch and even surpass some of their fellow branch-antlered yearlings in their second growing season. Today's spike might be tomorrow's "trophy." So where does this leave us as far as management decisions concerning spike bucks?

There are never simple "cut and dried" answers for managing a wild, free-ranging deer herd. However, increased sightings and harvestings of spike bucks on our Alabama lands suggest we should reduce the population density. Maybe you have too many bucks as well as too many does, but I doubt it. In most Alabama deer herds we have too few antlered bucks and far too many antlerless deer.

First, I suggest your management strategy should be to reduce the population as rapidly as possible by harvesting as many antlerless deer (especially does) as is legally possible in your situation. Second, with our long season and liberal bag limit, we must always restrict our appetite for harvesting antlered males to avoid the old dilemma of "shooting the best and leaving the rest" as we avoid high grading our timber stands. Harvest as few antlered bucks (spikes included) as your temperament can stand until you get your herd condition up to where you want it and keep it there using the same technique. This can be much more of a chore than most sportsmen realize, and don't expect overnight results.

The longer your deer have been overpopulated the longer it may take the habitat and the deer to respond to management efforts. On the area where many friends and I hunt we have been working hard for three years at reducing the population through dramatically increased doe harvest and drastically decreased antlered buck harvest and our antler sizes and body weights continue to decrease. We waited too long to get started and will have to wait longer than we would have liked to see the expected improvements.

Finally, let's assume you have solved the nutritional problems of your deer herd and have managed with your harvest strategy to achieve a good antlered buck to antlerless deer ratio (say 1:3). Let's say your yearling bucks are mostly 5-8 pointers and average 140 pounds as 18-month-olds. Then maybe you are ready to progress toward some of the more sophisticated and intensive trophy management schemes currently underway in parts of Texas. Some of these ranchers try to remove **all** yearling bucks with fewer than 6 points not just the spikes! They also remove any bucks with "undesirable" antlers and any large-bodied, small-antlered bucks with 6-8 point racks. Theoretically they are allowing only the very best bucks to survive and breed and are happy if they produce 2-4 "top quality" bucks per season.

Remember, these ranches are often many thousands of acres in size. Personally, I'm not aware of any areas in Alabama that have been managed to this degree of intensity, and frankly, I wouldn't recommend it for most of Alabama landowners. I believe this type of management is quite impractical due to the average size of our private landholdings and the nature of our Southeastern habitats.

South Texas deer management strategies may never be practical in Alabama, but misinterpreted data from Texas is where most Alabama sportsmen got the idea of "once a spike, always a spike." This is patently false, and if your deer herd is like most Alabama deer herds with elevated numbers of spike-antlered yearlings, you will be better off reducing your deer population through increased harvest of females and allowing your spikes to grow a year or two or three. At these ages most of them will have attained sufficient antler development to make all but the most discriminating "trophy hunter" beam with delight. ♣

All too often we as landowners realize after the fact, "We should have sought professional assistance before we agreed to let our timber be cut." It has happened to my neighbors . . . it has happened to my neighbors. Once it is done, it's done. But what can we do to insure that it doesn't happen to our families and friends in the future?

First of all, we must admit to our ignorance (though it's hard to do). We as woodland owners who are not involved with the selling of our timber on a regular basis do not keep abreast of modern technology in forest management or the prices our products are commanding. After all, you have grown the timber . . . you have paid the taxes . . . and you more than anyone else should reap the maximum benefit from your investment.

Consulting Foresters

This is a critical time in exhibiting sensitivity to our environment. Therefore, let us consider retaining a consulting forester to advise us. You will be asked some very pointed questions as to your objectives. Most of these will be quite thought-provoking because we are looking down the road to decades into the future. A good forester will work with you to help you arrive at the ultimate goals you have established. They will be well worth the fee that is paid in connection for their services rendered. Of course if you don't like what they have to say, get a second opinion. Find one who comes highly recommended through a friend who has used them in the past. If one is not readily available, at least contact your county forest ranger. He or someone on the County Forestry Planning Committee can steer you in the right direction. Their expertise will be a tremendous asset to you, not only now, but later as well.

Pay a visit to your local Auburn University County Extension Office and request the services of their extension forester. It is entirely possible that you will want to consider the service that is offered to landowners by private industry. There are several that make available one of their foresters who will make a detailed study of your woodlands and give you an in-depth report of their findings. One company offers a Forest Management Assistance Program (International Paper Company). They will cruise your timber and provide you with a management plan. Currently, they will match your purchase of up to 10,000 seedlings for reforestation. For a modest

fee they will provide you with their people to clear land, plant seedlings, conduct prescribed burning, work on kudzu control, mark timber and advertise timber sales. Although they do not survey property lines, they will paint the lines for you as an aid in boundary identification.

If you have made mistakes in the way you have managed the forest in the past or want to bring open land into timber production, you will probably have to resort to artificial regeneration. There are several viable alternatives you need to consider.

Cost Share Programs

Go by your local Agricultural Stabilization and Conservation Service Office (ASCS) to determine what cost share assistance you may qualify for. There is the Forestry Incentives Program (FIP) for timberlands of 1,000 acres or less. It is administered through the ASCS office with the technical responsibility delegated to the Alabama Forestry

Commission's county ranger. There is also the Agricultural Conservation Program (ACP) for timberlands in excess of 1,000 acres. If you have rowcrop land that was tilled in the recent past and because of soil type or slope is deemed to be "highly erodible," it may qualify under the Conservation Reserve Program (CRP). Cost share assistance under these programs vary from 50-65% of actual cost, not to exceed \$100 per acre.

The CRP developed as a result of the USDA Food and Security Act of 1985. Landowners may receive a 50% cost share assistance in stabilizing the soil and draw funds for 10 years while maintaining suitable cover on this marginal cropland. Technical responsibility for this as well as the Alabama Resource Conservation Program (ARCP) is carried out by the Soil Conservation Service. ARCP is funded by the State and is carried out by the Alabama Association of Conservation Districts with each county district conservationist working in conjunction with his board of supervisors. FIP has a \$10,000 limit per landowner. The other programs have a \$3,500 per year ceiling as long as funding is adequate. If the funds are not available when you apply, find out when the next sign-up date is and reapply then. If you hope to be eligible for government assistance in the future, you must have an approved plan in writing by January 1, 1990. The Soil Conservation Service will be glad to aid you in implementing this plan.

Additional Sources

It might not be a bad idea to give your local game warden a call. He can help you find a wildlife biologist who will assist you in managing your property along lines of developing a more desirable habitat for the wildlife you'd like to see flourish.

It would also benefit you to belong to the Alabama Forest Owners Association, Inc. (P.O. Box 104, Helena, AL 35080). They will send you their monthly newsletter that is most enlightening. While you are at it, sign up and qualify for Tree Farmer status. Write Doug Link, Rt. 4, Box 207-A, Selma, AL 36701; or the Alabama Forestry Association, 555 Alabama St., Montgomery, AL 36104.

Now that you have a pretty fair idea of where to find what you need to know, go ahead and shoot for the whole ball of wax . . . TREASURE Forest. You'll be proud you did! ♣

Finding Help May Be Easier Than You Think

by DAN JAMES,
TREASURE Forest Landowner

ACTIVITIES

DISTRICT

1

A workshop on smoke management sponsored by the District One personnel was recently held in Etowah County. **Hugh Mobley** instructed employees from the AFC, local consultant foresters and forestry industry companies Kimberly Clark, Hiwassee Land company, Inland Rome and the U.S. Army's Redstone Arsenal.

Reba and Kirk Holdsambeck of Huntsville were recently presented the Champion Tree designation by Madison County Forest Ranger **Mark Roberts** and Staff Forester **Brian Bradley**. The Holdsambeck's Forester Holly topped all others to become Madison County's Sixteenth Champion Tree!

Jackson County's North Alabama Reforestation Committee held a hardwood field day in early October which was attended by about 60 landowners and loggers. The event was held on the Clyde Carter property near Skyline in an effort to accommodate private landowners and area loggers.

Hardwood regeneration, wildlife management, erosion control structures on roads and log landing stabilization, as well as thinning and marketing hardwoods were all covered. An added treat was a demonstration of a Wood-Mizer® sawmill by owner **G.D. Schulle** of **Scottsboro**.

The cooperative effort of several agencies, forestry industry and the Tennessee Division of Forestry resulted in a very successful event.

The AFC sponsored and organized a Non-game and Game Wildlife Management Workshop for agency personnel, consultant foresters and forestry industry. An indoor session with speakers **Doreen Miller**, Alabama Dept. of Conservation, **Rick Busch**, AFC, and **Scott Atkins**, TVA, set the stage for a half day field trip to TF landowner and 1988 Helene Mosely winner **Bud St. Clair's** property. The participants received some practical tips to incorporate into the forest management plans developed for local landowners.

