



Alabama's **TREASURED Forests**

WINTER 1995

INDEX OF ARTICLES, 1982-1994

STATE FORESTER'S MESSAGE

by TIMOTHY C. BOYCE, State Forester



One of the greatest strengths we in the Alabama forestry community have is our ability to work together toward common objectives. Our ability to turn potential rivalry and “turf battles” into cooperative, productive, accountable and flexible relationships will serve us well as we face the challenges brought on by an ever changing world.

A recent report of the Southern Growth Policy Board, entitled *Measure by Measure the South Will Lead the Nation*, challenges us to build productive relationships within governments, across governments, between governments and the private sector, and between governments and their customers. We in Alabama are certainly meeting that challenge.

I would like to take this opportunity to welcome two people to this unique partnership: Ronnie Murphy, Alabama State Soil Conservationist, USDA-Soil Conservation Service (now called the Natural Resources Conservation Service), and Robert Joslin, Regional Forester, USDA-Forest Service. These gentlemen bring a wealth of experience to their new assignments. They also face

tremendous challenges within their respective organizations because they are undergoing major reorganization.

The functions of the newly legislated USDA-Natural Resources Conservation Service will include conservation compliance; technical determinations under conservation programs such as Water Bank, Swampbuster, Sodbuster, and others; as well as administrative authority over the Forestry Incentives Program.

The USDA-Forest Service has been designated as a “Reinvention Lab” by the White House and has pursued a large-scale internal study and public input process and is reportedly on the verge of announcing reorganization plans.

This is a time that we all should salute Ernest Todd, the previous State Soil Conservationist, for his outstanding service to our great state. He certainly made a difference and helped to make Alabama better for our people through his leadership.

Sincerely,

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

Timothy C. Boyce
State Forester

Commissioners

- Carol Jean Grisham, *Chairman*
- John Barfield
- Clifford J. Drouet
- Charlie Hamilton
- Randall Rogers
- Jimmy Samford
- Guice Slawson

State Forester

Timothy C. Boyce

Assistant State Forester

Richard H. Cumbie

Alabama Forestry Planning Committee

- Alabama Department of Conservation and Natural Resources
- Alabama Department of Education, Vocational Division, Agribusiness Education
- Alabama Farmers Federation
- Alabama Forestry Association
- Alabama Forestry Commission
- Alabama Soil and Water Conservation Committee
- Alabama TREASURE Forest Landowners Association
- Alabama Wildlife Federation
- Association of Consulting Foresters, Inc., Alabama Chapter
- Alabama Agricultural Experiment Station, Auburn University
- Alabama Cooperative Extension Service, Auburn University
- College of Agriculture, Auburn University
- Governor's Liaison for Environmental Affairs
- School of Forestry, Auburn University
- Tennessee Valley Authority
- USDA—Agricultural Stabilization and Conservation Service
- USDA—Farmer's Home Administration
- USDA—Forest Service, National Forests in Alabama
- USDA—Forest Service, Southern Region, State and Private Forestry
- USDA—Soil Conservation Service

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.

Editorial Board

- John C. Kummel Tommy Patterson
- Cynthia K. Page Coleen Vansant

Editor.....Kim Gilliland

Assistant To Editor.....Susan Martin

TECHNICAL ADVISORS

- Tom CambreHardwoods
- James Hyland.....Forest Health
- Louis Hyman.....Taxes
- Neil LetsonUrban Forestry
- Tommy Patterson.....TREASURE Forest
- Stan Stewart.....Wildlife
- Walter Vest.....Forest Law Enforcement

Alabama's TREASURED Forests

Volume XIV. No. 1

Winter 1995

CONTENTS

Sizemore & Sizemore Farms:
A Unique Family Tradition of Stewardship / by TILDA MIMS4

Appreciation Day Held for Firefighters / by HARRY KEPLER7

Overseas Lumber Markets Rebound / by MICHAEL FLORENCE9

Know the Value of Your Timber / by SAM LEWIS11

County Forestry Planning Committees:
A Success Story of Volunteerism / by LARKIN WADE and MARK DUBOIS12

Clay County Named Top Committee in 1994.....13

Site Preparation for the Private Landowner / by MAC PRINCE and JERRY SMITH.....14

11th Annual Alabama Landowner and TREASURE Forest Conference.....15

Helicopter Logging—
A Harvesting Method for Wetlands / by TOM TOMLINSON18

Alabama's TREASURED Forests Index of Articles, 1982-199419

Selma's School of Discovery / by DON BURDETTE25

Forestry Misconceptions: Part 1 / by BRIAN BRADLEY26

The Red Hills Salamander / by MARK A. BAILEY28

DEPARTMENTS

State Forester's Message2

Editor's Understory6

Threatened and Endangered Species8

Landowners Legislative Alert16

Hidden TREASURES30

Hardwoods of Alabama: White Oak32

COVER: Photo by Kenny Griffin.

Alabama's TREASURED Forests (ISSN 0894-9654) is published quarterly by the Alabama Forestry Commission, 513 Madison Avenue, Montgomery, AL 36130. Telephone 240-9355. Bulk rate postage paid at Montgomery, Alabama. POSTMASTER: Send address changes to: Alabama's TREASURED Forests, 513 Madison Avenue, Montgomery, Alabama 36130.

The Alabama Forestry Commission policy prohibits discrimination based on race, color, national origin, sex, age, religion or handicapping condition.



SIZEMORE & SIZEMORE FARMS: A Unique Family Tradition of Stewardship

by TILDA MIMS, Information Specialist,
Alabama Forestry Commission, Tuscaloosa

The descendants of Thomas Sizemore proudly claim a heritage of stewardship spanning almost 150 years.

Through the years, the 680-acre tract of Lamar County forestland abundant in timber, sparkling water and varied wildlife, has passed from generation to generation. In the early 1970s, Craig Sizemore and his sister Claire assumed responsibility of maintaining the family heritage.

A few small parcels have been added through the years to complete the 720-acre TREASURE Forest, Sizemore and Sizemore Farms. The farm was named

District I winner of the 1993 Helene Mosley Memorial TREASURE Forest Award.

The objective for Sizemore and Sizemore Farms is economically productive timber management that provides ample wildlife habitat for both game and non-game species.

Major Changes in Timber Management

With timber as their primary objective, the Sizemores made some major changes in their family's utilization of the land. "For

years the land had been high-graded, and the timber that was here was basically the junk that loggers had left," Craig said. "To return the property to a productive situation required just starting from scratch, and that's what we did in the early Eighties."

After careful consultation with the Alabama Forestry Commission and a forestry consulting firm, the decision was made to clearcut much of the area and regenerate to a more productive loblolly pine.

Most of the regenerated area was mechanically site prepared, some was



Persimmons are available for deer, birds and other wildlife.

sheared and root raked, and all was hand planted with superior seedlings.

Their decision to start again from scratch really paid off for Craig and Claire. "The first trees we planted had such dramatic growth that at 10 years of age we were able to do a prescribe burn and the first thinning at 11 years of age," he noted. "It was a unique situation."

The pine plantations are on a 30 to 35-year rotation until harvest. Regular thinnings are scheduled at 15 years and on an "as needed" basis until the final harvesting. Prescribe burnings are conducted every three years to reduce fuel and to encourage a healthy wildlife population.

The acreage now boasts 559 acres of planted pine flourishing under careful management and excellent site selection. The additional 19 acres of hardwood and pine/hardwood mixed stands prevents erosion along drains and provides wildlife habitat.

Wildlife Benefits Improve

Sizemore and Sizemore Farm's commitment to success is not limited to timber production, but carries over into wildlife management. They take every opportunity to protect and promote wildlife habitat.

Although the predominantly managed species is loblolly pine, care has been given to retain and protect a variety of species for both wildlife and aesthetic purposes. Hardwood trees were left in regeneration areas as individual stems,

clumps and along drains.

"Of the total acreage, we have 10 percent strictly for wildlife. These areas will not be cut, and will not be burned unless the burn would benefit the wildlife in those places," Craig said.

Almost seven miles of permanent firelanes and over two miles of access roads have been planted in permanent grass cover to prevent erosion and to serve as linear wildlife openings for deer and ground nesting birds. Windrows have been retained for habitat enhancement.

Eight wildlife food plots totaling four acres are generously scattered around the acreage. The food plots, targeted for winter grazing, include crimson clover, rye

grass, wheat, turnips and Australian winter peas. Hunting rights are limited to friends and family only, and are exclusively for white-tailed deer. Craig is actively enhancing the turkey population for future hunting opportunities.

A five-acre beaver pond has been preserved as good wetland habitat. Although his primary purpose for preserving the pond was simply because his family enjoys watching the beaver, the wetland has also provided excellent duck habitat. Many visitors report seeing ample wood ducks and mallards enjoying the secluded spot.

Around 25 acres are occupied by gas and oil wells that have proven to have had little impact on the land. In fact, wildlife has benefited from the open space and seeding of the well sites, according to Craig.

Craig owns and operates a successful beef cattle operation, "Fairview Farms," on land adjoining this TREASURE Forest. Fairview Farms includes 51 head of registered Black Angus. More than 150 acres of pastureland provide irregular edges attractive to wildlife. Row crops have been eliminated in recent years to expand the pasture, leaving around 30 acres for hay production.

The Sizemore family has been a vital part of forest management in Alabama for nearly 150 years. The original 680-acre tract, which began with land patents issued to Thomas Sizemore in 1855, has evolved into a highly productive TREASURE Forest setting, the pace for multiple-use forest management in the 1990s and well beyond. 🌲



The farm offers excellent hunting opportunities for white-tailed deer.

Food plots and seeded roads provide winter grazing for wildlife.

Editor's Understory

by TILDA MIMS, Information Specialist, Alabama Forestry Commission, Tuscaloosa

A Lamar County bank stores a collection of receipts, land patents and homestead certificates dating from the mid-1800s when Thomas Sizemore bought his first forestland for less than 13 cents an acre.

The signature of President Chester Arthur is a novelty, and a \$15 receipt for 120 acres of forestland can make for a lively discussion of inflation. But even more interesting is the current ownership documents in that vault that carry the same name—Sizemore.

Today Thomas Sizemore's great-grandchildren, Craig and Claire Sizemore, carry on a tradition rich in the heritage of stewardship. They added several purchases to the original 680 acres and now enjoy the 720-acre TREASURE Forest, Sizemore & Sizemore Farms, in the Fairview community of Lamar County.

The wooden cabin of Thomas Sizemore still stands. Once the site of the post office for Sizemore, Alabama, it is reputed to have been the scene of a meal or two served to Rube Burrows, "King of the American Train Robbers." For many of his outlaw years, Rube returned home to Lamar County under the guise of a successful Western cattleman to be treated well by friends and family. Later, his notoriety would spread to Alabama and he would be unable to travel so freely.

Thomas Sizemore willed each of his 10 children an equal portion of the



The Sizemores were honored at the 1993 Landowner and TREASURE Forest Conference as district winners of the Helene Mosley Award. Pictured left to right are Dr. Paul Parks, Auburn University; Claire Sizemore; Craig Sizemore holding April Sizemore; Beverly Sizemore; and John Yancy, U.S. Forest Service.

family farm. His son, Felix, purchased holdings from his brothers and sisters, and later willed the tract to his son Foster. Foster deeded the land to his children, Craig and Claire, in the mid-1970s.

Claire is a licensed travel agent in Birmingham and makes regular visits back home. Craig, his wife Beverly, and their daughter April live in Sulligent in Lamar County, and own Sizemore Insurance Company.

Craig manages the day-to-day operations and decisions of their jointly owned Sizemore and Sizemore Farms and is the sole owner of a registered Black Angus cattle operation, "Fairview Farms."

Although the two are separated by distance and professional interests, Craig and Claire's love of the land and pride in their forebears is a common bond. Craig noted during the Helene Mosley Award inspection that he can never go anywhere

on the property without thinking of his dad, because he loved the place so much. His only regret has been that their father didn't live to see the honor of being named District I winner.

TREASURE Forest landowners often refer to family and future, trusting their descendants to cherish the legacy of forest ownership they will leave behind. The Sizemores have passed down land from generation to generation for almost 150 years but, what is more important, they have succeeded in instilling respect and love for that same land.

Just ask Craig who he is doing all of his work for, and he'll quickly answer, "My little girl." One can easily imagine a similar scene years from now, as April Sizemore walks these woods and tells her family about Thomas, Felix and Foster Sizemore, and perhaps a little tale of Rube Burrows. ♣



Appreciation Day Held for Firefighters

by HARRY KEPLER, Alabama Forestry Commission, Montgomery

Firefighter Appreciation Day began 10 years ago with the first annual event being held in Prattville. The thought behind the event was to showcase the talent and ingenuity of volunteer firefighters across Alabama. This was accomplished by having a competition using various contests involving the use of firefighting apparatus, tools, and protective equipment.

One contest was the hose lay. Four firefighters began at the gun by putting on their gear, connecting hose to a water source. They then connected several lengths of 1 1/2 inch hose to extend 150 ft. and knocked down a target 25 ft. away with the water stream. Another contest involved a water bucket relay. A team consisting of four firefighters in full gear ran 25 yards and stood a 12 ft.-ladder against a scaffold, which had a 16-

gallon barrel on top. One firefighter mounted the ladder while the other three ran the bucket brigade. The team filling the barrel in the least amount of time won. Through the years some of the contests changed, but the competition remained intense.