DISTRICT

2

The St. Clair County AFC office has been very busy in the past few weeks conducting school programs to promote fire prevention and anti-litter. Some of the programs they have conducted include: a program on fire prevention to approximately 120 **Moody Elementary School** fourth graders; forestry worker **Sandra Jones** presented a program on litter and fire prevention to 175 kindergarten and first grade students at **Ashville Elementary School**; rangers presented a program on littering to 200 kindergartners at **Pell City Elementary School**; and County Supervisor **Gary Hamilton**, Ranger **Dennis Underwood**, and **Sandra Jones** held a meeting at the Alabama 4-H Center in Shelby County on litter and fire prevention for approximately 704-H'ers.

Walker County Ranger Bobby Matthews conducted a program on fire prevention to approximately 20 children at **Dora Library**.

Cullman Rangers Jimmy Moody and Kenneth Hulsey conducted a presentation on fire prevention to 103 kindergarten students at **Sportsman Lake Park** in Cullman. The program also included a walk along one of the park's nature trails.

Over 5,000 pieces of forestry and forestry-related literature was distributed by Blount County associates **Jim Walker, Gladys Daily, and Steve Bowden** during the Blount County Fair. This year's edition of the fair was the largest ever held in Blount County.

A new John Deere 550-G tractor and a new transport recently went on line in **Winston County**. The JD 550-G is the first of its series to be used in fire fighting in the state.

District Pilot **Jim Bass** was interviewed recently by **Judy Wood**, editor of *The Cessna Owner Magazine* based in Birmingham. Jim spent the day with Ms. Wood flying around District 2 and letting her get a first hand interview on the role the AFC's air fleet has and the duties of a district pilot. The magazine is distributed nationally.

Blount County Ranger Jim Walker recently presented a program on "Responsible Hunters" to the Conservation Club.

Cullman County Supervisor Darrell Johns and Information Specialist **Coleen Vansant** attended the October meeting of the **Cullman County Rural Development Committee**. Some of the upcoming activities of the group are a tour of the Alabama Power Company Resource Center and Cullman's annual Farm-City Week.

The **Walker County Forestry Planning Committee** recently hosted a landowner meeting on the southern pine beetle. District SPB Coordinator **Rick Hofmeister** was the special guest.

Urban Forester Lee Laechelt was a guest recently of Channel 13 in Birmingham. Station Meteorologist **Jerry Tracy** interviewed Lee on what makes trees change color in the fall.

Volunteer fire fighters from across Blount County gathered recently for their annual fire fighters competition. **Gladys Daily, Steve Bowden, and Dennis Underwood** from St. Clair County were the judges for the event.

A **Firemen's Appreciation Day** was held in Walker County, with approximately 100 firemen from across the county attending. The day-long event, held at Clear Creek Park on Smith Lake, was hosted by the **Walker County Fire Fighters Association** and **Walker County AFC**.

Congratulations to the **Royal Community Volunteer Fire and Rescue Squad** in Blount County for recently becoming certified.

Darrell Johns, Cullman County supervisor, attended a "One Minute Manager" course held in Cullman.

DISTRICT

3

Congratulations to **Kenneth Hulsey**, Cullman County ranger, **Larry Clark**, Jefferson County ranger, and **Coleen Vansant**, District 2 Information Specialist, for their recent graduation from the Alabama Forestry Commission Ranger Academy. Congratulations also goes out to those District 2 associates that recently completed the fall segment of ranger training. They are: **William Owen**, Ranger I Blount County; **John Thompson**, Blount County Supervisor; **Tim Davis**, Ranger I St. Clair County; **John Kimbrell** and **Sammy Holdsambeck**, Ranger I's Shelby County; **Wayne Ward**, Ranger II Shelby County; **Dan Jackson**, Walker County Supervisor; **Brian Morgan** and **Bill Hamner**, Ranger I's Jefferson County.

Cost share programs were the topic of discussion at a landowner assistance meeting held recently in Walker County. District Management Specialist **Tom Kimbrell** and **Tommy Counts**, with the Walker County ASCS office were the guest speakers. During the meeting Mr. **A.A. Shaw** of Walker County was presented with the **W. Kelly Mosley Award** for his contributions to forestry. The meeting was sponsored by the **Walker County Forestry Planning Committee**.

A vendor tree planting seminar was held recently at the Cullman Civic Center in Cullman as an effort to help educate vendors on proper tree planting methods. Guest speakers at the seminar included **David Hoge**, AFC; **David Boreland**, International Forest Seed Company; **Bart Williams**, AFC district forester; **David Gamble**, Drennon Timber Co.; and **Tom Kimbrell**, district management specialist. The seminar was sponsored by the **Cullman County Forestry Planning Committee**.

Tree planting vendor training sessions were held in September at the Tuscaloosa District office and the Fayette County courthouse for District 3 vendors. **Eddie Hyde** and **John Rice**, AFC Nurseries, **David Hoge**, AFC State office and **Mark Elliot** of International Forest Seed assisted with these sessions.

The **Sumter County Forestry Planning Committee** held a forestry field day on October 4. Stops on the tour included prescribed burning, quail habitat, turkey and dove management. District Forester **Wayne Strawbridge** and Sumter County Forester **Philip DuBois** presented TREASURE Forest certificates to **Drayton Pruitt, III, Dr. and Mrs. Gary Stone, Tracey Treadaway, and Allen Tartt**. We welcome these landowners into our TREASURE Forest family. Ninety-six persons attended the field day, 70 of which were forest owners. A delicious meal was provided by various sponsors and a \$320 chain saw was given as a door prize.

Fayette County rangers stayed busy this quarter putting on courses for the 4-H Fish & Wildlife day in July. They also spoke to the volunteer fire departments in Fayette County on the AFC programs.

Hale County Forester **Jim Junkin** also spoke to the **Friendship Fire Department** and the **Stewart-Havana Fire Department** in October on AFC assistance.

Ranger **Harold Jordan**, Lamar County, explained the TREASURE Forest program at a meeting of the **South Lamar Young Farmer's Association** in July and all the Lamar County rangers manned a booth at the Lamar County Fish & Wildlife Day in August at the Vernon National Guard Armory.

Philip BuBois gave two training sessions to Peace Corps trainees on tree planting and fire behavior in August and September.

A mixed stand management tour was held in October on the TREASURE Forest of **Steve Skelton** of Pickens County. The 75 people in attendance listened to talks from **Tom Cambre**, AFC hardwood specialist, **Dan Sims**, USFS hardwood specialist, **Glen Hickman**, SCS soil scientist and **Tony Wiggins**, DCNR wildlife biologist. TREASURE Forest certificates were presented to **Ralph Windle** and **Thomas W. Webb**.

The **Tuscaloosa County Forestry Planning Committee** hasn't let winning the District award for best planning committee slow them down. They had a forestry and wildlife tour on the TREASURE Forest of **Dr. James Sherwood** in the Samantha community. The 70 people in attendance ate barbecued ribs, shot skeet and watched archery and equipment demonstrations when the tour was finished. Local hunting and equipment companies sponsored the tour.

Efforts by District Fire Specialist **Kenneth Elmore** has resulted in the organization of a District 3 Fire Fighters Association made up of county associations in the district. **Reggie Summerlin**, state RCFP coordinator, assisted Ken at the association's organizational meeting held at District 3 Headquarters on October 19. The purpose and goals of the association are to promote and enhance better rural fire protection.

District 3 held its Annual Fire Control Cooperators' Meeting with forest industry on October 25. District Forester **Wayne Strawbridge**, county supervisors, and district headquarters staff discussed ways to continue to improve our total fire control effort. Fire Control Chief **Hugh Mobley** presented a program on smoke management.

Control of the southern pine beetle has been one of the top priorities in District 3 for the past several months. AFC employees have been working with landowners in every way possible to control this forest pest.

Charlie Squires has returned as seasonal pilot. He will be flying the second aircraft on wildfire patrol and assisting Pilot **Bill Ignatz** during the fall and spring fire seasons.

DISTRICT

4

Clayton Schwind, Chambers County forester, presented a program to 20 members of the **La-Fayette Rotary Club**. **Clayton, Ronnie Ray, and Jeff Abney** assisted with the annual **Pine Tree Fes-**

tival in August. They assisted and participated in the annual **District 4 Volunteer Fire Fighters Association Festival** held again at **Still Waters**.

Clayton and Ronnie also assisted with the **Fire Fighters' Appreciation Day** held annually by the AFC at Garrett Coliseum.

Schwind attended a vendors' tree-planting session, the prescribed burning refresher course in District 4, as well as the Performance Evaluation Training in Birmingham. He also assisted with the 4-H Awards Banquet and attended the **Chambers County Forestry Planning Committee** meeting and the **Chambers County Fire and Rescue Association** meeting.

Earl Smith and **W.N. McCollum** attended the District 4 VFD Fire Fighters Association meeting at Lineville Fire Station and the Clay County VFD Association meeting at Cragford. **Smith**, **McCollum** and **Wayne Johnson** attended the District 4 VFD Association meeting at Lineville to finalize plans for the District VFD Appreciation Day at Stillwaters on September 10.

Smith met with 37 people at Mt. Olive Church who were ready to organize a new volunteer fire department. They will be called the **County Line VFD**.

W.N. McCollum and **Brian Osborne** attended the District 4 Smoke Management Training at District 4 HQ.

Earl attended the Employee Performance Rating in Birmingham. He also attended the "Industry Appreciation Day" supper at the Clay County Farmer's Market in September. Clay County associates, along with other local industry representatives were presented a certificate signed by Gov. Hunt for "Outstanding contribution to the economic growth and development of the state of Alabama."

John Tyson organized a TREASURE Forest Landowner's Tour which was held on Oct. 8 on the property of **C.B. Munroe**. **Blake Kelley** assisted with the tour; TREASURE Forest concepts and multiple-use resource management was discussed and illustrated on the tour.

Blake Kelley reported four new TREASURE Forests certified in District 4: **Charlie Christian**, Chambers County, **Chuck Simpson** and **Owen Smith**, Coosa County, and **Al Griffin**, Clay County—Junior TREASURE Forest.

Three forest rangers have transferred to District 4. They are **David Rogers** to Talladega from Mobile, **Brian Osborne** to Clay from Jefferson, and **Kyle Desmond** to Tallapoosa from Morgan.

Ernie O. Moore, who had served as district forester since January of 1972, retired August 29. A 1951 graduate of the School of Forestry, Auburn University, Moore had worked as a forester with Alabama Power Company for 16 years. He worked with McMillan-Blodel and in the private sector for several years before joining the AFC. He is married to the former Margie Kirkland of Panama City, Florida. They have three children.

On August 4, District 4 associates held a fish fry at Headquarters in Mr.

Moore's honor. All District 4 personnel attended. Mr. Moore was presented with several gifts, among them one of **Skip Turner's** beautiful "Forest Sculptures."

Charles E. Hall, Jr. came on board as District Forester Sept. 1. He was formerly Walker County supervisor. He has moved into the Manoy Creek area of Lake Martin with his wife, **Benita**, and 16-month-old **Kevin**.

On October 14-15 the District Foresters Staff Meeting was held at District 4 Headquarters. On the 15th, **Bud Watts** prepared a barbecue for the District 4 Volunteer Fire Departments to honor **Ernie O. Moore**. The district foresters, State Forester **C. W. Moody** and Assistant State Forester **C. A. Pigg** officially named the office building the **Ernie Moore Building**. Mr. Moody read a resolution from the seven forestry commissioners. Mr. Moody and Mr. Pigg both spoke on the changes and improvements that have taken place under Mr. Moore's supervision. Mr. and Mrs. Moore enjoyed the barbecue and visiting with friends.

Kate L. Prater, who has been Coosa 20 for 38 years, and **Ralph Woolley**, who has been Coosa 10 for 23 years (but has been with the AFC for 28 years), have retired. A retirement party was held at Unit Presbyterian Church in Weogufka on Nov. 15. **Blake Kelley**, who has been management specialist for the past two years at District 4 Headquarters, is now Coosa County supervisor.

The new Coosa County office at Hanover will be completed by Dec. 31. This is the fourth county office built by District 4 personnel. The others are in Randolph, Cleburne, and Clay. The Clay County office in Lineville was partially destroyed by fire in May due to an electrical problem. It is currently being rebuilt by AFC personnel in District 4.

Randolph County Forester **Bill Nixon** and his wife have a new son, **Tony Victor**, who joins his big sister **Kristina Elizabeth**.

Guy Slayden and **Mary Tucker** prepared a forestry exhibit for the **Jim Pearson School** in Alexander City. This was part of the Tallapoosa County Heritage Day that the school has held annually for about three years. **Mrs. Hugh Neighbors** (parent) and **Mrs. Dale Stone**, assistant principal, have developed a Fall Festival that is astounding in scope; they have a list of about 50 exhibitors.

Randolph County Ranger **Charles Sikes** presented a program on home fire safety to the PTA in Randolph County. He used four slide-tape programs and his own knowledge of structural fire possibilities and safety training rules to present this information.

Charles Sikes and **Mary Tucker** presented the AFC approach to careers in forestry at the **Randolph-Roanoke Vocational School** in Wedowee on Nov. 29. All the juniors and seniors from the Randolph County schools attended. They used the new ranger video developed by Anita Benton and the I&E Section, as well as literature concerning other facets of forestry, including that of Landowner—Steward of the land. They also gave out PALS brochures and

litter bags.

The personnel of District 4 have prepared an exhibit on the many facets of forestry, which is on display in the Cobb Memorial Archives of the **Bradshaw Chambers Library** in Valley, Alabama until the end of December. Six of the seven counties in the District assisted directly with gathering the materials. The theme of the exhibit is forest history, economics, wildlife, and aesthetics—multiple-use forestry.

Charles Hall, district forester, and **Mary Tucker**, information specialist, attended the I&E meeting at Alabama Forestry Association headquarters in Montgomery Nov. 3-4.

Three of the Helen Hunt Award winners in PALS are from District 4. The winners are **Travis E. Ford**, deputy sheriff in Talladega County who is also chairman of the Law Enforcement Committee; *The Daily Home* of Talladega and Sylacauga, which provides such excellent coverage of the PALS activities in articles, photographs and cartoons; the **Russell Corporation** of Alexander City, whose leadership has always meant excellence in Tallapoosa County and in any other area where they serve.

The **Clay County Historical Society** has long been interested in a clean-up of the litter in the county and is sponsoring the PALS effort. On October 24 the initial meeting of PALS in Clay County was held at the courthouse in Ashland. **C. W. Moody**, **Charles Hall**, **Earl Smith**, and **W.N. McCollum** attended this meeting. Mr. Moody outlined the PALS program and qualifications for the organization. The Hon. **C. W. Carpenter**, probate judge of Clay County and the Hon. **Bill Morris**, sheriff, and **Stanford Miller** of the Health Dept., as well as **Walter Farr** of the Clay County Historical Society, **Spencer Ryan**, executive vice president of PALS, the Hon. **Gerald Dial** (state senator), and the Hon. **Richard Laird** (state representative) lent their support. **Travis Ford**, Talladega County deputy sheriff, as well as the Hon. **Derrill Hann**, probate judge of Talladega County, assisted with the program approach.

The next meeting was held on Nov. 21 in Ashland at the Wynn Building. At that time a county chairman was selected. With so many distinguished people from the county putting forth so much effort, the **Clay County PALS** organization should have one of the best programs in the state in full operation very soon.

The Lineville FFA Chapter won the National Forestry Judging Team Award in Kansas City. The 4-H club national Forest Management Award was also given to a Lineville FFA member—**Al Griffin**—who is a Junior TREASURE Forest landowner.

A forestry tour was held in Chilton County on October 4th. Tour stops included several site preparation methods involving soil type, topography, residual timber and acreage. Twenty-six people were on hand for the tour and everyone seemed to enjoy the day. The tour was sponsored by the AFC, SCS, and the

Chilton County Forestry Association.

Smokey Bear entertained 600 K-2nd grade students in Prattville during Fire Prevention Week. **Smokey** also made several appearances in Dallas County during September and October. **Smokey** received several thank you letters from students at **Southside Elementary School**.

A demonstration of the Homewood Logger was held at the Kelley Mosely property in Mertlewood in Marengo County on September 23. Approximately 25 people attended the demonstration of low cost thinning.

Smokey Bear was Grand Marshall at "Christmas on the River" in Demopolis on December 23.

District 5 headquarters hosted the tree planting training sessions in Selma on September 27-28. These meetings were for landowners and vendors. Approximately 70 people attended the training sessions in which the AFC reforestation standards were discussed along with nursery operations, site preparation, and herbicide application. Guest speakers were **David Hoge**, AFC productivity forester, and **Wayne Bell** with International Forest Seed Company.

The **Wilcox County Forestry Committee** sponsored a tour of the Wilcox Milling Company Specialty Hickory Mill located in Camden. Approximately 25 people attended the tour on October 27.

The **Pine Hill City Tree Commission** was presented their Tree City USA certification plaque and flag on September 27.

DISTRICT 6 Geneva County has been very busy with TREASURE Forest activities throughout the past several months. The **Geneva County Forestry Planning Committee** and county landowners recently hosted a luncheon where County Supervisor **Ronnie Hickman** spoke on the TREASURE Forest Program.