In the beginning, Idaho Volunteer Fire Department in Clay County seemed to dominate the competition. Then the southern part of the state shone as Daphne began to emerge as the one to beat. Recently, Shinbone Valley (Clay County) and Crossroads (Baldwin County) have been leading the way, until Thomasville (Clarke County) come out on top this year.

The winners in each of the contests are given cash awards. The combined, overall winner is given an additional cash award and a trophy, second overall \$100 plus trophy, and 3rd place \$50 plus a trophy. One of the favorite areas of competition, especially for the judges, is the cooking competition. There are three categories: (1) stew of any kind, (2) chili, and (3)

cake decoration and taste. These categories were derived from the many fund raisers the volunteers conduct to keep their departments going. Cash awards are also given in the cooking competition.

There is also a "brush truck" competition. Each Forestry Commission district picks a representative brush truck from the volunteer fire departments in their district. Each district winner receives \$100 and a plaque. The trucks are brought

to the Appreciation Day location and are judged for the "Pick of the Year" brush truck, which receives \$150—first place, \$100—second place, and \$75—third place. A trophy is also given to each of these winners. These trucks allow the volunteers to show their ingenuity. The AFC loans a truck to a volunteer department and the fire department adds all the necessary tanks, hose, pump, and firefighting equipment to fight brush fires.

Future firefighters are not forgotten or left out of Appreciation Day. There is always a children's area, where activities such as the saw dust pile with Smokey

coins and quarters—or even silver dollars—buried in the sawdust for the children to dig out. Face painting is popular, and most want a fire truck, Smokey Bear or a fire dog (dalmatian) painted on their cheek. In addition to clowns, Smokey Bear always makes an appearance, and Ron and Sandra Glass bring their fire prevention puppet show.

The vendor area, used to display fire trucks and firefighting equipment, is always well attended by firefighters to look for bargains and to keep up with the newest equipment available.

The organization needed to set up and carry out Appreciation Day is no small task. Each year the Rural Community Fire Protection Steering Committee screens several requests to host the day. The requests come from volunteer fire county associations or sometimes a single volunteer fire department. When the request is approved the RCFP Steering Committee makes a grant to the hosting organization to help with the funding.

The committee tries to keep two years ahead on their approval for hosts. In 1995, Appreciation Day will be hosted by the Lauderdale County Association at Joe Wheeler Park, and in 1996, the Cullman County Association will serve as host. Previous hosts have included the Randolph and Tuscaloosa County Associations. This year the Pike County Association hosted Appreciation Day at the Pike County Pioneer Museum, a place where everyone could enjoy seeing how folks lived "back then."

Appreciation Day is a relaxed, fun event that can be enjoyed by all ages and is always geared toward family involvement. The past five years have seen an increase in attendance. This event would be worth marking your calendar for in 1995. Exact dates and times will be sent to all volunteer fire departments in Alabama well in advance of the event. Keep in touch with your volunteer department or contact the Alabama Forestry Commission at 240-9370. See you there! ♣



Firefighters await the start of the Air Pack Relay contest.

THREATENED & ENDANGERED SPECIES

Tennessee Yellow-eyed Grass

by TIM L. GOTHARD, Alabama Forestry Commission

Yellow-eyed grasses are a group of plants that occur almost exclusively in wetlands. In Alabama, 15 different species of yellow-eyed grass are known to occur and all but one are considered obligate wetland species. This means that greater than 99 percent of yellow-eyed grass occurrences will be found in wetlands. The one species not considered obligate (Carolina yellow-eyed grass) will still be found almost exclusively in wetlands.

Tennessee yellow-eyed grass (*Xyris tennesseensis* Kral) is an endangered species of perennial yellow-eyed grass that is known to occur at 15 different sites in Alabama, Georgia, and Tennessee. Nine sites are located in three Alabama counties: Bibb (5), Calhoun (3), and Franklin (1). This represents over half of the sites known in the United States.

To most of us, Tennessee yellow-eyed grass would appear much the same as any other yellow-eyed grass we might encounter, and most likely have seen in wet areas. The plant typically occurs in clumps much like the fashion in which broomsedge grows. The leaves are clustered at the base and lower half of the plant with the outermost leaves being small and having a scale-like appearance. The inner leaves in the clump are larger, much more noticeable, and linear in shape. These inner leaves vary in length and may range from 3 to 18 inches long, are deep green in color, and slowly twist as you move up the leaf.

The flower stalks are impressive and give the plant much of its character. The stalks extend from one to three feet above the base of the plant and support tannish-brown cone-like nodules at their tips. Small yellow flowers (two-tenths of an inch long and one-tenth of an inch wide) appear from the cone-like nodules during the months of August and September. The flowers have three petals, open in the

morning, wither in the afternoon, and appear only a few at the time. Distinguishing Tennessee yellow-eyed grass from other species of yellow-eyed grass is usually based on microscopic differences between flower structure.



Although distinguishing Tennessee yellow-eyed grass from other yellow-eyed grasses may be tedious, the habitat where Tennessee yellow-eyed grass is found is somewhat different from the other yellow-eyed grasses. All yellow-eyed grasses will be found in areas that are moist to wet year round and open or very thinly wooded (sunny), such as steep slopes, springy meadows, and gravelly shallows and banks of small streams. Tennessee yellow-eyed grass differs from other yellow-eyed grasses in that it is found where calcareous rock such as shale, limestone and dolomite are at or near the soil surface, or where thin calcareous soils are present. This character results in soils that are more neutral to basic than acidic. Woody species found at some of the Alabama

sites include black willow, silky dogwood, hazel alder, and southern bayberry.

Little is actually known about the biology of Tennessee yellow-eyed grass. It was not described and recognized as a separate species of yellow-eyed grass until 1978. Since that time the Franklin County site was discovered in 1980-81, the Bibb County sites were discovered in 1992, and the Calhoun County sites were discovered in 1992 and 1994. The endangered status of the plant is primarily a result of its apparent limited distribution and the fragile nature of the habitat upon which it depends.

Based on the plant's wetland habitat and the general biology of yellow-eyed grasses collectively, Tennessee yellow-eyed grass could be positively managed by protecting sites from encroachment by woody species and ensuring that activities taking place in areas where the plant occurs do not adversely affect the hydrology of the site. For more information on Tennessee yellow-eyed grass and its management, contact the Alabama Natural Heritage Program at 242-3484 or the U.S. Fish and Wildlife Service at (601)965-4900. ♻️

References

- Kral, R. "A Report on Some Rare, Threatened, or Endangered Forest-Related Vascular Plants of the South." USDA-Forest Service, Tech. Pub. R8-TP2, 1983, pp. 166-70.
- U.S. Fish and Wildlife Service. "Recovery Plan for Tennessee yellow-eyed grass (*Xyris tennesseensis* Kral)." Jackson, Mississippi, 1994, 23 pp.
- U.S. Fish and Wildlife Service. **Endangered and Threatened Species of the Southeast United States (The Red Book)**. Prepared by Ecological Services, Division of Endangered Species, Southeast Region. Washington, DC: Government Printing Office, 1992, 1070 pp.

OVERSEAS LUMBER MARKETS REBOUND

by MICHAEL FLORENCE, Alabama International Trade Center

Alabama has a long tradition as a lumber exporter. Since the 19th century its mills have shipped hardwood to the factories of England and Europe and pine to the Caribbean. The historical markets are still strong, and over the last decade-and-a-half new markets have opened, causing state lumbermen to take a second look at exporting. The European Community, for instance, began using southern yellow pine as a substitute for the more expensive Scandinavian species and Douglas fir, and by 1990 had become the leading overseas pine market. Taiwan was importing hardwood for its expanding furniture industry, and Japan grew to be a leading hardwood export market, second only to Canada. As a result of recessionary pressures, exports have planed out somewhat in the last couple of years, but indications point to an upturn, and the future for Alabama lumber looks bright.

Southern Yellow Pine

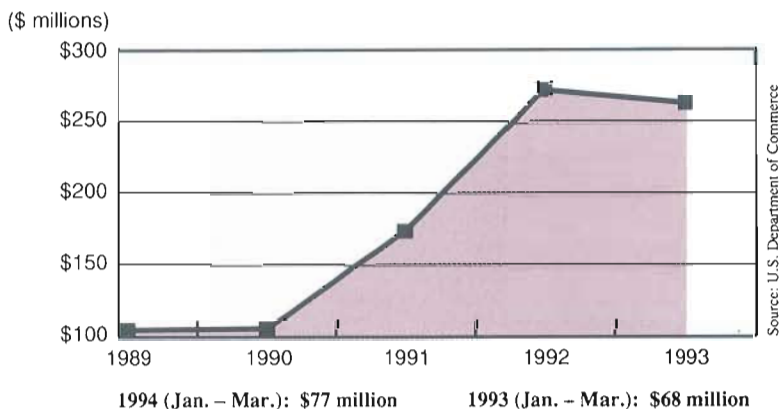
Southern yellow pine, which "boomed" through the last half of the 1980s, has had its ups and downs since the beginning of the decade. In 1989 total U.S. exports were at \$202 million. The figure dropped 4 percent the next year, increased 8 percent the next, was up 17 percent in 1992, and down 15 percent in 1993 to a value of \$209 million. Pine's volatility, however, has not reflected bad times for mills, rather a shift in marketing efforts. Several factors, both domestic and foreign, have been responsible. A shortage of logs, in part because of an unusually wet spring in 1993, caused prices to climb drastically.

The high prices, combined with a continuing world recession, reduced demand in some key markets. Low supplies were sapped further by an increased domestic demand, as a result of cutbacks in the Pacific Northwest and a significant rise in housing start-ups. Instead of exporting, many mills chose to sell available products to domestic customers and divert a

substantial portion into value-added industries, such as millwork, where skyrocketing prices brought even higher profits.

out have been Italy, Germany, and the Dominican Republic. Most southern yellow pine lumber is shipped rough—both to Europe and the Caribbean—the higher

Fig. 1 Alabama Exports of Lumber and Related Products



But things may be different this year. The most current U. S. export figures for 1994 (Jan.-July) show an export value of \$136 million, a 10 percent increase over the same time period in 1993. Bob Kincaid, Export Manager for the Southern Products Forest Association, said the rise is due to recovering European economies, more stable prices, and a weaker dollar. He also said there are new markets making an impact. "Mexico is developing into a very good market," he said, "and you should see a lot of southern yellow pine moving to Japan by the turn of the century." Mark Rodgers, sales manager for Swift Lumber Company of Atmore, has also noticed positive movement. "We export, primarily, high-grade pine to Spain," Rodgers said. "The Spanish economy has been down for a couple of years, but seems to be recovering. They can afford to pay more for their lumber, and we can afford to buy the high quality logs we need to supply them."

The strongest market for southern yellow pine is still Spain, even though, as Rodgers noted, the market has been drastically hurt by recession (a 20 percent drop in 1993). The runners-up year in and year

grades (prime and saps) going to Europe for millwork, especially door and window frames, and other types of joinery and decorative finishes. The lumber going to the Caribbean is usually a lower grade, used eventually for structural work and concrete forming. There is also a good deal of treated wood shipped to the islands, though a growing number of treating facilities in the region may have negative effects on that movement.

Hardwood

Unlike southern yellow pine, total values for U.S. hardwood exports have risen every year since 1990, averaging a 14 percent increase per year until 1993, when they broke the \$1 billion level. According to market analysts, the increased values have been a result of higher prices, rather than volume exported, which in some cases has slipped. Soaring prices have been triggered by a greater demand from a rebounding U.S. construction industry, political and supply problems with tropical hardwoods in overseas markets, and even the decline of the Douglas fir, which has caused some

(Continued on page 10)

customers to turn to higher grade hardwood lumber. As an example, the export pricing index rose 27 percent to \$1,300 from April 1992 to August 1993.

The latest figures for 1994 (Jan.-July) indicate an export value of \$638 million, a rise of only 3 percent over the same period in 1993. Rick Barrett, managing editor of *Hardwood Review*, said that the increase would be “a little flatter” this year. “We’re not looking at quite as large an increase because the Japanese and German recessions are catching up with us,” he said. Some mills, however, have the falloff behind them and are seeing improvement in their particular markets.

wan, and Mexico; the top white oak markets have been Canada, Japan, and Spain. Most high grade oak is used in the manufacture of furniture, dimension, and in fine interior work.

Alabama’s Role

Alabama’s exports of lumber and related products totaled \$264 million in 1993, a down year by recent standards, dropping by 3 percent from the year before (Figure 1). 1993’s level, however, is still 52 percent higher than the 1991 total of \$174 million; and if the first quarter of 1994 is any indication of things to come,

Commission (AFC) has taken an active assistance role. In the mid-1980s, the AFC realized the potential of foreign markets and established an export program under the direction of its Marketing and Economic Development Section, which is now headed by Jim Gober. Through this program the AFC has funded a full-time trade specialist at the Alabama International Trade Center to work with companies interested in exporting. Also, the Alabama Forestry Commission, Alabama Development Office, Alabama International Trade Center, and Auburn University’s Forest Products Development Center have formed the Forestry TEAM, an organization to promote international trade and investment in the industry.