The **Geneva County Planning Committee** also outlined work goals for the upcoming year concerning TREASURE Forest activities.

In September the **Geneva County Forestry Planning Committee** and **RC and D Committee** hosted a forest tax workshop with 32 attending landowners. The workshop was put on by **Jean McDaniel** and was very informative. It included discussion on both severance taxes and acreage assessment.

In Dale County, the **H.C. Jordan** property was recertified as a TREASURE Forest. This was a five year reinspection. The recertification was done by Forester **Jerry Smith** and Biologist **Will Maddox**.

The Dale County forest landowners held a meeting where **Franklin McAliley**, **Barry Lawrence**, **Larry Doster** and **Bruce Hancock** spoke on the CRP program. This pertained to compliance in areas such as subsoil checks, chemical application, and paperwork to be submitted. The landowners were instructed on the guidelines adopted by the CRP cost-sharing program. This session was to

offer assistance to landowners on the changes taking place with this new program.

At the Dale County Forestry Association meeting, **Jean McDaniel** put on a program dealing with taxation. The meeting consisted of forest taxation and laws pertaining to forestry tax laws. Jean later received an award for her programs from the Forestry Committee.

Houston County had two TREASURE Forest certifications during this period— **Landmark Park** and **Forrester Farms**. Congratulations to both.

The **Houston County Forestry Association** sponsored a tour of the Great Southern Paper Company in Cedar Springs, GA. The tour was very informative and educational, showing the transition of raw wood fiber into finished paper products.

Private landowner **James Hughes** of Houston County was certified as State Tree Farmer of the Year. Mr. Hughes and his entire family actively participate in all phases of forestry.

In August Forester **Don VanHouten** and Biologist **Kevin Kramer** worked on recertification of property owned by **Jere Henderson** and **Thomas Pinson**.

Coffee County has been busy with the processing of four more TREASURE Forests. These are **Nasco Insurance Company, A. B. Bryars, Mrs. Flurnoy Whitman Estate** and **Dr. Jim Paulk's** property.

Barbour County was very busy with various programs throughout the last quarter. A fire prevention program was held at **St. Andrews Community Center** with 37 students in attendance. **David Gulledd** hosted Smokey Bear and sparked enthusiasm among those participating, both young and old.

Henry County hosted a meeting in which **Franklin McAliley** and **Kenneth Blalock** spoke on planting regulations within the cost sharing programs. The meeting took place at the Headland Experiment Station and was very informative.

DISTRICT 7 Monroe County forestry personnel and the U.S. Army Corps of Engineers are designing a litter program for elementary school children and will be presenting it to school children in the near future.

On Oct. 6 Monroe County personnel hosted 13 Southeastern management chiefs and their respective counterparts from game and fish conservation departments.

Monroe County personnel and the **Monroe County Forestry Committee** had their annual tour on Oct. 20. The tour consisted of visits to Frisco City Manufacturing, Temple-Inland and a Georgia Pacific Plywood Mill.

Covington County once again topped the state in CRP sign-ups. Covington County personnel **Tammy Ellis, Terry Daughtry, Gary Thompson** and **Dwight Rathel** completed the work in record time.

Smokey Bear was present at the Covington County fair which was held

Oct. 31-Nov. 4. Covington County Supervisor **Tammy Ellis** worked with the **Covington County Volunteer Association** to distribute fire prevention literature.

Forest Ranger **Terry Daughtry** and Smokey were present at the annual Red Level Armadillo round-up. Proceeds went to help the **Red Level Rescue Squad**.

Forest Ranger **Gary Thompson** was an equipment instructor at the Fall Academy. Gary spent two weeks teaching techniques on the basics of equipment maintenance and operation.

Covington, Butler and Crenshaw counties had a vendor training session on Oct. 11. Supervisors **Brandon Burkett, Tim Money** and **Tammy Ellis** attended along with Management Specialist **Gib Burke** and District Secretary **Ruth Carden**. Vendors were briefed on the new specifications for this planting season.

Tammy Ellis and **Gary Thompson** presented a fire prevention and environmental program to the fifth grade at the **Floral City School**. The students were given Smokey Bear literature and lessons on fire suppression and prevention.

The **Wiregrass RC&D Committee** held a tax workshop at the Covington County Bank building on Sept. 20. Ozark RC&D Forester **Barry Lawrence, Tammy Ellis** and **Gib Burke**, along with private landowners, were given the latest information on tax laws by H and R Block representative **Jeanne McDaniels**.

Forestry Academy graduation ceremonies were held on Oct. 28 in Selma for Escambia County Forest Ranger **Junior Stokes** and Conecuh County Forest Ranger **Robert Taylor**.

The **Butler County Forestry Planning Committee** held its fall tour on Oct. 19. Topics covered were site mechanical thinning operation, effects of herbicide, hardwood management, tree planting specifications and natural regeneration. A tour was taken of Union Camp Canter Mill Operation and Plywood Plant. Speakers were **Tim Craig, Marvin Odom** and **Frank Croley**, all of Rocky Creek Logging, **Tom Cambre** and **Gib Burke** of the AFC, and **Bill Garbett** of Union Camp. Lunch was compliments of Butler County Alfa Committee at the Rocky Creek Inn. Approximately 65 people attended this tour. This was an exceptional tour and compliments and praise go to **Roy Kendrick, SCS**, and the entire **Butler County Forestry Planning Committee** for a job well done.

Victor Howell and **Robert Taylor**, Conecuh County, presented a Smokey Bear program to the first and second grade at **Conecuh County High School**. They also visited the Brooklyn Day Festival during October.

Howell and Taylor were both part of the team sent to Montana to help fight fires in the Scapegoat National Forest.

Howell held a forest tour for 12 members of the **Conecuh County Vocational Ag** class at the Conecuh County office.

Escambia County Supervisor **Robert Knowles** and Management

Specialist **Gib Burke** reinspected the TREASURE Forest property of **Robert Hawkins**.

A forestry and military cooperators meeting was held in Escambia County on Oct. 12 at T.R. Miller Mill Company's Why Not Camp. District Forester **Robert Dismukes** and **Frank Jones**, vice president woodlands manager with T.R. Miller, gave the introduction and welcome. Topics covered were prescribed burning by **Hugh Mobley**, AFC; industry's point of view by **Paul Padgett**, area forester with T.R. Miller; presentation and explanation of prescribed burning map by **W.W. Greene, Jr.**, Florida Division of Forestry; open discussion held by **John Webster**, Forestry Center Manager, Florida Division of Forestry. A tour was given of T.R. Miller Mill field and mill operations.

Special guests in attendance were **Harold K. Mikell**, Florida State Forester, **C.W. Moody**, Alabama State Forester, U.S. Navy Commander **S.W. McDermaid**, Training Air Wing Five, and Captain **Paul Pedisich**, Commanding Officer Training Air Wing Five, both from Whiting Field, Milton, Florida. Approximately 70 people attended this meeting.

DISTRICT 8 Grant checks were issued to Mobile County Volunteer Fire Department Chiefs at the Mobile County Fire Chiefs Association meeting on August 1. **Bobby McAdams, Jim Wade**, and **Charlie Carpenter** of Mobile County, and **Charles Rawls** were present at the meeting.

On August 30 **Chuck Quinn**, Choctaw County supervisor, and Forester **Greg Kelsoe** held an instruction session on tree identification for Choctaw County 4-H members.

District 8 personnel responded to the call for assistance in fighting the fires that were burning out West during September. **Charles Rawls**, Mobile County Rangers **Bobby McAdams** and **Tim Kelly** and **Earnest Hunt**, Clarke County ranger, spent 15 days fighting fires in Montana.

Mobile County associates participated in the Mobile Fire Department 100th Anniversary Celebration which began on Friday, September 30 with a reception at Fort Conde. **Ray Tucker**, Chief of the RCFP Section in Montgomery joined Mobile County Supervisor **Steve Lyda**, Mobile County Rangers **Jerry Dwyer, Aaron Hunt, Bobby McAdams, Mike Sealey**, and **Jim Wade**, District Forester **Stanley Anderson** and **Melanie Curry**, District I&E Specialist at the reception. On Saturday, October 1, two Forestry Commission fire suppression units were on display with other fire fighting apparatuses from fire departments all over the state. Several volunteer fire departments were represented. Smokey Bear on was hand for the event during the day. A parade of the fire fighting units was held that afternoon through downtown Mobile.

Alabama PALS sponsored a picnic for the volunteers who participated in

the Alabama Coastal Cleanup. The Coastal Cleanup was part of a nationwide effort in cleaning up the beaches of the U.S. The Alabama Cleanup was organized by ADECA, Ala. Dept. of Environmental Management, Dept. of Conservation, and local and county governments in Mobile and Baldwin Counties. Beaches from Fort Morgan to Romar Beach were cleaned up with the picnic at the Gulf Shores State Park Beach Pavillion. **Melanie Curry** and **Charles Rawls** of the district office along with **Lynn Booth** assisted **Spencer Ryan**, executive vice president of PALS with the picnic. State Forester **Bill Moody** joined the group for lunch. Approximately 300 people participated in the cleanup which was deemed a great success!

Stanley Anderson and **Melanie Curry** attended a Cooperators Meeting in Brewton on October 12. Forest industry and military aviation representatives were present for the meeting and tour of the **T.R. Miller Saw Mill** operations.

On October 20 the **Choctaw County Forestry Planning Committee** hosted a tour of **Linden Saw Mill**. Several landowners participated in the tour. County Supervisor **Chuck Quinn**, Choctaw County Forest Ranger **Pete McInnis**, and **Melanie Curry** were present for the tour. After the tour the group had lunch courtesy of Linden Saw Mill. Following lunch **Bill McKee** of James River Corporation gave a presentation on the future of hardwoods in Alabama.

Clarke County Forestry Planning Committee sponsored a tour of **Boise Cascade** paper and sawmill in Jackson Alabama on October 27. Several landowners were present along with students from **Clarke County High School**. The Forestry Commission was represented by **Benji Elmore**, county supervisor, and Clarke County Rangers **Tim Kelly, Earnest Hunt**, and **Randy Kinman**. **Stanley Anderson** and **Melanie Curry** participated in the tour.

Congratulations to **Steve Lyda, Charlie Carpenter**, and **Michael Jordan** on their graduation from the 1987 Forestry Academy. They received diplomas at the graduation exercises held in Selma on October 28. **Steve Lyda** was recognized as having the highest peer rating and as an academy honor graduate.

DISTRICT 9 On August 31 District 9 hosted a vendor training session on proper tree planting in Russellville. **Bill Padgett** and **David Hoge** from the AFC headquarters in Montgomery were two of the special guests at the day-long meeting, designed to provide local tree planting vendors with the proper methods of tree planting to insure seedling survival.

September 2 was a busy day in District 9. County supervisors, district staff, pest specialist **Jim Hyland** and Assistant State Forester **Charles Pigg** were among those in Russellville for a Southern Pine Beetle Cooperators meeting. The purpose of the training session was to bring AFC associates and industrial cooperators together to

exchange information on the current SPB epidemic in the district as well as review control methods. Following the training session, Mr. Hyland and Mr. Pigg were the guest speakers at a SPB press conference held at the district office in Florence.

District 9 Fire Specialist **Mike Lanier** was one of 20 AFC associates that traveled out west for fire duty. After snow and cold weather for two weeks, Mike was glad to get back to the South. Following Mike's return, the *Times Daily* in Florence did a feature on his trip for a Sunday edition of the paper.

Colbert County Supervisor **Danny Deaton** and Information Specialist **Coleen Vansant** were guests at a "Question and Answer" newspaper interview at the *Times Daily* in Muscle Shoals. The feature story, which appeared in one of the newspaper's Sunday editions, was regarding **People Against Litter of the Shoals**, which Deaton is president, and **People Against A Littered State (PALS)**. Colbert County has an outstanding anti-litter group, and recently became the state's first county chapter of PALS, the statewide organization. PALS Executive Director **Spencer Ryan** was on hand to present the group their certificate during a September meeting. Some accomplishments of PAL of the Shoals include the following: cleaning up of over 40 of an estimated 140 illegal dumps in Colbert County; the issue of approximately 500 illegal dumping notices, with a 98 percent cleanup response; and the start of a litter education program in the county and city schools. PAL of the Shoals is currently being reviewed to become the state's first **PROUD PAL COUNTY**, a program of the state PALS group to distinguish outstanding county anti-litter groups.

The southern pine beetle was the theme of the Morgan and Colbert County fairs held recently. The exhibits included a color photograph display stressing detection, control, and prevention of the beetle, literature and handouts concerning detection and control methods for the landowner, and samples of trees and bark that had been infested with the SPB.

The Development Division of the AFC recently visited to conduct their district review. Following county presentations on the first day of the review, the group met at McFarland Park in Florence to enjoy a T-bone steak dinner. Fire Specialist **Mike Lanier** was the chef for the evening and did an outstanding job cooking the steaks and roasting corn-on-the-cob.

PALS Executive Director **Spencer Ryan** and **Danny Deaton** were guest speakers recently at the Muscle Shoals Chamber of Commerce meeting held at the Right Track Restaurant in Tusculumbia. Spencer gave a presentation on PALS, the state organization, and Danny talked to the group about **PAL of the Shoals**.

District 9's Annual Forestry Camp was held on Nov. 15-16 at the **Bear Creek Education Center**. The following people assisted District 9 staff in instruction: **Rick Busch**, AFC Wildlife Biologist, **Don Murhoff**, Champion In-

ternational, **Joe Namie**, Forestry Instructor, Itawamba Jr. College, **Bill Bustin**, Consultant Forester. This workshop is in its fifth year and is sponsored by the W. Kelly Mosley Environmental Awards program. **Tony Avery**, **Louise Bone** and **Kathy McCollum** direct the camp each year.

District Forester **Gerald Steeley**, **Mike Lanier**, **Larry Lee**, **Steve McEachron** and **Danny Deaton** attended a law enforcement seminar sponsored by the Florence Police Department.

Fire Prevention Week was celebrated in all counties in District 9. Morgan County had more than 2,000 students attending fire prevention programs. **Larry Lee** held fire prevention programs in all Lawrence County Schools.

The **Red Bay Garden Club** visited the Hopkins Ranger Station in Hamilton. They toured the new office facility and the nature trail.

District 9 welcomes three new associates—**Billy Rye**, staff forester at District 9 Headquarters, **Paul Beverly**, forest ranger II assigned to Morgan County and **Tony Montgomery**, ranger I assigned to Lawrence County. These men have completed the Fall Academy.

Reginald Wright, forestry worker, graduated from the Forestry Academy Oct. 28.

DISTRICT 10

Macon County Forestry Planning Committee was recognized as the State Outstanding Forestry Planning Committee at the 5th Annual TREASURE Forest and Landowner Conference. Field tour for the conference was held in Macon County at the **Windcreek Plantation** owned by **Jim Wilson, Jr.** District 10 associates did an excellent job in helping get this annual tour accomplished.

At the August Soil Conservation District Meeting in Bullock County, **Bryar Hill Farm** landowner **Jim Norton** was presented the Conservation Award.

Plans for the 1989 Forestry Field Day in Bullock County at the **Sedgefield Plantation** are in full swing. Keep up the good work **Bullock County Forestry Planning Committee!**

Montgomery Station WSAF-TV 12 reviewed the severe SPB outbreak in Elmore County with Elmore County Supervisor **Lynn Justiss** and Bama Wood representative **Billy Brooks**.

Sharon Clark, urban forestry coordinator, trained members of the **Wetumpka Tree City Committee** and Elmore County AFC personnel to carry out a tree inventory in August. Wetumpka is the first city to use the AFC Tree Inventory Computer Program.

Bullock County Supervisor **Otis French** commends Forest Ranger **James Thomas** on the excellent work he has done in reducing the SPB problem in Bullock county this past spring, summer, and fall.

Sandy Ridge Volunteer Fire Department held an open house of a new fire department building in October. Lowndes County Supervisor **Bill Davis** acted as chief cook.

Bullock County Ranger **James Thomas** and Forest Products International Trade Specialist **Mark Beeler** recently met with the Bullock County Development Board to discuss the possibilities of getting more forest industry established in the county.

Otis French and Montgomery County Supervisor **Bruce Johnson** met with the **Bullock County Forestry Association** recently. Guidelines were set up to get landowner participation and interest. Landowners were selected to serve on a landowner's board after a tour of Union Camp's nursery at Inverness.

Russell County Associates **Melvin Phelps** and **David Boozer** attended the Soil Conservation Service Annual Meeting where landowner **Bobby Jones** received the Landowner Award for Management of Timber.

The **Macon County Forestry Planning Committee** sponsored "Learning From Success," a Small Landowner Conference, at Tuskegee University. Over 100 people attended and listened to such speakers as Representative **Jenkins Bryant**, **Bruce Baldwin** of the U.S. Forest Service, **Chester Thigpen**, Commissioner for the Mississippi Forestry Commission, and **Doug Schofield**, President of the Wildlife Federation.

Lee County Ranger **Jimmy Kenney** taught a brush fire class to students from four Lee County fire departments.

In Lee County, a county-wide referendum vote to set up fire districts passed with a three to one margin.