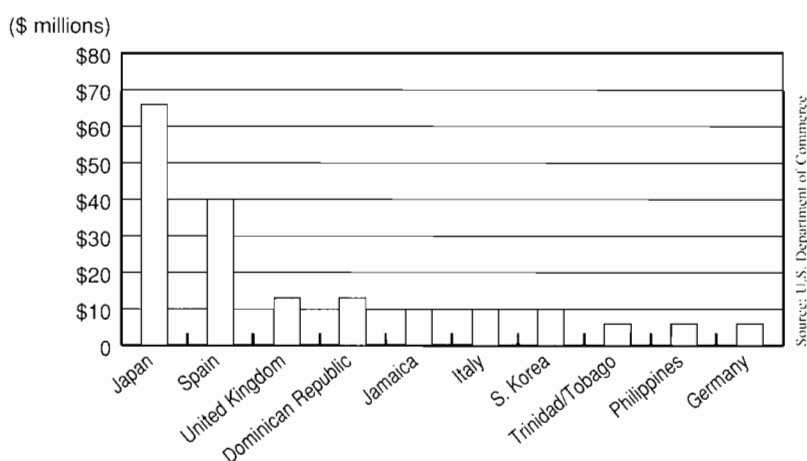
According to Gober, the AFC’s philosophy is to emphasize the export of manufactured wood products—which carry a higher profit margin—rather than natural resources. “We’d like to see more Alabama companies involved in value-added production,” he said. “Based on our resources, we see benefits, such as more jobs created in secondary manufacturing, as well as more profitability for companies.”

Gober feels that many forest products companies in Alabama have the potential to export but have never taken the step. If his efforts are successful, that could change. Two years ago he initiated a project with the Alabama International Trade Center to produce the *Alabama Wood Products Export Directory*, which lists all state forest products companies involved in exporting and is distributed to foreign agents and buyers. The Forestry TEAM has also gone overseas to represent Alabama in forest products trade shows. The AFC, in a joint project with the Alabama International Trade Center, has just published a *Directory of Overseas Trade Shows for Alabama Wood Products Companies*, which provides state companies with information on the top overseas shows.

“We’re just trying to do our part,” Gober said. “We want Alabama companies to know that there’s a huge world market out there. And we want people overseas to know what Alabama has to offer.”

Companies wishing more information on exporting wood products should contact Jim Gober at the Alabama Forestry Commission (631-2552) or the Alabama International Trade Center’s Forest Products Export Program (348-7621). ☐

Fig. 2 Top Export Markets for Alabama Lumber and Related Products



G.L. “Butch” Ousley, sales manager of Buchanan Hardwoods in Selma, says that exports have been off the last couple of years, but that they seem to be coming back this year. “A lot of it is due to low inventories in Europe,” Ousley said. “The Europeans let their inventories get low, and now that they’re recovering economically, they’re trying to build them back up.” Ousley said that his company’s exports this year should be about 20 percent over last year’s level.

Canada and Japan, respectively, are the first and second largest export markets for U.S. hardwood lumber. They are followed perennially by Germany, Italy, Taiwan, and the United Kingdom; and in the last couple of years Mexico has come on strong. The most common species exported are red and white oak. In 1993, red and white oak each comprised 27 percent of total hardwood exports—together making up more than half of our overseas hardwood shipments. The main red oak markets have been Canada, Tai-

this should be a comeback year: Alabama exports from Jan.-March 1994 valued \$77 million, a 13 percent increase over exports in the same period in 1993. If this trend holds, Alabama can expect 1994 lumber exports to rise to the \$300 million mark, the highest in its history.

Despite the recent slippage in lumber export markets, Alabama’s lumber and related products has continued to play a major role in the state’s international trade (Figure 2). Last year it ranked as Alabama’s eighth largest export category; and, if every million dollars of exports produces 20 jobs, the export of lumber and related products alone is responsible for 6,000 jobs in the state. The contribution of the lumber industry to international trade was also noted by the Alabama World Trade Association last February when it named Linden Lumber Company the Exporter of the Year, the state’s highest award for excellence in exporting.

To ensure growth of lumber and wood products exports, the Alabama Forestry

Know the Value of Your Timber

by SAM LEWIS, Registered Forester

Anyone who has worked in the timber business for any length of time has seen a few cases where landowners sold their timber for a fraction of its true value. Landowners in dire need of cash or totally ignorant of the value of timber today are usually the ones who make the biggest mistakes. The worst example I can give is of a landowner who sold 350 acres of timber for \$24,000, which may have been 10 percent of its real value.

I imagine most landowners will say that they do not have to worry about this worst case scenario happening to them. They know how much a cord of wood weighs, how many average pounds it takes to make a thousand board feet, what the going prices are at any particular time, and, most of all, they know they can trust the logger or timber buyer who is buying their wood.

As a forestry consultant, I make my living appraising and selling timber. I have been in this business for over 10 years, and I can tell you when it comes to forest landowners, many have been tricked out of their money. The purpose of this article is to examine the way in which most landowners sell timber and to show you how money is being lost. I hope that when you are finished reading this article you will be willing to hire a professional registered forester to work for you the next time you sell timber.

I only sell my timber on a lump sum basis. This means that all the money is received up front before any trees are harvested. The timber will have been measured as to its highest and best use and appraised before any potential timber buyers are contacted. This way there is a firm basis of value to help us in the business transaction.

Selling by the Cord

Most forest landowners sell their timber in a way that is commonly expressed as "by the cord." They get paid a certain amount for each cord or unit of wood that is carried to the processing mill. This method is very appealing to landowners who like to count

every penny, because you supposedly get paid for every tree that leaves the property. This method also allows you to avoid the cost of a timber cruise and appraisal, and avoiding any costs is high on the list of most forest landowners. You simply trust the timber buyer to let you know how much timber is removed and to pay you the agreed upon price per cord. Unfortunately, this leaves you under the total control of the timber buyer and you will be the one taking all the risks.

Now let's get to the particulars of how you could lose money from using this "by the cord" method. First, you may not get paid for every load of wood that is hauled to a mill. It may be lost by accident or unaccounted for on purpose. The major timber firms in this country are concerned with timber theft from their own land and are giving their procurement and management people training from professional security firms. Don't you think you should be concerned about your load of wood?

Know What Your Trees Are Worth

Another common mistake is selling all your timber on a cord basis for pulpwood. A landowner should not sell sawtimber sized trees, which have grown for 30 years or more, for pulpwood prices. You likely could receive more than twice as much money by selling larger trees as sawtimber. Three hundred cords of sawtimber sized trees, worth \$70 per cord, utilized as pulpwood at \$25 per cord, would remove \$13,500 from the landowner's pocketbook.

This type of situation could apply equally well to pole grade timber used as sawtimber, or plywood grade timber used as sawtimber. The main point is that the landowner loses due to bad utilization when selling by the cord. You can put utilization specifications in the contract, but why pay someone to enforce a contract specification during and after the cutting when this complication could have been avoided from the beginning?

Now suppose you decided to sell your large pine sawtimber logs at \$250 per thousand board feet to a timber buyer who offered you \$20 a thousand more than

another buyer. Well, you may not know—and he may not tell you—what the weight factor will be in determining a thousand board feet. Nor may he tell you that your large sawtimber logs will cut a thousand board feet at a far lower average weight factor than the average one currently used at the mill. He may use the average of 16,000 pounds equals a thousand board feet. Unfortunately for you, you gave away 38,000 board feet of timber, because it only took an average of 13,250 pounds of your timber to make a thousand board feet. At \$250 per thousand, that 38,000 board feet equals \$9,500.

A landowner may think that selling wood by the cord means weight factors aren't important. A cord does not adequately measure the amount of solid wood product that can be cut from a tree, and you are going to be giving wood away to the mill or the timber buyer if you don't try and determine the wood volume as best you can before you sell.

Conclusion

So, you can lose money by having wood stolen, utilizing it poorly, or using poor forest cutting practices that are not in your best interests, and you can lose simply by being out horse-traded by a person who knows the ins and outs of measuring timber.

The bottom line is that when you sell your timber by the cord or unit, you take risks that could have been avoided if you had paid a forester to work for you. And if you do decide to sell timber in a lump sum, you still need an appraisal, because even getting several bids from timber buyers may not give you the true value of your timber.

The timber companies know the value of having a forester who is loyal to the company. You should hire a registered forester who gets paid on the amount of money **you** make on your timber transaction, and have him measure and appraise your timber before you start to deal with timber buyers. That way you will minimize the risks to yourself involved in timber selling. ♣



Fig. 1

County Forestry Planning Committees: A Success Story of Volunteerism

by LARKIN WADE, Professor Emeritus of Forestry and MARK DUBOIS, Assistant Professor and Extension Forester, School of Forestry, Auburn University

The Alabama Forestry Planning Committee (AFPC) was organized on April 5, 1971, and presently has 19 members (these organizations are listed on page 2). The original mission of the AFPC was to increase the values derived from Alabama's forest resources by more effectively coordinating and delivering forestry-based programs being offered to private landowners. Many of the AFPC's projects represent efforts to create a positive framework for the work of forestry planning committees operating at the county level.

A decade after its inception, the AFPC requested that state and federal agencies represented on the AFPC with county offices meet as needed to identify and address important forestry problems and issues. This action led to the formation of County Forestry Planning Committees (CFPCs). County Forestry Planning Committees cooperate and coordinate efforts on forestry problems and projects requiring input from several agencies.

County Forestry Planning Committees include state and federal agencies, forest industry personnel, consulting foresters, landowners, and others from organizations

interested in forestry issues. Membership in county committees is voluntary, and the work of county committees is self-directed. County committees get very few directives from the AFPC, allowing them to coordinate activities and implement programs that are unique and pertinent to their individual county's needs.

Counties which have excelled in the coordination of efforts compete for recognition at the annual Alabama Landowner and TREASURE Forest Conference. Outstanding CFPCs are chosen for each of three districts in the state (see Figure 1). Each of the three district-winning CFPCs receives a \$500 achievement award from the Mosley Environmental Awards Program. An overall state winner is selected from the three district winners. In 1994, the Clay County Forestry Planning Committee was selected as the state winner (see page 13). In 1990, former state winners competed against each other for the first time in a "Masters" category. The Masters winner also receives a \$500 achievement award.

The results of cooperative efforts over the past years are impressive. For instance, in the 1993 county committee competition, there were six masters committee entries, three district winners, and three district

runners-up. Together they represent 12 counties. Altogether the 12 committees have 300 members, meet monthly, and have 50 percent attendance at meetings. On the average, the committees have been established eight years and in 1993 have each completed approximately 17 forestry related projects, for a total of 200 projects.

County Forestry Planning Committee Conferences

In April 1994, four County Forestry Planning Committee conferences were held throughout the state. The purpose of the conferences was to find out what CFPCs thought was needed to increase their committee's effectiveness in working with the TREASURE Forest and other forestry related programs. These conferences were the first meetings of any kind, other than the annual landowner conference, where county forestry committee and state forestry committee members directly interacted. Approximately 200 attendees participated in the four conferences. There was outstanding participation from both the private and public sectors.

The process that was used to assess the needs of the CFPC resulted in ideas being democratically suggested and ranked by those attending the conference. At the end of each conference the attendees had selected the best ideas for improving the effectiveness of CFPCs. In the process, the CFPCs also identified opportunities in which the Alabama Forestry Planning Committee could help them in meeting their individual CFPCs goals and objectives.

All of the top ranked ideas were divided into two major categories: audiences and methods, and operation and procedures. The primary concern in the audiences and methods category was to develop methods and program ideas to reach more/new landowners. There were also concerns about educating the public,

District, State, and Masters County Forestry Planning Committee Winners

Year	District I	District II	District III	State	Masters
1984	Franklin	Russell	Clarke	Russell	
1985	Marion	Macon	Monroe	Monroe	
1986	Walker	Coffee	Autauga	Autauga	
1987	Walker	Coosa	Monroe	Walker	
1988	St. Clair	Macon	Tuscaloosa	Macon	
1989	Walker	Bullock	Monroe	Monroe	
1990	St. Clair	Coosa	Choctaw	St. Clair	Monroe
1991	Jackson	Coosa	Tuscaloosa	Coosa	St. Clair
1992	Jackson	Clay	Mobile	Jackson	St. Clair
1993	Colbert	Talladega	Covington	Covington	Jackson
1994	Lamar	Clay	Mobile	Clay	Jackson

youth, teachers, and media people.

Getting landowners to participate as members of CFPCs was one of two primary concerns in the operations and procedures category. The other was having the AFPC provide guidance for securing funds and grants. The remaining top ranked ideas in the operations and procedures category were concerned with internal operational procedures.

County Forestry Planning Committee Questionnaire

Concurrently with the County Forestry Planning Committee Conferences, county committees were asked to complete a questionnaire concerning county forestry planning committee operations. Forty-seven of the 67 counties responded. This information is the most comprehensive information ever gathered about county committee operations. All together, these data represent an overwhelming success story; however, there are concerns.