Congratulations go to **Southwest Lee County Fire Department** for receiving 2nd Place overall at the annual Fire Fighters' Day.

William and David Hornsby's TREASURE Forest in Elmore County was the site of the 1988 annual tour. Topics discussed were wildlife food plots by **Lee Stribling** of the Extension Service, thinning by **Lock Hunter**, a consultant, and prescribed burning by **Lynn Justiss** and **Jim Foreman** of the AFC. The tour was concluded with a demonstration of chemical site preparation by **Edward McCullers** and **Marvin Cox** of Central Alabama Reforestation Inc. **Mr. Lloyd Emfinger** of Tallassee was awarded TREASURE Forest certification.

Elmore County Forestry Landowners Association elected **Edward Dennis, Jr.** to serve as chairman for 1988-89.

Smokey Bear, alias District Fire Specialist **Cliff Cobb**, has been very busy lately. He acted as the Grand Marshall of Rock n "S" Rodeo Parade in Eclectic, attended Loachapoka Fire Department Syrup Sopping Day, presented plaques to Representatives **Richard Laird** and **Perry Hooper** for their support of forestry legislation, and has visited more than 10 kindergartens and elementary schools.

Elmore County Supervisor **Lynn Justiss** presented a program to the **Wetumpka Lion's Club** on forestry and its importance to Elmore County.

Montgomery County Ranger **Tommy Wilson** has been busy giving forestry programs to schools and has

also been seen as an alias to Smokey Bear.

The **Montgomery County Forestry Planning Committee** is planning a prescribed burning demonstration February 8, 1989 in the LaPine area. The location will be announced later. For more information contact Montgomery County Supervisor **Bruce Johnson** or the Montgomery County Forestry Planning Committee.

The experts of District 10 showed their color by helping teach classes during the Fall Forestry Academy and other ranger training. **Cliff Cobb** helped train academy students to drive our big equipment. Management Specialist **Robert Wiggins** showed his expertise when teaching surveying. During the last ITC ranger training Lee County Supervisor **J.B. Coker** again showed his wisdom when it comes to public speaking.

Congratulations to Lowndes County Forest Ranger **Juan Burnette** on his graduation from Forestry Academy. He received the highest score in aerobics.

The Annual Area Forest Meeting and Tour was held in Russell County at the **Cedar Heights Plantation** owned by landowner **Louis Holmes**. The tour, entitled "Management of Mixed Stands," was sponsored by the Alabama Forestry Planning Committee and the Alabama Forest Regeneration Committee. Counties represented from District 10 were Bullock, Lee, Macon, Montgomery and Russell.

Lowndes County Supervisor **Bill Davis**, Lowndes County Ranger **Juan Burnette**, District Staff Forester **Sharon Clark** and Lowndes County Agent **Sam Wiggins** planned the meeting in response to several requests for information on forest taxation.

Congratulations to **Sharon Clark** for her promotion to a staff forester from a county supervisor trainee. Sharon is the first woman forester to hold a fully permanent district staff forester position.

District 10 honored **Tom Bell** with a barbecue cook-out on Sept. 28 at Lagoon Park for his retirement.

Tonee Thomas attended the Southeast Division Conference of Professional Secretaries International in Birmingham in October. Over 800 member secretaries from the Southeast were in attendance.

CALENDAR*

January 21—WVTM-TV Channel 13, 6:30 a.m. Forester Barry Lawrence will discuss pine straw production.

April 4-6—Long Beach, Mississippi. Symposium on the management of longleaf pine. Contact Roger W. Dennington, USDA-Forest Service, 1720 Peachtree Rd., NW, Atlanta, GA, 30367, (404)347-3551.

April 18-19—Atlanta, Georgia. Pine-Hardwood Mixtures: A Symposium on Management and Ecology of the Type. Contact: F. Thomas Lloyd, USDA-Forest Service, Clemson University, Clemson, SC 29634, (803)656-4863.

Alabama's TREASURE Forest Planning Guide

JANUARY

- Plant trees
- Install fire lines (dry sites)
- Conduct prescribed burning
- Conduct timber salvage harvests on beetle spots
- Conduct timber harvesting on dry sites
- Establish wood duck nest boxes or clean out existing boxes
- Clear food plot openings
- Conduct food plot soil tests
- Apply herbicides in food plots (contact Auburn Extension for specific recommendations)
- Conduct mechanical site prep (dry sites)
- Wildlife food plot plantings (contact SCS or Auburn Extension for specific planting information)
 1. Bicolor lespedeza (seedlings)
 2. Lespedeza thunbergii (seedlings)
- Harvest deer, quail, squirrel, rabbit, dove, waterfowl

FEBRUARY

- Plant trees
- Install fire lines (dry sites)
- Conduct prescribed burning
- Conduct timber salvage harvests on beetle spots
- Conduct timber harvesting on dry sites
- Establish wood duck nest boxes or clean out existing boxes
- Clear food plot openings
- Conduct food plot soil tests
- Apply herbicides in food plots (contact Auburn Extension for specific recommendations)
- Conduct mechanical site prep (dry sites)
- Wildlife food plot plantings (contact SCS or Auburn Extension for specific planting information)
 1. Common lespedeza
 2. Kobe lespedeza
 3. Korean lespedeza
 4. Partridge pea
 5. Dallis grass
 6. White clover
- Harvest quail, rabbit, snipe

MARCH

- Late tree planting early part of month
- Conduct prescribed burning
- Conduct timber salvage harvests on beetle spots
- Timber harvesting on dry sites
- Spring turkey season starts—see exact date for your county
- Fusiform rust spores noticeable (orange-colored spores)
- Chemical herbaceous weed control application—**OUST**
- Eastern tent caterpillar present
- Conduct mechanical site prep
- March wildlife food plot plantings (contact SCS or Auburn Extension for specific planting information)
 1. Bahia grass
 2. Bicolor lespedeza
 3. Common lespedeza
 4. Corn
 5. Kobe lespedeza
 6. Korean lespedeza
 7. Lespedeza thunbergii (Seed)
 8. Partridge pea
 9. Sericea lespedeza
 10. Weeping lovegrass
 11. Bermuda grass
 12. Dallis grass
 13. White clover
- Conduct food plot soil tests
- Apply appropriate food plot herbicides (contact Auburn Extension for specific recommendations)
- Remove standing water from greentree reservoirs
- Bush-hog herbaceous openings

APRIL

- Early part of month—prescribed burning
- Conduct herbicide application and herbaceous weed control using **OUST** and **ATRIZINE**
- Conduct timber salvage harvests on beetle spots
- Conduct timber harvesting on dry sites
- Close roads to potential turkey nesting sites if turkey management is desirable (end of month)
- Spring turkey season ends—see exact date for your county
- April wildlife food plot plantings (contact SCS or Auburn Extension for specific planting information)
 1. Bahia Grass
 2. Bicolor lespedeza (Seed)
 3. Browntop millet
 4. Corn
 5. Lespedeza thunbergii (Seed)
 6. Sericea lespedeza
 7. Sunflower
 8. Weeping lovegrass
 9. Bermuda grass
 10. Dallis grass
 11. Egyptian wheat
 12. Johnson grass
 13. Forage millets
 14. Sorghum-Sudan hybrids
 15. Sudan grass
 16. White clover
- Conduct food plot soil tests
- Bush-hog herbaceous openings (early April)



Alabama's Rural Bridges Need Major Repairs

Modern Timber Bridges—an Attractive Option

by JIM GOBER, Utilization Specialist, Birmingham

Bridges serving Alabama's rural areas are in bad shape and need costly repairs, according to data from the Alabama Highway Department and U.S. Department of Transportation. Over 470,000 rural bridges are currently in use in the U.S. and that figure represents

more than 80% of the nation's bridges. Surveys have indicated that nearly one half are deficient for structural or functional reasons. About 87 percent of the inventoried timber bridges are located in 19 states. Nearly two-thirds are located in the nine states of Alabama, Arkan-

sas, Iowa, Kansas, Louisiana, Mississippi, Nebraska, Oklahoma, and Texas. Of the total number of bridges in Alabama, 21 percent, or nearly 3200, are timber bridges with spans over 20 feet.

Many of Alabama's bridges were built in the 1930's and 40's. There are many

more smaller span bridges on local and secondary roads. Many of these need to be replaced. The Alabama Highway Department is in the process of posting functionally deficient rural bridges to limit danger to the public. Every passing day increases the economic and social impacts on rural Alabama communities caused by deficient bridges. Alabama's timber industry is being adversely affected by the inaccessibility to vital transportation routes needed to move raw materials and products. Not only transportation, but routes to hospitals, schools, fire protection, trade area access and recreation are being adversely impacted by deficient bridges.

An Attractive Option

Because of the seriousness of the rural bridge problem and the cost of making improvements, the Alabama Highway Department and county engineers are focusing their attention on the economical replacement and rehabilitation of rural bridges. The rural bridges in Alabama have been built using steel, concrete, and treated wood or a combination of all three materials. Where practical, treated timber bridge materials should be considered as a viable solution to help alleviate the rural bridge problem.

According to Bill Penayar, assistant director of Cooperative Forestry for the Forest Service, modern advances—such as the use of pre-stressed and glue-laminated timber—have made the contemporary timber bridge an increasingly attractive option to small, local road crews. Such crews are typically found in rural areas and their access to construction equipment is generally limited to smaller, more commonly available cranes.

Other advantages include the following:

- Timber bridge materials are lighter relative to concrete and steel.
- Simpler installation requirements and pre-fabricated bridge sections, makes it possible to use local road crews for bridge installation and maintenance.
- The aesthetics of using wood makes a timber bridge a more attractive option in many settings.
- Timber bridges last a long time in comparison to other types of bridges. The expected life of a timber bridge currently in use in the U.S. is about 50 years. This exceeds the life of the typical steel or concrete bridge by

TABLE I

Cost Comparison in 1979 Dollars

Type of Bridge	Cost*	Life Expectancy Yrs
Glue-laminated timber	50,000	50
Reinforced concrete	95,000	15
Open steel grid	105,000	15
Concrete-filled steel grid	113,000	15

*(Relative costs of timber, steel, and concrete bridges vary widely and are very site-specific.)

TABLE II

Expected Service Life of Existing Timber Bridges in U.S. with Spans Over 20'

Expected Service Life	# of Timber Bridges	% of Total
Less than 30 years	5,857	11
30-50 years	17,891	35
51-70 years	22,924	45
71-90 years	3,229	6
More than 90 years	1,389	3

as much as 20 years. Some timber bridges are already more than 100 years old.

- Because of the longevity of the timber bridges, cost savings can be realized over the life of the bridge.

treated wood products for the replacement or rehabilitation of deficient bridges.

Marketing Initiatives

Much work needs to be accomplished if wooden bridge construction is to become as common as in previous years. There are many factors explaining the lack of acceptance of wood bridge construction. The major factors seem to be these:

- There is a common perception that wood, and wood bridges, are not durable and will not give long service.
- The fact that wood bridges can be designed to carry whatever loads are necessary is not understood.
- Engineers are not familiar with wood design procedures and are accustomed to designing with concrete and steel.

Economic Opportunity for Wood Products Industry

There is an opportunity existing today to utilize locally produced wood products to replace or rehabilitate existing bridges in Alabama. Alabama has over 200 sawmills producing products that can be treated at its 49 treatment plants. The 1982 wood treatment industry in Alabama showed a value added to the timber base at \$58.4 million. The value of shipment of treated wood products was \$173.5 million. Treated pine and hardwood products have a solid niche in today's market. Alabama's forest products industry, already a strong segment of the economy, would certainly benefit from an increased utilization of

- Standards for wood bridges in Alabama are out of date and inadequate for present needs.

Marketing initiatives are being directed by way of the Alabama Forestry Legislative Study Committee of the Alabama Legislature to address these deterrents to greater acceptance of wood bridges. Some of the proposed objectives are as follows:

- Develop a design standard acceptable to the Alabama Highway Department for timber bridge construction.
- A series of timber bridge workshops for county engineers will be held across Alabama.
- Develop and enhance course curricula for timber bridge construction for Alabama's engineering schools.

The strategy proposed by the members of the Alabama Legislature and others is to aim the primary effort at the individuals who make the decisions about what type of bridges will be used on rural roads. In most situations, these individuals are the county engineers.

Summary

The modern timber bridge is an alternative that should be considered as a solution to Alabama's worsening bridge conditions. Timber bridges are cost competitive while at the same time supporting local economics and improving transportation.

Technological advances in the timber bridge construction methods have made properly treated wood a practical and safe alternative to steel and concrete materials. Timber bridges are simple to design and construct. And finally, the characteristics of wood make it durable and reliable, thus prolonging bridge life with less maintenance costs.

Clearly the modern timber bridge is a viable alternative to solving Alabama's bridge problems.

References

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- Mark, Larry. **USDA NEWS**, July, 1987, Page 1.
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Photo Courtesy of Colorado State University

SCS Continues Conservation Plans

We have passed the 70 percent mark in developing conservation plans required under the Food Security Act of 1985, says Ernest Todd, state conservationist of the U.S. Department of Agriculture's Soil Conservation Service. Conservation plans have been completed for more than 1,131,000 acres, 70.4 percent of the estimated 1,741,073 acres of highly erodible cropland in Alabama needing plans.

"Our goal is to have had 80 percent of the plans completed by the end of 1988," Todd said, "and the remaining 20 percent completed by the end of 1989. We are on target, but I urge farmers to act now if they have highly erodible land that needs a conservation plan."

Todd said that it is SCS's job to help farmers reduce erosion on their cropland and stay in business. "It's a mistake to

postpone requesting a conservation plan until the last minute," he said, "because by then there may be a long wait for the technical help to develop it."

To stay eligible for USDA programs, farmers and ranchers who farm erodible cropland must have a conservation plan approved by December 31, 1989. They have until December 31, 1994, to implement the plan. ☐

Set Your “Sites” on the Best Results



by DAVID A. HOGE, Productivity Forester

The likelihood of a certain kind of tree being found in a given location is dependent upon a number of physical and biological factors. Tree growth is influenced by the genetic abilities of a species and the environment. Environmental influences include climatic factors, such as air temperature, precipitation and wind; soil factors such as composition, depth and moisture; topographic characteristics, such as slope, elevation and aspect; and competition, such as the influences of other trees, lesser vegetation, and animals.

The sum of all these environmental factors determines site quality. When a site has favorable growing conditions, it is considered “good.” When a site has in-

hibitive growing conditions it is considered “poor.”

Site quality is often expressed in terms of site index. Site index is the relationship of height to age of dominant and codominant trees of a given species in a stand. Good sites have site indices greater than 75, poorer sites are indicated by lower site indices.

Environmental conditions may favor one species over another; therefore, site quality must be considered by individual species. Some species have more general requirements and can be found on a number of different sites. Other species are more site specific. An example of site specificity is bald cypress. A poor competitor on upland sites, bald cypress does

quite well on wetland sites where it has a competitive advantage over other trees.

For management decisions, a good indication of which trees will survive and grow on any site is those species already present. Previous mismanagement of existing forest stands or the absence of existing timber may cloud the picture.

While the interaction of environmental factors as a whole determines the suitability of a site for a given species, perhaps no factor is more important than that of the soils present. A recent soil survey is a good reference for determining species-site suitability. In the woodlands suitability section of the soil survey, site indices for selected tree species are given for similar soil types. Contact your local

county office of the Soil Conservation Service (SCS) for information regarding soils in your area. Additional references, such as the decision key developed by Baker and Broadfoot, are valuable tools in the management decision process.

Selected Species Description

What follows is a brief description of site requirements for a number of important tree species in Alabama.

Loblolly Pine. Because of its wide range, occurrence in pure stands, abundance, and versatility in use, loblolly pine is the principal commercial pine species in the southeastern United States. Loblolly pine grows on a wide variety of soils, from the flat, poorly drained soils of the lower Coastal Plain to the well-drained soils of the upper Piedmont. It grows best in soils with poor surface drainage, a deep surface layer, and a firm subsoil. Such soils are common in the lower Coastal Plain and in the flood plains of the larger rivers. Prominent examples are the Coxville, Bladen and Elkton soil series. In the Piedmont region, loblolly pine grows better on soil series such as Durham, Appling, Cecil and Davidson.

Loblolly pine site indices generally increase from ridgetops to bottoms but this variation seems to be related to soil differences rather than slope position or steepness.

Pure loblolly pine stands are widespread where moisture is comparatively plentiful. Generally the main associate in the loblolly pine type is sweetgum, but on well-drained sites, shortleaf pine, southern red oak and post oak are frequently found with it. On poorly drained sites, common associates of loblolly pine include blackgum, water and laurel oak, yellow-poplar and slash pine.

Loblolly pine also does well when grown in a mix with a number of hardwood species. On wet sites, these associates include sweetbay, redbay, blackgum, sweetgum, water oak, red maple, white and green ash and American elm. On drier sites, loblolly pine will be found in mixed stands with southern red oak, northern red oak, white oak, hickory and persimmon.

Longleaf Pine. Longleaf pine is found from southeastern Virginia to east Texas, seldom more than 150 miles from the coast except in the Appalachian foothills of northern Alabama and Georgia. Longleaf pine is frequently found growing on soils low in organic matter, light-colored, moderately to strongly acidic

with sandy surface layers. Examples of soil series on which longleaf pine will be found include Norfolk, Orangeburg, Ruston, Lakeland, Coxville, Leon and Plummer.