County forestry planning committee successes include:

- There are over 800 members; about half from public agencies and half from private organizations.

- With the exception of the secretary-treasurer position, personnel representing public agencies and private organizations share the chair, vice-chair leadership.
- Over 400 major natural resource related projects were completed in 1993.
- The TREASURE Forest Program is actively promoted.
- Many committees work to help establish committees in other counties.

Concerns of the CFPCs include:

- Many counties have difficulty staying organized and functioning.
- Many counties have mostly agency membership.
- A few counties experience interagency rivalry.

Many suggestions were offered when asked directly about what CFPCs expected from the AFPC. These suggestions included:

- Leadership, support, and guidance
- New ideas
- Model by-laws

- Program ideas and speakers
- Funding
- Help in establishing and maintaining effective county organizations
- Positive critiques
- Information

Conclusion

The Alabama Forestry Planning Committee and County Forestry Planning Committees represent voluntary efforts existing for the purpose of achieving cooperation, minimizing program overlap, and supporting mutually satisfactory forest resource programs. Recent conferences have identified County Forestry Planning Committees' "needs" to increase the effectiveness of their voluntary work. Cooperative efforts among those with interests in Alabama's forest resources are imperative, as total resources dedicated to forestry programs are limited. The impressive results of County Forestry Planning Committees' activities over the past years is testimony to their cooperative spirit in addressing forestry-related issues of today. Their story is truly one of continued success. ♣

Clay County Named Top Committee in 1994

The Clay County Forestry Planning Committee was selected as the state's outstanding forestry planning committee in 1994. The Clay County committee is comprised of 20 members, representing a diverse cross-section of private and public organizations involved in forestry. The committee also has five landowners. The committee's purpose is to promote multiple-use forestry through the TREASURE Forest Program. Successes of the Clay County Forestry Planning Committee include:

- Publishing a TREASURE Forest Manager's Guide. The guide includes a list of vendors and timber buyers in the area, all cost-share programs, emergency phone numbers, a wildlife planting guide, and a guide on how to become a TREASURE Forest landowner.
- Establishing a TREASURE Forest Nature Trail. A nature trail was estab-

lished on a local church's property. The trail includes wildlife habitat improvements such as bird houses and squirrel, owl and bat boxes. The trail was constructed with proper erosion control devices including water bars, gravel, bridges, and seeding of critical areas. The trail is available for public use through local youth groups and civic organizations.

- Constructing an Outdoor Environmental Classroom in the Ashland City Park. The committee also performed streamside stabilization and constructed a weir to monitor stream flow in the park.
- Sponsoring a Natural Resource Fun Day for 26 youth at a local camp.
- Constructing wood trophies for the state 4-H contest winners.
- Holding the first Clay County 4-H Forestry Invitational Contest.
- Sponsoring a quarterly agency luncheon allowing agencies to discuss

issues affecting them.

- Holding a tour of the Twin M TREASURE Forest. Tour topics included: timber value analysis, wildlife habitat, hardwood management, log road stabilization, and the TREASURE Forest program.
- Sponsoring a forestry tax seminar. More than 50 people attended.
- Participating in Arbor Week by distributing seedlings to every fifth grade student in Clay County.
- Sponsoring a Best Management Practices Meeting for local loggers.
- Referring landowners to consulting foresters.
- Receiving two stewardship grants from the AFPC in 1993.
- Committee members making speaking appearances to local schools and organizations.
- Assisting in installing six dry hydrants for volunteer fire departments in the county.

Site Preparation for the Private Landowner

by MAC PRINCE, Forest Management Specialist, Alabama Forestry Commission, Ozark and
JERRY SMITH, Houston County Forester

Many landowners think about regeneration of timberland when a timber sale has already been made. However, the time to plan regeneration and site preparation is *before* the timber is harvested. A more complete harvest operation of most standing trees will help to ensure a less expensive site preparation alternative and a better quality planting job. In many cases, the quality of the harvest job will dictate the site preparation method.

There are several site preparation alternatives to bear in mind. A majority of foresters will tell you that the most important component in site preparation, regardless of method, is a hot fire. In some instances, a hot fire is all the site preparation that will be needed. This is the case when all large stems are felled and a hot fire will suppress the smaller (under 2 inches at ground line) stems until the pines get a head start. Most of the time there will be stems larger than 2 inches left standing at the ground line. In these cases, some type of site preparation in addition to fire will be needed.

Mechanical Site Prep

Mechanical is the type of site preparation that most people think of when site preparation is mentioned. The residual stand of timber is physically removed to allow the planting process to be accomplished. There are several positive aspects of mechanical site preparation:

- Timewise, there is a larger window of opportunity for accomplishment than when using chemical site preparation.
- Machine planting can usually be accomplished behind mechanical site preparation (machine planting has about a 10 percent higher survival rate than hand planting).
- Many people feel that it is aesthetically more pleasing to look at because all residual stems have been felled and piled.

The negative aspects of mechanical site preparation are as follows:



Raking and piling debris after it has been sheared.



The drum chopper can be used on steeper terrain than shearing.



A disk is best used on flat terrain.

- It is expensive.
- Sprouting from the previous stand is not well suppressed.
- A substantial amount of topsoil is moved unless care and the right tools are used in the operation.
- Some soil compaction takes place.

There are basically three methods used for mechanical site preparation:

- Shearing and Piling
- Drum Chopping
- Disking

Shearing and piling is used when a significant number of trees over 6 inches in

diameter are left standing. The tractor uses a Vee blade or a K-G blade to shear the trees at the ground line. This is followed by a tractor with a "root rake," which is used for pushing the debris into piles or windrows. If windrows are used, they should be oriented along the contour. They may be burned or left for wildlife habitat. This method should be used on fairly flat terrain to reduce the chance of erosion. The cost of shearing and piling runs from around \$125 to \$175 per acre.

Drum chopping is most successful when residual stems are small (less than 3 inches in diameter) and the chopper can reduce them in size and compact the fuel into a burnable mass. Some people believe that chopping causes more trouble than it saves due to the fact that it seems to promote sprouting. Chopping can be used on somewhat steeper terrain than shearing, because the litter layer covering the soil surface is left in tact. Pulling the chopper up and down the hills helps slow the water flow and reduces erosion. Drum chopping costs around \$75 per acre in south Alabama.

Disking has been used in areas of fairly flat terrain and will do a good job of suppressing competition due to the multiple cutting of the stems and roots of residual plants. This method has a very high potential for erosion, because of the large amount of exposed soil being dealt with. On the terrain types where this method can be used it is a lower cost method than some others. In the southeast portion of the state disking costs about \$45 per acre.

Chemical Site Prep

Chemical site preparation is being used more frequently because of two main reasons: lower cost and superior sprout suppression. In the southeast portion of the state costs for chemical site preparation run from \$85 to \$110 per acre. There is a downside to chemical site preparation, including the following factors:

- Correct timing of the application is needed to achieve the best effect.
- Correct assessment of soil texture is

11th Annual Alabama Landowner and TREASURE Forest Conference

needed to determine the proper application rates.

- In many cases, seedlings will have to be planted by hand crews, which may result in significantly lower survival rates.

The choice of chemical to use depends on which chemical the vendor you employ is most familiar with and the soil type and texture on the site—the lighter the texture, the less chemical needed. The best results usually come with a good application job in conjunction with a fire that is hot enough to kill any sprouts that may have survived the chemical application. An additional advantage to chemicals for site preparation is the fact that with some training the landowner can apply certain chemicals, such as VEL-PAR, with good results.

Another facet of chemical use is release of planted or natural seedlings in the first through the fourth year of the rotation, depending on the needs of the stand. This additional versatility can be used to save some money where a good cutting job has been accomplished on the site prior to planting seedlings, but there is a competition problem. In natural stands, a release can be used to help a good stand of seedlings get ahead and stay ahead of competition. The cost of release in the southeast part of the state is \$60 to \$75 per acre, depending on the rate of chemical used.

One trap that some landowners have fallen into is trying to use “plant and release” instead of “site preparation and planting” on sites where there is heavy competition. Too much competition will shade out and kill seedlings, and you will have lost money and a year’s growth of your seedlings. A consultant forester who is familiar with chemicals is a good source of advice in this area.

Site preparation is the most expensive part of regenerating a site to the chosen species. All methods have their proponents and opponents. Currently, chemical site preparation is the most bang for the buck method, but don’t get so locked in on it that you can’t see the best method for the site and your situation. Good professional advice is often the best money you can spend in your site preparation budget.

Editor’s note: The prices for the activities mentioned in this article may vary according to locality. Please consult a local vendor for prices in your area. ♣



The McConnell Family of Coosa County was the winner of the 1994 Helene Mosley Memorial TREASURE Forest Award. The award is given annually to the outstanding TREASURE Forest in the state. Sara and Douglass McConnell are shown receiving their award from John "Bubba" Trotman (left), the governor's liaison for agricultural affairs, and Steve Guy, chairman of the Alabama Forestry Planning Committee. District winners and runners-up to the state award were William C. Snoddy of Winston County and Wilco Properties, Ltd. of Monroe County.



The Clay County Forestry Planning Committee (above) took top honors as the 1994 state committee winner. Other district winners were Lamar and Mobile Counties.



The Masters Award is presented each year to an outstanding planning committee that has previously won a state award. Jackson County was honored with the 1994 Masters Award.

LANDOWNERS

LEGISLATIVE • ALERT

NATIONAL

by BILL IMBERGAMO, Washington Office, National Association of State Foresters



Forestry in the 104th Congress

With Washington, the nation, and the

world trying to absorb the meaning of this November's historical elections, there has been precious little time to assess their impact on forestry and related natural resource issues in the next Congress. The only thing certain is that the names, faces and ideas directing forestry and environmental policy will be different, at least until 1996.

The GOP captured both Houses of Congress for the first time since 1954, and while the Senate was expected to change hands, the remarkable victory in the House of Representatives was not widely predicted. Having gained control over both Houses, Republicans will have a free hand to change much of the committee structure that sets policy for natural resources, the environment, and public lands.

And they have committed to make changes; presumptive Speaker-to-be Newt Gingrich (R-GA), has said repeatedly that he wants to reduce the number of committees. Additionally, Republicans in both the House and Senate have pledged to reduce the number of people on committee staff by one third. Almost certain to get close scrutiny will be the House Merchant Marine and Fisheries Committee.

The House

There has long been discontent in the GOP ranks about the continued relevance of this committee; the Senate's own version of it was merged into the Commerce, Science and Transportation Committee when the Republicans last held the Senate in the early 1980s. Under Mas-

sachusetts Rep. Gerry Studds (D), the committee has played a key role in debates on the Endangered Species and Clean Water Acts.

Options for Republicans include merging the Committee's functions with other House standing committees or abolishing it outright. Some of the Committee's functions could be absorbed by the House Public Works and Transportation Committee—likely to be taken over by Rep. Bud Shuster (R-PA)—or by the House Energy and Commerce Committee. If the Merchant Marine and Fisheries Committee does persist, Texan Jack Fields is likely to be chairman.

In other key House slots, Pat Roberts (R-KS) is in line to take over the full Agriculture Committee from E. Kika de la Garza (D-TX). Currently, forestry matters are handled by the Specialty Crops and Natural Resources Subcommittee. Rep. Bill Emerson (R-MO) is next in line for that slot, and is considered by many as a friend to forestry. Also, it is not clear how the Republicans will choose to organize subcommittees, and it is important to remember that at the beginning of the last Congress, interest among committee members in forestry was extremely low.

The House Natural Resources Committee chairmanship will go to fiery Alaskan Don Young (R). Young has been a vocal critic of the Endangered Species Act and other environmental laws, particularly the restrictions on wetland development contained in the Clean Water Act. Technically speaking, most of Alaska meets the definition of a wetland. Utah Rep. James V. Hansen is in line to take over the subcommittee with jurisdiction over the Bureau of Land Management, the National Park Service, and partial jurisdiction over the Fish and Wildlife Service and the USDA-Forest Service.

The Natural Resources Committee is likely to take a generally more conservative bent as well, with the defeat of moderate Western Democrats by Republicans who ran against the Clinton administration's environmental policies. The administration's efforts to revise the 1872 mining law and to raise grazing fees are likely to be shelved if not reversed outright.

The crucial Appropriations Committee chairmanship in the House is less clear, however. Reports indicate that Rep. Bob Livingston (R-LA) will become the chairman. Republican Joe McDade was in line to take over the Committee, but he is currently under investigation for ethics problems. Livingston leapfrogs over several members with greater seniority. The two subcommittees with jurisdiction over federal forestry cost-share programs are likely to be taken over by Joe Skeen (R-NM), taking over the Agriculture Appropriations Subcommittee, and Ralph Regula (R-OH), taking over the Interior Appropriations Subcommittee.

The Senate

Under the leadership of Majority Leader Bob Dole, the GOP will resume control over the Senate, which they lost in 1986. Committee chairmanships here will also switch hands, although it seems that committee and subcommittee structures are less likely to be tinkered with in the Senate.

The Senate Agriculture Committee will be taken over by Sen. Richard Lugar (R-IN), who will play a prominent role in the formulation of the 1995 Farm Bill. The subcommittee that oversees the Forest Service is likely to go to Sen. Larry Craig (R-ID). Mississippian Thad Cochran is also likely to stay on the subcommittee. Both have been supportive of forestry in the past.

The Senate Environment and Public Works Committee will be taken over by liberal Republican John Chafee (RI), who has indicated that he wants to take action on the Clean Water Act, Safe Drinking Water Act and Superfund Reauthorization, all measures which ongoing chairman Max Baucus was unable to complete. The subcommittee with direct jurisdiction over two of these issues and the Endangered Species Act will become more conservative, however, under the likely leadership of either Lauch Faircloth (R-NC) or Dirk Kempthorne (R-ID).

The Energy and Natural Resources Committee, which has partial jurisdiction over public lands, will be taken over by Frank Murkowski (R-AK). Murkowski has been critical of the administration's direction in managing the vast federal land holdings in his state, and will likely push for more commercial development of them.

In the Appropriations Committee, Oregonian Mark O. Hatfield (R) will take over the full committee from Robert C. Byrd (D-WV). The two subcommittees with jurisdiction over federal forestry cost-share programs will go to Thad Cochran (R-MS), taking over the Agriculture Subcommittee, and Don Nickles (R-OK), taking over the Interior Subcommittee.

The Issues

The issues facing the new Congress will be, by and large, the same ones the previous two Congresses failed to take action on. Major pieces of environmental legislation are still awaiting action. These include the Clean Water Act and the Endangered Species Act, both of which have the potential to impact forestry. While the overall GOP theme has thus far been to cut federal spending and to cut taxes, it seems likely that they will be able to join with conservative Democrats to overcome the stumbling

blocks which had held up environmental bills over the past three years.

The three issues which have caused contention, private property rights, risk assessment/cost-benefit analysis, and unfunded mandates, will likely get even greater attention in a GOP Congress. Whether or not environmental laws will be a top priority in the next Congress remains to be seen. They did not figure prominently in many election campaigns, although GOP candidates did make the issue of government regulation an important part of their campaigns.

These issues, as well as the future of current conservation programs and some forestry-related programs, will also be up for grabs in the scheduled 1995 re-write of the Farm Bill. There is no telling at this point what direction that will go.

Whatever happens during the next two years, the forestry community, along with everyone else in the country, has a lot of change to get used to. ♣

ALABAMA

by FRANK SEGO, Legislative Liaison, Alabama Forestry Commission



Just when you thought you understood even a little bit about the political spectrum, along comes Election Day 1994.

It was a day unlike most November days. The unusual change in temperature for that time of the year should have given us a clue. The sun came up as usual. The polls opened across the state as they were supposed to. People came in record numbers to most polling places. The day wore lazily on. But when the sun went down, so did the political careers of dozens of Alabama office holders from the State House to the court house and beyond.

The numbers blinking from television screens that November night left bleary-eyed viewers in a state of disbelief as upset after upset was projected by the networks through local TV channels. Even the most astute political observer was stunned beyond belief.

Evans fell hard to the oncharging former U.S. Attorney Jeff Sessions of Mobile.

Agriculture and Industries' ageless Commissioner, A.W. Todd, failed to withstand the onslaught of Republican Jack Thompson, a former No. 2 man in the department.

Sitting judges were dethroned, as was veteran Democrat Judge Bill Bowen for Place No. 1 on the Court of Criminal Appeals. Voters were clamoring for **CHANGE** and getting it! Surely the most bizarre race of all was for Chief Justice of the Alabama Supreme Court. The challenger, former Montgomery County Probate and Circuit Court Judge Perry O. Hooper, Sr., locked horns in a deadly battle with incumbent Democrat Sonny Hornsby. The fact is that this column was written 10 days after the general election and the outcome was still in doubt.

Never has the state of Alabama been shaken with as many upsets in a general election. It was as if Halloween had lingered for another week and a full moon had brought the Werewolf out to haunt the Democrats.

However, it's time to look ahead. It is time to take a look at the new legislature, the one elected to serve from 1995 through 1998.

House Giants Fall

Needless to say, there are those who won't be back. Among those are such veteran House leaders as Taylor Harper, the powerful chairman of the Ways and Means Committee; Jim Campbell, Speaker Pro Tem; and Mary Zoghby, Banking Committee chairman. These and others met defeat in the general election. Harper had served four terms from Grand Bay; Campbell three terms from Anniston; and Zoghby was in her fourth term from Mobile.

Thirty-seven of the 105 House members have been elected to serve for the first time.

The House Of Representatives

Now let's meet the full House, which reports for its orientation session on January 10.

D-1	Nelson R. Starkey, Jr., Florence
D-2	James H. Hamilton, Rogersville
D-3	Marcel Black, Tusculumbia
*D-4	Nelson Papucci, Madison
D-5	Tommy Carter, Elkmont
*D-6	Lee Jorgensen, Madison
D-7	Sam Letson, Moulton
*D-8	Bill J. Dukes, Decatur
D-9	Paul Parker, Hartselle
D-10	James C. Haney, Huntsville

(Continued on page 18)

Governor Bows Out

Governor Jim Folsom, Jr., seeking a full term following the ouster of Guy Hunt in April 1993, was shaken from the state's top perch by less than a 10,000 vote margin. Attorney General Jimmy

Continued from page 17

D-11 Tom Drake, Cullman
 *D-12 Neal Morrison, Cullman
 D-13 Thomas E. Hogan, Jasper
 *D-14 Ken Guin, Carbon Hill
 D-15 Johnny L. Curry, Hueytown
 D-16 Sam Collins, Fayette
 D-17 Michael J. Millican, Hamilton
 D-18 Johnny Mack Morrow, Red Bay
 D-19 Laura Hall, Huntsville
 D-20 Howard Sanderford, Huntsville
 *D-21 Randy Hinshaw, Meridianville
 D-22 Albert Hall, Gurley
 *D-23 John Robinson, Scottsboro
 D-24 Ralph Burke, Rainsville
 *D-25 Howard Hawk, Arab
 D-26 W.F. McDaniel, Albertville
 *D-27 Jim Murphree, Oneonta
 D-28 Joe M. Ford, Gadsden
 D-29 John G. Page, Gadsden
 *D-30 Blaine Galliher, Glencoe
 D-31 Jack B. Venable, Tallassee
 *D-32 Barbara Bigsby Boyd, Anniston
 D-33 Ronald G. Johnson, Sylacauga
 D-34 Gerald Willis, Piedmont
 *D-35 Larry P. Sims, Eastaboga
 *D-36 Mike Rogers, Anniston
 D-37 Richard J. Laird, Roanoke
 D-38 William P. Fuller, Jr., LaFayette
 D-39 Richard J. Lindsey, Centre
 D-40 Al Knight, Pelham
 D-41 Mike Hill, Columbiana
 D-42 Curtis Smith, Clanton

D-43 Allen Sanderson, Birmingham
 D-44 Arthur Payne, Birmingham
 D-45 Albert G. Morton, Birmingham
 D-46 Jim Carns, Birmingham
 D-47 Mark L. Gaines, Homewood
 D-48 John Hawkins, Birmingham
 *D-49 Dave Thomas, Springville
 *D-50 Jim Townsend, Pinson
 D-51 Tony Petelos, Pleasant Grove
 D-52 John W. Rogers, Jr., Birmingham
 D-53 Demetrius C. Newton, Birmingham
 D-54 George Perdue, Birmingham
 *D-55 Warren A. Minnifield, Fairfield
 *D-56 Lawrence McAdory, Bessemer
 *D-57 Tommie L. Houston, Birmingham
 *D-58 Earnest Johnson, Birmingham
 D-59 Lewis G. Spratt, Birmingham
 D-60 John R. Hilliard, Birmingham
 D-61 Allen Layson, Reform
 *D-62 Gerald Allen, Tuscaloosa
 D-63 Tim Parker, Tuscaloosa
 D-64 James E. Warren, Castleberry
 D-65 Jeff Dolbare, Bigbee
 D-66 Frank P. White, Flomaton
 *D-67 Edward A. Maull, Selma
 *D-68 Thomas E. Jackson, Thomasville
 D-69 James L. Thomas, Selma
 D-70 Bryant Melton, Tuscaloosa
 D-71 Lucius Black, York
 *D-72 Andrew Hayden, Uniontown
 D-73 Perry O. Hooper, Jr., Montgomery
 D-74 Bob McKee, Montgomery
 *D-75 Greg Wren, Montgomery
 *D-76 Thad McClammy, Montgomery
 D-77 John F. Knight, Jr., Montgomery

D-78 Alvin Holmes, Montgomery
 D-79 Pete Turnham, Auburn
 *D-80 Lesley Vance, Phenix City
 *D-81 Betty Carol Graham, Alexander City
 **D-82 Thomas Reed, Tuskegee
 *D-83 George Bandy, Opelika
 D-84 James S. Clark, Eufaula
 *D-85 Lucy Baker, Abbeville
 D-86 Joe R. Carothers, Dothan
 *D-87 Riley Seibenhene, Hartford
 *D-88 H. Mac Gipson, Jr., Prattville
 D-89 Steve Flowers, Troy
 D-90 Charles O. Newton, Greenville
 *D-91 Gareth Moore, Enterprise
 D-92 Seth Hammett, Andalusia
 *D-93 Steve Clouse, Ozark
 D-94 Walter E. Penry, Jr., Daphne
 D-95 Stephen A. McMillan, Bay Minette
 D-96 Michael E. Box, Mobile
 D-97 Yvonne Kennedy, Mobile
 D-98 William Clark, Prichard
 D-99 James E. Buskey, Mobile
 D-100 Victor Gaston, Mobile
 *D-101 Chris Pringle, Mobile
 D-102 J.E. Turner, Citronelle
 *D-103 Joseph Mitchell, Mobile
 *D-104 Mike Dean, Mobile
 *D-105 R.P. Crigler, Jr., Irvington
 * New Members
 ** A Former Member

We will focus on the new Alabama Senate in our next issue of *Alabama's TREASURED Forests* magazine. ♣

Helicopter Logging— A Harvesting Method for Wetlands

by TOM TOMLINSON, River Operations Manager, Scott Paper Company

Scott Paper Company owns and manages approximately 50,000 acres of land in the Middle-Tensaw River Delta. These wetland sites produce high volumes of merchantable timber. Scott began looking for a "least impact" harvesting method in the early 1980s that would be environmentally safe, cost effective, and meet silviculture objectives.

In 1986, Scott began helicopter logging with contractors and by 1989 operated its own helicopters and crews. The operations consist of two Kaman helicopters, both with dual counter-rotating, intermeshed main rotors, with no tail rotor. Pilots and mechanics are company employees. Logging is done with one helicopter at a time.

Helicopters are expensive to operate, but are offset by high wood production. With an average lift capacity of 5,000 pounds, Scott is harvesting an average of 95 to 110 tons per hour, or about 750 tons per day.

Pulpwood is flown to the riverbank, where logs are stacked on a deck. They are then loaded on barges where they are transported an average of 20 miles down river to the pulp mill. Barges are loaded to a maximum of 850 tons per barge, or about 30 truck-loads. Distance, along with river transportation, makes this operation cost effective.

The operation also includes two tracked feller bunchers that operate on ground mats, which impact the site less than the normal person walking. These feller bunchers increased production to 100-110 tons per hour compared to past hand chainsaw felling, which produced 65 tons per hour.

Environmental and Silvicultural Impacts

Areas harvested are limited to 60 acres or less. These areas that are harvested produce

100-120 tons per acre. Timber type is made up of tupelo-cypress with ash in the understory. Den trees and snags are left standing in the clearcut area for nesting birds.

All areas are clearcut, leaving a considerable amount of debris lying on the ground after harvest. Research has shown these areas trap sediment and act as a filtering system. Research has also shown that regeneration occurs quickly after this low-impact logging system.