On sandy, infertile sites, trees found in association with longleaf pine include turkey oak, bluejack and blackjack oak, and sand post oak. On moister sites, slash pine, loblolly pine, dogwood, southern red oak, water oak and sweetgum can be found growing with longleaf pine.

Slash Pine. Slash pine is one of the most important commercial pines of the southeastern United States and one of the species worked for naval stores. The soils within the natural range of slash pine are usually sandy and underlain with poorly drained hardpans eighteen inches below the soil surface. Slash pine makes its best growth on pond margins, or along creeks, bays and other minor drainages. With better fire protection, the species has spread to some of the sandhills, scrub oak ridges and less sandy soils of the middle Coastal Plain.

Slash pine will be found growing along with longleaf pine; post, laurel and water oak; loblolly pine; American elm; sweetbay; swamp tupelo; red maple and bald cypress.

Cherrybark Oak. Cherrybark oak is a bottomland hardwood species frequently found on the best sites in river or stream bottoms and on well-drained terraces and colluvial sites of the southeastern Coastal Plain and the Mississippi Delta. While a lowland species, cherrybark seldom does well on wet or swampy soils. Rather, it develops best on loamy, well-drained soil.

Cherrybark oak will be found growing with American beech, southern mag-

nia, yellow-poplar, hickory, swamp chestnut oak, southern red oak, blackgum and sweetgum.

Southern Red Oak. Southern red oak is characteristically an upland species and usually occurs on the dry ridgetops and upper part of slopes facing south and west, rather than on the more moist lower slopes and bottomlands, or north and east aspects. However, occasionally southern red oak occurs along streams in fertile bottoms and here attains its largest size.

Common associates of southern red oak include loblolly, longleaf and shortleaf pine; white oak; black oak; scarlet oak; post oak; blackgum, sweetgum and hickory.

Water Oak. Water oak is found along stream bottoms, on the margins of Coastal Plain swamps, and on deep, moist upland soils. The best sites are alluvial bottoms; the better-drained, silty, clay, or loamy ridges; or the borderline sites between flats and ridges.

Loblolly and slash pine, swamp chestnut oak, cherrybark oak, sweetgum, American elm and green ash will frequently be found growing along with water oak.

White Oak. Found throughout the eastern United States, white oak grows on a wide range of soils and sites. It is found on sandy plains, gravelly ridges, rich uplands, coves, and well-drained bottoms.

This species develops best on deep, well-drained loamy soils. White oak grows well on all upland aspects, slope positions and ridgetops within its range except extremely dry, shallow soil ridges, poorly drained flats, and wet bottomlands. White oak develops better on northerly and easterly lower slopes and





coves, but is more abundant on south and west-facing slopes, though generally, individual trees are of smaller size.

White oak grows with many other tree species including other upland oaks, hickories, yellow-poplar, American basswood, white ash, black cherry, sweetgum, blackgum, shortleaf and loblolly pine.

Green Ash. In spite of the fact that natural stands of green ash are almost completely confined to bottomlands, this species grows well when planted on moist upland soils. It has been one of the most successfully planted hardwoods in the Great Plains shelterbelts; and similar results are expected with planting it in soil types common to the "black belt" region of the state.

Green ash is found most commonly on alluvial soils along rivers and streams and less frequently in swamps. It is common on land that is subject to flooding once or twice a year and remains healthy even if inundation lasts up to 40 percent of the growing season.

Found growing along with green ash will be sugarberry, American elm, box elder, red maple, sweetgum, American sycamore, eastern cottonwood, willow oak and black willow.

Yellow poplar. For good growth and form, yellow poplar is exacting in soil and moisture requirements. Natural stands of yellow poplar are usually found on moist, well-drained, loose-textured

soils. It rarely grows well in very dry or very wet situations. Found throughout the eastern United States, toward the southern limit of its range, where high temperature and soil moisture may be limiting, yellow poplar is usually confined to well-drained stream bottoms. Studies have shown that on certain sites, yellow poplar productivity can be predicted by comparing it with loblolly pine as growth rates are similar.

On bottomlands and the better drained soils of the Coastal Plain, yellow poplar will be found along with blackgum, bald cypress, red maple and several oaks. In the Piedmont, associated species include the oaks, hickories, sweetgum, blackgum, American elm and loblolly pine.

Sweetgum. Sweetgum is very tolerant of different soils and sites but grows best on rich, moist, alluvial clay and loam soils of river bottoms. Sweetgum will be found growing along with northern red oak, hickory, pin oak, yellow poplar, willow oak, loblolly pine, slash pine, longleaf pine, swamp chestnut oak, cherrybark oak, sycamore, American elm, and bald cypress.

The kinds of trees present on a given site are the result of a number of physical and biological factors. Perhaps the most important factor is the type of soils on the site. Excessively wet or dry sites will support fewer tree species than more ideal sites. For example on wet sites, slash pine, swamp chestnut oak, bald

cypress and swamp tupelo may be the limit of possible selection alternatives. Whereas on more ideal sites, those which are fertile, moist, and well-drained, any of the Southern hardwoods and loblolly pine will do well. On dry upland sites, due to lack of available water and fertility, your species selection is again limited.

In developing mixed stands, species selection must be such as to allow different species to complement rather than totally compete with one another. An example is a loblolly pine-sweetgum mixture. Sweetgum is slightly more tolerant and will survive in less than full sunlight and eventually occupy openings in the pine canopy such as those created by southern pine beetle.

Finally, before engaging in any forest management activity, it is necessary to consult with a professional soil scientist and registered forester to determine what is best for your given site and situation.

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Drought and Forest Productivity

by DAVID A. HOGÉ, Productivity Forester

There are a number of ways that forest productivity is affected by drought. The nutrient cycle, important as it is, is made possible only by the circulation of water from the soil through the roots to the foliage, to the atmosphere, and from the atmosphere back to the soil. Soil nutrients must be in an ionic state before being absorbed, and this requires the presence of soil water.

The water cycle, therefore, is as important as the nutrient cycle. Water is often a limiting factor in determining the distribution and growth of forests. Tree growth responds more to water stress than any other perennial factor of the forest site. Height and diameter growth of trees is highly correlated with environmental moisture stress. In temperate climates moisture deficits during the middle of the growing season affect growth during both the current and succeeding growing seasons. The significance of this impact depends on the timing and duration of the drought and the species seasonal growth pattern.

Drought Fuels Other Problems

In addition to slowing tree growth, drought can cause mortality of trees under stress from other causes such as overcrowding, old age, mechanical injuries, disease and insects. Trees undergoing moisture stress are more susceptible to attack from various insects and diseases. The southern pine beetle immediately comes to mind. One only has to look at the list of counties currently listed as having epidemic populations of the beetle and compare it to previous precipitation levels to see the positive correlation.

Many studies demonstrate that water stresses normally occurring in fully stocked stands may be alleviated by silvicultural practices such as thinning or wide spacing of trees. Radial growth of residual trees is faster and more prolonged in thinned than in unthinned stands. Heavy thinning of loblolly pine stands may alleviate summer moisture stresses such that residual trees may continue to grow longer throughout the season.

Drought years leave their record in growth rings of trees, and the high correlation of ring width with summer water deficit is widely documented. Robert Zahner of Clemson University has developed a methodology for evaluating the effects of drought on forest productivity. Using historical precipitation data, he has shown that forest growth rates were as much as forty percent below normal in Alabama during the mid-1930's and mid-1950's, periods of below normal rainfall similar to that experienced in Alabama the last five years.

In addition to the decline in height and diameter growth and the direct mortality of trees, drought also causes a decline in reproductive growth. Seed production from the Alabama Forestry Commission's seed orchards is down by approximately 75 percent. It also appears that formation of conelets containing next year's crop is also off by this amount. This situation is primarily the result of the drought.

Seedling germination and establishment is also impacted by the drought. Poor seedbed conditions result in low germination and survival rates. Perhaps the effects of the drought are most visible in the survival of newly transplanted seedlings. Survival of newly planted tree seedlings is greatly influenced by the amount and timing of rainfall. Tree seedlings are already under stress due to the lifting, transporting and planting processes. It is imperative, for survival reasons, that soil conditions be favorable for prompt contact of seedling roots with surrounding soil and the uptake of available soil water and nutrients. A recent survey of last year's tree planting on non-industrial private forestland showed average survival statewide to be about 75 percent. However, a number of planted areas across the state have much lower survival rates. Drought is not always solely to blame for plantation failures. Rather, it is the colloquial nail in the coffin for other problems such as late season planting, shallow soil hardpans or problematic soil types, poor planting techniques, and failure to control grass and weed competition. ♣



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