The feller bunchers, when felling, remove unwanted stems. This enables the area to regenerate itself with young seedlings and sprouts from freshly harvested stumps. Desirable regenerated stems measure nearly 30 ft. by the fourth growing season following harvest. Within 30 to 40 years, these natural stands are expected to again approach commercial productivity, while at the same time protecting and enhancing other wetlands values. ♣

Alabama's TREASURED Forests

W—Winter · SP—Spring · SU—Summer
F—Fall · TAX—Tax Supplement, 1984

Example: W90-4—Winter 1990 Issue, Page 4

INDEX OF ARTICLES, 1982-1994

AESTHETICS

- Autumn Color.....F89-25
- Color Your Forests.....F83-8
- The Secret of Fall Colors.....F91-32
- Transplanting.....SP90-28

ALABAMA FORESTRY COMMISSION

- Commission Assists in Poultry
Cleanup.....SP88-14
- Giving Returns on Your
Tax Dollars.....SP87-13
- Governor Appoints New
Commissioners.....SP86-28
- Hat's Off to the AFC.....SU86-27
- Sixty-Seven Stories of Progress.....SU83-20
- State Forester Moody Retires.....F93-14
- Tax Dollars at Work.....F85-11
- Training Pays Dividends.....SP87-12
- Using Marketing Research.....W90-22

ASSOCIATIONS/AGENCIES

- Alabama Cooperative Extension
Service.....SP91-21
- Alabama Department of
Conservation.....F90-18
- Alabama Forestry Association.....SP83-15
- Alabama Forestry Planning
Committee.....SU93-7
- Alabama Forestry Planning
Committee Directory.....SU93-13
- Alabama TREASURE Forest
Landowners Association.....F92-24
- Alabama Wildlife Federation.....SU83-14
- Centennial Year of the
National Forest System.....F91-7
- Conservation Foundation.....SP90-31
- Fisheries, Forestry and Wildlife
Extension at Auburn.....F92-12
- Forestry in Secondary Schools.....W90-14
- Forest Farmers Associations.....SU88-26
- Natural Resource Conservation
Organizations for Landowners.....W94-22
- Ninth Annual Forest Festival.....SP83-22
- N.E. Alabama Landowner Association
Formed.....SU92-19
- SCS 50th Anniversary.....SP85-30
- Soil and Water Conservation
in Alabama.....SP92-10
- The State Board of Registration
for Foresters.....SP93-10
- State Soil & Water
Conservation Committee.....SP90-11
- USDA Forest Service.....SU90-11

AVIATION

- Fire Detection.....SP83-26
- Helicopters in Forestry.....W94-24
- Smoke Chasing.....F82-9
- Used in Fire Detection and
Suppression.....SU90-30

AWARDS

- 1983 Forest Festival Banquet.....SU83-27
- Barrow Receives Award.....SU83-27
- The Best of the Best.....SU91-13
- Choctaw County, 1992 Forestry
Capital of Alabama.....F92-21
- Clay Co. Teams Earn Top Honors.....W92-31
- Eighth Alabama Landowner
Conference.....W92-11
- Faulkner Receives Collier Award.....F90-30
- Fifth Alabama Landowner Conference.....F88-11
- Forestry Champions.....F94-31
- 4-H Wildlife Team Wins National
Championship.....W94-9
- Helene Mosley Award Recognizes
Landowners.....F94-22
- Kelly Mosley Honored.....SU84-28
- Mosley Awards.....SP88-10
- Nominations Encouraged for
Environmental Awards.....SU91-32
- Seventh Alabama Landowner
Conference.....W91-14
- Sixth Alabama Landowner
Conference.....F89-12
- Take Pride in America
Winners Announced.....SP91-10
- Tenth Alabama Landowner
Conference.....W94-19

BEAVER

- Convert Your Beaver Problem into
a Waterfowl Area.....SU92-28
- Leave It to Beaver.....SP83-8
- Living with Beaver.....SP94-12
- Wood Ducks and Beaver Ponds.....SU88-30

BIRDS

- Amquail.....F87-11
- Bicolor Is for the Birds, pt. 1.....W84-24
- Bicolor Is for the Birds, pt. 2.....SP84-9
- Canada Geese—Going South.....F88-8
- Convert Your Beaver Problem into
a Waterfowl Area.....SU92-28
- Developing Dove Habitat.....SP86-26
- How to Attract
Non-Game Birds.....SP89-8
- Nest Boxes for Wood Ducks.....F84-8
- Purple Martins.....W87-30
- Red-Cockaded Woodpecker.....SU89-11
- Snag Management for Forest Birds.....F83-28
- Where Have the Bluebirds Gone?.....SP84-5
- Wood Duck Hatch.....F86-29
- Wood Duck Nest Boxes.....W87-14
- Wood Ducks and Beaver Ponds.....SU88-30

CHRISTMAS TREES

- Christmas Trees Can
Bring Profit.....SP88-25
- Christmas Trees, a Cash Crop.....F82-17
- Christmas Trees and Taxes.....TAX-18
- Facts about Growing Christmas Trees.....SP94-31

COMPUTERS

- Computers Are Becoming
Necessary Tools.....SP89-26
- Fire Fighting Computers!.....SU84-22
- Foresters and Computers.....W85-27
- The Newest Forestry Tool.....W87-9

CONSULTANTS/FORESTERS

- Choosing the Right Consultant.....SU83-18
- Do You Need Assistance from a
Wildlife Biologist?.....SU92-23
- Finding Help.....W89-19
- Hire a Forester.....F84-25
- How a Consultant Forester
Can Help You.....SU92-22
- On Being a Consultant.....SU93-26
- The Professional Forester.....SP85-17
- Selecting the Right Vendor.....F90-23

COST-SHARE

- Alabama Agricultural and Conservation
Development Commission Program.....W94-7
- Comparison of Cost-share Programs.....SU93-14
- Comparison of Programs.....F87-29
- Conservation Reserve Program.....SP86-8
- Conservation Reserve Program.....SU88-12
- CRP—Herbicides, Grass vs. Trees.....SP88-22
- Cost-share Activities and
Southern Pine Beetle.....SU93-15
- Drought Assistance.....W89-10
- A Helping Hand, ARCP.....F85-25
- Historical View of Cost-Share
Tree Planting.....SP94-18
- Industry/Landowner Assistance
Partnerships.....SU93-16
- Reforestation Incentives.....SU87-13
- SIP: A New Cost-Share Program.....SP92-26
- Tree Assistance Program.....SU93-28
- Uncertain Futures: CRP and FIP.....SU94-20
- USDA-ASCS Cost-share Programs.....SU93-18

DEER

- Cool Season Food Plots for Deer.....SU94-23
- Deer in Alabama.....F84-12
- Deer Management and
Spiked Bucks.....W89-18
- Establishing Food Plots
for Deer and Turkey.....F86-18
- Hunter's Choice Deer Season.....SU86-26
- Leave It Alone—
The Mother Did!.....F89-26
- More About Deer.....W85-22
- Supplemental Crop Plantings.....F89-30
- White-tailed Deer Research.....SP90-10

ECONOMICS

- Ala. Timberland—Can It
Support Industry?.....SU90-27
- Cost of Mis-managing Your Land.....W86-8
- Economic Impacts of Erosion
Control in Forests.....SP91-23

Alabama's TREASURED Forests

W—Winter · SP—Spring · SU—Summer
F—Fall · TAX—Tax Supplement, 1984
Example: W90-4—Winter 1990 Issue, Page 4

INDEX OF ARTICLES, 1982-1994

- FmHA Timber LoansSU88-18
Forestry RecordkeepingW83-11
From TREASURE Forest
to TREASURE ShipSU89-25
Have Logs Will Travel?F90-14
Hardwood Chip ExportsSU89-13
Investing: Forestry or Agriculture?F86-22
Stumpage Price Trends in AlabamaF89-22
Truth About Forest InvestmentsF83-16
Why Is Forestry Such a
Good Investment?W85-16
- EDUCATION**
Adopt-A-School for TREASURE
OwnersSU94-14
Center Provides Environmental
InformationSU91-28
Forestry Education in Secondary
SchoolsW90-14
Future Farmers Learn
Forestry SkillsW83-20
One Foot in the WoodsSU83-10
Mobile College Announces Forest
Resources Learning CenterW91-28
Project Learning TreeSP89-14
Project WildSP89-15
Show and Tell Forest ManagementSU83-11
- ENDANGERED SPECIES**
Alabama Canebrake Pitcher PlantF94-28
Endangered SpeciesF86-26
Endangered Species Act and the
Private LandownerF93-23
The Green Pitcher PlantF84-24
Fire and Our Natural HeritageW92-28
Proposed RCW Guidelines for the
Private LandownerF93-30
Red-Cockaded WoodpeckerSU89-11
The Sandy-moulderF92-28
- ENVIRONMENT**
Earth Day, 1990SP90-26
Oceanfront Property for SaleSU89-7
Open Burning OzoneF90-8
- EQUIPMENT**
Biltmore StickSU86-12
Forest Management on a ShoestringF82-10
Forest Management ToolsW88-31
Forest Tools for the
"Hands-on" LandownerF92-7
Make it YourselfW86-27
Own Your Own SawmillF88-14
Ticket to RideSP85-13
Where to Find Forestry ToolsW85-25
- FIRE**
Burning Outdoors:
What You Should KnowF92-32
Dry Hydrant SystemSP90-27
Fire's Effect on Forest SoilW83-17
Its Bearing Upon Land and ManSU83-21
Where There's Smoke There's IreF91-30
- FIRE PREVENTION**
Festival Salutes SmokeySP84-14
Fire Prevention PlanW88-7
Law Enforcement as Fire PreventionW83-17
Preventing Unwanted FiresF94-8
Smokey Bear First Day CoverSU84-24
Smokey Bear—40 YearsW84-6
Talladega Co. Targeted for Fire
Prevention ProjectSP93-27
- FIREBREAKS**
Firebreaks Protect Forest LandsF83-18
Firelanes Have Multiple UsesF92-30
Permanent FirelanesW89-9
- FOREST DAMAGE**
After the Iceman ComethSP85-10
Disasters and TaxesTAX-16
Drought and Forest ProductivityW89-31
Tree Assistance ProgramSU93-28
- FOREST HEALTH**
Annosus Root-RotF82-18
Annosus Root Rot—
Nuisance in AlabamaSP86-19
Dogwood Anthracnose: Prevention
and ControlF93-28
Dogwood Anthracnose Raises
Concern in AlabamaW91-27
Fighting Fusiform with GeneticsSU83-25
Forest Health Monitoring
in AlabamaF91-14
Forest Health Monitoring
Update, 1994F94-7
Forest InsectsSU89-23
Fusiform—The Rust That
Destroys PinesSP83-16
Gypsy Moth Trapping-1990SP91-13
Gypsy MothsSU90-12
How to Grow Beetle Bait!SU92-20
Insects and Disease!SP87-29
Pines Rust, Too!SP87-27
Soil and LittleleafF83-12
SPB and Annosus Root Rot
ManagementW85-17
Southern Pine Beetle
ManagementSU94-28
A Partnership in Pest
ManagementSP84-28
Pest Management Slides-TapesF86-12
Protect Your TREASURE
From PestsSU86-22
What to Do When Pests
Hit HardwoodsSU85-19
- FOREST MANAGEMENT**
All Aged? Even Aged?W85-9
Chemical Site PreparationW84-17
Commercial Pruning: An Economic
GambleSP92-12
The Costs of Mis-managing
Your LandW86-8
Decision Time ApproachesSP92-32
Do It Yourself ForestrySU86-10
Ecosystem ManagementSU94-18
Ecosystem Management in AlabamaSU94-19
Firewood from TSISU92-8
Forest Management on a ShoestringF82-10
Forethought in Forest
Management PaysSU87-16
Growing Loblolly Pine in AlabamaF86-13
Growing Poles and PilingSP86-25
Inferior PinesW85-15
It's Your Forest: Take a StandSP83-14
Longleaf Pine as a Planting OptionSP94-15
Longleaf Pine RegenerationF83-27
Looking for HelpSU84-9
Management Means MoreSU84-7
Managing Natural StandsSP86-22
Managing Site ProductivityW94-10
The Need for Forest ManagementSU94-9
Plan Before You Cut!SP83-20
Planning GuideW89-24
Preplanning a Multiple Use Forest
Timber SaleSP94-7
Selective Thinning—A New ApproachW90-19
So You Want a Pine ForestF84-20
Set Your "Sites" on the Best ResultsW89-28
Thinning Your TimberSU91-10
Timber and Wildlife HabitatW87-11
Trees Need A Proper HomeSU84-16
TSI Methods to Help Achieve
Your GoalsF91-8
Uneven Aged Management
of LoblollyW85-12
Weather or NotW88-24
Yes, You Can Have It AllF94-26
- FOREST PRODUCTS**
Alabama's Forest ProductsSU87-15
Applying Log Grades to the WoodlotF87-24
Cedar FurnitureSP87-25
Cedar Makes ScentsSP87-26
Europe—A Growing Market
for Southern PineSU91-26
Forest ProductsF87-19
From TREASURE Forest
to TREASURE ShipSU89-25
Gourmet Mushrooms from
Alabama's ForestsF91-28
Hardwood: A Matter of QualityF93-20
Harvesting Pine StrawW90-26
KindlinF87-27
Modern Timber BridgesW89-25
Old Keg MillSU87-23
One Man's Trash Is Another
Man's TREASUREF87-29
Poles: A Preeminent CropF83-15
Trends in Forest Product TechnologyF89-13

Alabama's TREASURED Forests

W—Winter · SP—Spring · SU—Summer
F—Fall · TAX—Tax Supplement, 1984

Example: W90-4—Winter 1990 Issue, Page 4

INDEX OF ARTICLES, 1982-1994

Unusual Alabama Forest Products.....	SP91-22
Utilization of Low-Grade Hardwoods.....	F85-22
Wood Residues	W94-18

FORESTRY PLANNING COMMITTEE

Alabama Forestry Planning Committee	SU93-7
Alabama Forestry Planning Committee Directory	SU93-13
Cooperative Forestry, County Level.....	W87-10
Planning Committee Expands.....	W91-12
Reforestation—Planning Committees.....	F88-23
Unique Example of Coordination	SP83-12

GRAZING

Beef Cattle and Timber	SP84-18
Beef Production in Alabama's Woodlands	F82-28
Goat Grazing on Woodlands	F84-11
Integrating Timber and Cattle	SP86-15

HARDWOODS

American Chestnut	SU94-22
American Hornbeam.....	W94-32
Bald Cypress.....	F94-25
Black Walnut	F82-16
Changing Philosophies of Hardwoods	SU85-8
Cherrybark Oak	SU91-11
Cypress, a Tree to Consider.....	W86-25
Epicormic Branching.....	F92-9
Facts of Hardwood Management	W86-23
Green Ash.....	SP92-25
Growing Black Walnut Trees.....	SP92-27
Hardwood Management Alternatives	W92-14
Hardwood Management in the SMZ.....	SP90-30
Hardwood Regeneration	F82-25
Hardwood Regeneration Methods.....	F90-24
Hardwood Site Selection	SU87-26
Hardwood Timber Harvesting.....	F88-19
Hardwoods Improved in Four Steps.....	W83-21
It's Poplar	SU84-19
Let's Get Started, Regeneration	SU85-6
Losing Sight of Sites	SU83-20
Natural Regeneration of Upland Hardwoods.....	W86-9
No Freeway to Regeneration	F82-25
Northern Red Oak	SP93-7
Nuttall Oak	SU92-19
Oak Regeneration by Direct Seeding	SU85-12
Oaks, Acorns and Wildlife	SU85-30
Oaks—One of Alabama's Handsome Hardwoods.....	SP86-11
Oh, Those Lovely Oaks.....	SU88-19
Paulownia	F90-27
Persimmon	F93-32
Protecting Bottomland Hardwood Benefits	SU85-28
Quality: The Key to Value and Management	W92-22
The Sturdy Oak	SP93-18
Swamp Chestnut Oak	F91-24
Upland Hardwood Regeneration	SU85-16

Utilization of Low-grade Hardwood	F85-22
What to Do When Pests Hit Hardwoods	SU85-19
Yellow Poplar.....	SU87-24
Yellow Poplar: A Tree of Beauty and Benefit.....	W92-32

HARVESTING TIMBER

A Tale of Two Sales	SU90-9
Conducting a Successful Timber Sale.....	SP93-8
Estimating Timber Volume of Your Forest	W86-13
Hardwood Timber Harvesting.....	F88-19
Harvesting Upland Hardwoods	SU94-10
How to Harvest Timber	SU90-18
Inspecting Timber Sales	SU86-24
Landowner's Responsibility During Logging	SU92-25
Mule Logging: A Dying Art?.....	SP92-14
Plan Before You Cut!.....	SP83-20
Preplanning a Multiple Use Forest Timber Sale.....	SP94-7
Selective Thinning—A New Approach.....	W90-18
Some "Rules" You Should Know	SU84-15
Timber Harvests: More Than Cutting Trees.....	W92-7
Timber Sale.....	W83-5
Today's Logger: Ready for the 20th Century?	SP94-19
What To Do Before Selling Timber.....	F88-23
Which System Would You Select	SU86-23

HERBICIDES

Chemical Site Preparation	W84-17
Forester's Guide to Herbicides.....	F85-17
Herbaceous Weed Control	SP89-18
Herbicide Alternatives	SP87-18
How Safe Are You?	W85-6
Improving Wildlife Habitat with Herbicides.....	W91-7
Pesticide Labeling and Registration	W90-9
Pesticides, Poison, Toxicity	W85-28

HISTORY

Alabama's First Forest	SP89-30
Alabama's Forests—A Timeline.....	F94-14
Archaeological Sites.....	SU84-20
Biological Diversity in Alabama Forests— A Historical Perspective	F93-10
Famous and Historical Trees.....	SP90-18
History Writers of the Forest.....	SP90-9
Tree 249-3	SP92-18
The World That Was.....	W92-26

HOME PROTECTION

How Safe Is Your House?	W88-8
House Fires! An Unspoken Fear	SP83-24
Log Cabin Fever	F85-29
Smoke Detector	F82-9
They're Our Volunteers.....	F84-23
Volunteer Firefighters—The Unsung Heroes	SP93-31

HUNTING

Before You Sign Hunting Leases.....	SU84-14
Cedar Heights	F88-27
Fundamentals of Bowhunting Success.....	SU91-30
Hunter's Choice Deer Season in Ala.....	SU86-26
Landowner-Hunter Relations	F93-26
Leasing Hunting Rights.....	SU89-18
Leasing Hunting Rights How Much Should I Charge?	SU92-11
Managing Wildlife for Income.....	F85-7
Organizing a Hunting Club	SU91-8
Penalties for Violating Game Laws	W90-8
Sport Hunting's Effect on Wildlife.....	W87-25
Tree Stands: Are They Hazardous?	W91-32

KUDZU

Arrest Kudzu	SU83-28
Options for Kudzu Control	W90-30

LANDOWNER PROFILES

All in the Family.....	F85-4
Barry Hughes Has a First	SU84-4
The Best of Both Worlds.....	F92-23
Blount County's Secret TREASURE.....	F91-18
A Bountiful TREASURE in Coosa County	SP92-22
Building Bridges for Those to Follow.....	F88-4
A Cabin to TREASURE	W91-30
Christmas Tree Farming at Shalimar	W91-30
A Commitment to Excellence	SU91-4
Cotton, Cattle, Hay, Timber	F86-4
Creating a TREASURE	W91-4
A Diverse TREASURE	F92-4
An Environmental Showplace	SU90-4
A Family TREASURE.....	SP94-4
Family TREASURE	W92-21
A Forest with a View.....	SU93-4
Forest of Fears	W92-19
Gordon and Son—A Family TREASURE.....	F83-4
Happy Acres Farm: A Family Tradition	SP93-4
A Home—An Occupation— A TREASURE	W89-4
How to Grow a TREASURE Forest	W83-8
I Always Did Want Some Timber.....	F84-4
I Did Something Right	SP87-4
"I Didn't Plant Most of the Trees That I Cut".....	W91-31
"It's a Different World"	F89-4
It's a Dream-Come-True	SU86-4
It's the Little Things That Count	W88-4
It's More Than a Paper Forest	SU87-4
It's Never Too Late	SP91-4
It's Not What You Know—It's Who!	W84-4
It's Quality, Not Quantity	W86-4
It's What You Do with What You've Got	F87-4
It's Worth the Extra Effort	SP93-22
Juniper Valley.....	F94-21
A Lesson in Stewardship	W92-18
Lessons Learned	SU91-4
Little Nashville	W94-20

Alabama's TREASURED Forests

W—Winter · SP—Spring · SU—Summer
F—Fall · TAX—Tax Supplement, 1984
Example: W90-4—Winter 1990 Issue, Page 4

INDEX OF ARTICLES, 1982-1994

Making Alabama a Better Place Through Forestry	SU89-4
Marywoods	F94-20
McCallister Farms—A Hobby, a Haven, a Home	SP92-4
Mildred's Farm's a TREASURE	SU83-4
Millwood's a Hardwood Haven	SP85-4
Nature Strikes a Pretty Pose	SU85-4
Nothing Happens by Accident	SU94-4
Nurturing Nature	F92-19
One with Nature	SP93-21
Pennywinkle Farm—A Story of Commitment	SP93-23
Pine Trees, Quail and Bluebirds	SP91-19
Pineland, Alabama's First TREASURE Forest	F82-4
Pineland, a Second Look	SU89-29
A Place for People	F92-22
Preserving the Forest Heritage	F92-20
A Purpose for Everything	W90-4
Racks Are Getting Bigger, Quail Are Coming Back	F91-19
The Ranger's Woods	SU91-18
Reaping the Benefits of a TREASURE Forest	SU91-19
A Recreational TREASURE	F93-19
Retirement Benefits	F93-4
Retirement Enjoyable at a TREASURE Forest	F91-19
A Risk Worth Taking	SU92-14
Russell Campbell's Red Clay Hilltops Are Turning Green	SP83-4
Sixty-five Years in the Family	W94-20
A Steward of His Land	SP90-4
Stewardship: North Alabama Style	F90-4
Sturdy Oak Farms	F94-4
Taking Special Care	W92-4
A Thing of Beauty	SP93-20
Timber's a Sidetrack	W87-4
A TREASURE Forest—For Love and for Money	SP91-18
A TREASURE to Share	SU92-4
A TREASURED Home	F93-18
TREASURES Worth Sharing	SP89-4
The Woods Is the Place to Be	W85-4
A Valley of Hardwoods	W94-4
We'd Do It All Over Again	SP88-4
Wilmon Timberlands, Inc.	SU88-4
Wilderness in Marengo County	W92-20
Working with Nature	SU92-15
You're Never Too Old to Learn	SP86-4
You've Got to Do Something!	SP84-24

LAW ENFORCEMENT

Alabama Woods Arson Report	F88-10
An Illegal Green in Our Forests	W84-16
Burning Outdoors: What You Should Know	F92-32
Fire Bug	W87-29
Is Your Burn Legal?	F82-8
Law Enforcement as Fire Prevention	W83-17

Penalties for Violating Game Laws	W90-8
Revised Severance Tax Law	SU94-13
Timber Theft	SP89-10
Timber Theft	SU92-18

LITTER

Don't Drop It on Alabama	SP90-14
Garbage, Garbage, Everywhere	F86-30
Litter In Alabama's Forests	W88-15
PALS Continues Anti-Litter Efforts	SP91-14
PALS Director	F88-09
PALS Is Cleaning Up Alabama	F89-31

MAPPING AND SURVEYING

Aerial Photos and Topographic Maps	SU87-8
Basic Steps in Land Measurement	F83-6
The Finishing Touch	F86-8
Getting Boundaries Surveyed	F84-22
See the Big Picture	W83-22
A View from Above	F94-29

MISCELLANEOUS

Beauty in Flight	SP91-28
Between Rome and Dixie	SP94-10
The Boy and the Tree	W85-31
Champion Trees	SP90-20
Discovering Pike County's Pocosin	SP92-28
Farm Hotline Established	SU83-24
Forestry in Hungary	W92-24
A "Forever Wild" Land Trust	SU92-7
Glossary of Forestry Terms	SU91-14
ISO Ratings: What They Mean to You	W91-15
Keeping Alabama Forever Wild	F91-12
Many Questions Answered	W86-12
Managing Vegetation with Goats	SP94-21
Medicinal Value of Plants in Alabama's Forests	F94-10
Perceptions of the Forest	F91-23
Rocks of Alabama's Forest Trails	SU89-9
Seeing Scenic Alabama, pt. 1	W94-28
Seeing Scenic Alabama, pt. 2	SP94-28
Small Acreage Forest Landowner Conference	F94-11
Soil and Water Stewardship Week	SP93-15
Starting a Home Forestry Library	SP86-10
Tips for Absentee Landowners	W86-6

NATURAL REGENERATION

Doing It Naturally	W84-18
Longleaf Pine Regeneration	F83-27
Natural Regeneration of Upland Hardwoods	W86-9
Regeneration of Forests—Naturally	SP89-20

NURSERIES

A Little History	W90-28
Know Your Seed Source	SU91-20
North Alabama Nursery	SP90-15
Nurseries Growing Super Trees	F82-14
Nursery Program	SU88-10

Nurserymen Harvest Improved Pine Seed	W83-7
Planting Acorns by the Ton	SP94-27
Progeny Testing Program	SP83-11
Seed Quality, a Key Cost Factor	SU83-8
Seedlings by the Millions	F82-20
'Tis the Busiest Season	W83-25
War Against Weeds	W84-20
What Are Super Seedlings?	SP94-25

OAKS

Cherrybark Oak	SU91-11
Northern Red Oak	SP93-7
Nuttall Oak	SU92-19
Oak Regeneration by Direct Seeding	SU85-12
Oaks, Acorns and Wildlife	SU85-30
Oaks—One of Alabama's Handsome Hardwoods	SP86-11
Oh, Those Lovely Oaks	SU88-19
The Sturdy Oak	SP93-18
Swamp Chestnut Oak	F91-24

PINE MANAGEMENT

Commercial Pruning: An Economic Gamble	SP92-12
Cone Development in Southern Pines	SU89-30
Growing Loblolly Pine in Alabama	F86-13
Growing Poles and Piling	SP86-25
Inferior Pines	W85-5
Longleaf Seedlings: Bareroot vs. Containerized	SU94-24
So You Want a Pine Forest	F84-20
Southern Bread and Butter	W84-11
The Southern Pine	SU84-25
Longleaf Pine	F87-15
Longleaf Pine as a Planting Option	SP94-15
Longleaf Pine Regeneration	F83-27

POND MANAGEMENT

A "Reel" Adventure	W84-8
Clearing Muddy Ponds	F91-26
Managing Aquatic Weeds in Ponds	F91-27
Ponds: Popular Recreation	F87-13
Take Control of Weeds	SU90-24
What About Pond Management?	W89-14

PRESCRIBED BURNING

Burning for Site Preparation	SU88-8
Controlled Burning Users in the Wiregrass Region	W91-24
Fire and Our Natural Heritage	W92-28
Is Your Burn Legal?	F82-8
Open Burning and Ozone	F90-8
Plan Management Around Control Burning	W86-24

Alabama's TREASURED Forests

W—Winter · SP—Spring · SU—Summer
F—Fall · TAX—Tax Supplement, 1984

Example: W90-4—Winter 1990 Issue, Page 4

INDEX OF ARTICLES, 1982-1994

Plan Now for Winter Burning	F83-22
Plan Prescribed Burning Now	F85-13
Prescribe Burning in Pine Stands	SP87-11
Prescribe Burning—the Safe Way	SU90-7
Prescribed Burning—Useful Tool	SP83-28
Prescribed Burning—What Is It?	W83-16
Tame Fire Can Aid Our Forests	SP83-29
What Can You Expect?	W89-11
Where There's Fire There's Smoke	W87-28

PRUNING

Commercial Pruning: An Economic Gamble	SP92-12
How to Prune Trees	SP83-21
Pruning: A New Look at an Old Practice	SU94-7

RECREATION

Forest Photography	SP84-27
Summer Is a Time for Camping	SU84-23
Take a Nature Break at Tuskegee	SU83-30
A Trail in the Woods	SU91-24
Trails Can Be Fun	SU83-26

REFORESTATION

Burning for Site Preparation	SU88-8
Checking Seedling Survival	SP85-24
Containerized Seedlings Offer Alternatives	W91-26
Direct Seeding	SP85-12
Doing It Naturally	W84-18
Don't Let Them Die	W86-26
Evaluation of the Planting Job	F90-7
How to Grow Beetle Bait!	SU92-20
Inferior Pines	W85-15
Make it Yourself	W86-27
Plant Your Forest Correctly	W94-8
Planting Containerized Seedlings	F86-20
Planting Southern Pine Seedlings	W87-23
Planting Trees?—Standards Can Help	W88-21
Prepare Now for Planting	SU83-9
Reforestation Survey	F88-12
Reforestation Vendor Service	SP87-31
Seedling Handling	F89-27
Seedling Survival— How Is Alabama Doing?	F90-31
So You Want a Pine Forest	F84-20
Tree Planter for Marginal Land	F84-18
Tree Planting—It's Worth Doing Right	F88-29
You Reap What You Sow	W88-28
What Are Super Seedlings?	SP94-25

SAFETY

Chainsaw Safety Is No Accident	F94-19
---	--------

Chainsaw Safety, It's No Accident	F84-25
Common Poisonous Plants	W90-12
Don't Be Afraid—Be Cautious	F89-18
Don't Let It Bug You!	SU87-27
Gun Safety	F87-7
Herbicides—How Safe Are You?	W85-6
How Safe Is Your House?	W88-8
Lyme Disease	SU90-25
Pesticides, Poison, Toxicity	W85-28
Rabies	F90-12
Safety Comes First (chain saw)	W91-13
Smoke Detector	F82-9
Tractor Safety	SP87-31
Tree Stands: Are They Hazardous?	W91-32

SOILS

Considerations for Forest Management on Ala. Soils	F94-12
Controlling Erosion	SU86-29
Defining a Wetland	F93-7
Dollars in Your Dirt	SP84-20
Fire's Effect on Forest Soil	W83-17
Forest Management Begins With Soil	SP85-9
Know Your Wetlands	SU90-8
Losing Sight of Sites	SU83-20
Planning Soil and Water Quality	W83-18
Set Your "Sites" on the Best Results	W89-28
Soil and Littleleaf	F83-12
Soil Compaction, Hardpans and Tree Growth	SP93-24
Soil pH in Forestry	F83-12
Soil Survey	F83-12
Timber Production on Marginal Cropland	F85-28

SOUTHERN PINE BEETLE

Combating the Beetle	SP84-16
Control the SPB	F83-23
Cost-share Activities and Southern Pine Beetle	F93-15
Hazard Rating	W83-26
How to Grow Beetle Bait!	SU92-20
Insects and Disease	SP87-29
Sawing is Salvage	SU84-12
Southern Pine Beetle Alert	SP86-24
Southern Pine Beetle Management	SU94-28
SPB and Annosus Root Rot	W85-17
SPB Battle Continues	W89-12
Where Did Those Beetles Come From?	F85-9
Will the Beetle Be Back?	W88-29

SQUIRRELS

A Fly-by-night Operation	SP93-28
Auto Tires Make Dens	SU91-21

Gray Squirrel	SP85-14
Observing Squirrel Signs	W83-29

STATE LANDS

Alabama Forestry Commission: Practicing What It Preaches	SU94-8
Choccolocco State Forest	W83-24
Practicing What We Preach	F82-29
A Recreational Opportunity	SP91-26

STATISTICS

Alabama Resource Information	W89-7
Alabama's Fourth Forest	SP88-29
Measuring the Wealth of Alabama's Forests	F89-10
1990 Alabama Forest Survey	W91-10
Snapshots of Alabama's NIPF Landowners	SP93-26
What Is Alabama's Fourth Forest?	W88-10
Who Own's Alabama's Forest?	SU91-7

TAXES

Acreage Assessment for Alabama	W90-7
Alabama Severance Tax	SU94-12
Approved Amendment Will Provide Funding for Firefighters	SP94-32
Changes in Estate Taxation	SP83-6
Christmas Trees and Taxes	TAX-18
Death and Taxes	TAX-13
Deductible Expenses and Carrying Charges	TAX-20
Disasters and Taxes	TAX-16
Estate Planning	SU87-9
Federal Forestry Cost-share Programs Outlook	SU93-24
Forest Severance Tax	SP89-11
Forestry Recordkeeping	W83-11
IRS, the Helping Hand	TAX-30
Management Can Save Tax Dollars	SU88-28
Managing Under New Tax Laws	W87-8
Now Where Did I Put That?	W92-10
Partners with Uncle Sam	TAX-26
Passive, Active, or Just Confused	SU93-20
Preserving Your Family Forest by Estate Planning	SP93-12
Revised Severance Tax Law	SU94-13
Severance and Privilege Taxes	TAX-23
Stewardship Incentives Program	SU93-22
Tax Tips	F90-10
Tax Treatment of Reforestation	TAX-10
Taxes, the Silent Partner	TAX-4
Timber Account Depletion	TAX-5
Tips for Forest Landowners	SP88-12
Valuation for Estate Taxes	TAX-7

Alabama's TREASURED Forests

W—Winter · SP—Spring · SU—Summer
F—Fall · TAX—Tax Supplement, 1984
Example: W90-4—Winter 1990 Issue, Page 4

INDEX OF ARTICLES, 1982-1994

TREASURE FOREST

Awareness Campaign Launched	F94-27
Crying Indian Smiles about TREASURE Forest	SP85-28
A Haven for Wildlife	W88-14
Not in It for The Money	SU90-14
Path to TREASURE Forest	SP90-7
Perspective on TREASURE Forest	F88-7
The Road to TREASURE	SU86-28
Signs of the Times	SP90-25
State-Owned TREASURES	SP92-23
TREASURE Forest and Tree Farm	F85-16
TREASURE Forest Goes Nationwide	W90-15
TREASURE Forest Landowner Creed	W84-29
TREASURE Forest Memorabilia Donated to AU Archives	F92-8
TREASURE Forest Program	W83-23
The TREASURE Forest Program in Alabama	SU93-29
TREASURE Forest—The First Step	SP92-7
View on TREASURE Forest	F89-7
When Managed Properly All the Pieces Fit	W85-26
Why TREASURE Forest	SP85-25
You May Have a Buried TREASURE	SP92-9

TREE IDENTIFICATION

Selecting a Tree Guide	F94-23
Tree Identification	SU83-19

TURKEYS

Chufas	SU88-23
Building a Turkey Feeder	W91-23
Establishing Food Plots for Deer and Turkey	F86-18
Growing Chufa for Wild Turkeys	SP92-30
Planting Supplemental Foods	SP84-7

URBAN FORESTRY

Cities Recognized for Tree Programs	SP90-12
City Forest Needs Managing Also	SP89-25
Envisioning an Urban Forest	SP93-30
How to Prune Trees	SP83-21
Managing an Urban Forest	SP85-6
Oceanfront Property for Sale	SU89-7
Stewardship in the City	SP92-31
Suburban Forestry	SU84-29
Which Trees Do I Save	W84-14
Urban Development and Water Quality	SP91-7

WATER QUALITY

Affected by Woodland Quality	SP83-23
------------------------------------	---------

Alabama Forestry BMP Manual Available	SP93-14
Best Management Practices	SU84-17
Best Management Practices for Forested Wetlands	F92-13
Best Management Practices, Update	SP89-7
Clean Water and Forest Management	SP91-9
Coastal Zone Management Act Management Measures for Forestry	W94-14
Defining a Wetland	F93-7
Don't Get in a Rut	SU83-16
Forest Roads	W92-12
Hardwood Management in the SMZ	SP90-30
New Coastal Zone Management Guidelines	W94-13
Planning Soil and Water Quality	W83-18
Status Report on Water Quality	W94-26
SMZs for Wildlife	W92-8
Stream Crossings	F91-20
Streamside Management Zones	SU91-22
Trails Can Be Fun	SU83-26
Water Quality	SU86-8
Water Quality Act of 1987	SP88-28

WILDFIRE

After the Fire	SP87-9
Aviation in Fire Detection and Suppression	SU90-30
Cooperation Makes a Difference	F84-29
Fire Bug	W87-29
Fire Detection	SP83-26
Is Your Home in Danger?	SP92-24
Residential Wildland Interface	W90-24
Threat to Southern Forest	SP85-26
Using Tools for Fire Control	SU88-7
Woods Arson Report	F88-10

WILDFLOWERS

Wildflowers	SP87-8
Wildflowers for Alabama	SP89-28
Wildflower TREASURES	F89-9

WILDLIFE

Alabama Black Bears	F90-9
Animal Inns	F89-7
Attracting Owls	F91-25
Auto Tires Make Dens	SU91-21
Building a Turkey Feeder	W91-23
Convert Your Beaver Problem into a Waterfowl Area	SU92-28
Coyote: Predator on the Rise	SU91-29
Deer in Alabama	F84-12
Deer Management and Spiked Bucks	W89-18
A Fly-by-night Operation	SP93-28
Foxes in Alabama	SP91-25
Gopher Tortoise	SP86-29

Gray Squirrel	SP85-14
A "Hare" Raising Adventure	W84-27
Hunter's Choice Deer Season	SU86-26
Improving Wildlife Habitat with Herbicides	W91-7
Leave It Alone— The Mother Did!	F89-26
Managing Forests for Wildlife, pt. 1	F93-12
Managing Forests for Wildlife, pt. 2	SP94-22
Managing Wildlife for Income	F85-7
More About Deer	W85-22
Nine-Banded Armadillo	SP91-20
Non-Game Program Makes Strides	TAX-29
Observing Squirrel Signs	W83-29
Penalties for Violating Game Laws	W90-9
Pine Silviculture and Wildlife	SP88-7
Red-Cockaded Woodpecker	SU89-11
The Sandy-moulder	F92-28
SMZs for Wildlife	W92-8
Sport Hunting and Its Effect	W87-25
Timber and Wildlife Habitat	W87-11
White-tailed Deer Research	SP90-10
Wildlife—Managing for Profit	F88-18
Yes, You Can Have It All	F94-26

WILDLIFE (FOODS/PLOTS)

Amquail	F87-11
Autumn Olive	F90-32
Bicolor Is for the Birds, pt. 1	W84-24
Bicolor Is for the Birds, pt. 2	SP84-9
Chufas	SU88-23
Cool Season Food Plots for Deer	SU94-23
Establishing Food Plots for Deer and Turkey	F86-18
Growing Chufa for Wild Turkeys	SP92-30
Oaks, Acorns and Wildlife	SU85-30
Supplemental Crop Plantings for Deer	F89-30
Wildlife Foods	F87-8

WOOD ENERGY

Energizing the Middle Story	SU83-22
Firewood As a Business Venture	F82-12
Firewood from TSI	SU92-8
Often Neglected As an Energy Source	F84-27
University Turns to Wood Energy	SU83-23
Wood—A Source of Energy	W83-14

YELLOW POPLAR

It's Poplar	SU84-19
Yellow Poplar	SU87-24
Yellow Poplar: A Tree of Beauty and Benefit	W92-32

Selma's School of Discovery

by DON BURDETTE, Conservation Education Forester

The Selma School System is aiming to improve sixth grade scores in science by providing an innovative pilot program which emphasizes natural resource conservation.

The new program started when Dr. James Carter, Selma's superintendent of education, set out to duplicate the academic success of another local school program. Byrd Elementary School is known throughout the state for its creative environmental education program, which has motivated students to greater academic achievement, personal pride and responsible citizenship. Byrd's principal, Ross Hobbs, was asked to expand the concept he had used at the elementary school into a middle school program. When Hobbs came

back with a proposal that would stimulate academic accomplishment by offering a curriculum enriched with science and art, he was asked to lead the effort as principal of the new School of Discovery.

One of Hobbs' guiding principles in building the School of Discovery has been to make it a "school without failure." To do that required the assistance of a very capable staff which Hobbs was able to procure from Selma's existing school system. The science teachers have included Janis Stewart, Renee Slaughter, Ann Thomas and Melissa Hollis.

In turn, his staff advisors have assisted him in refinement of the science program objectives. One of the most unique attributes of the School of Discovery is a commitment to using as much hands-on activity and observation as possible to make science interesting and relevant to the student. The desired outcome is that each graduating student will be more aware, appreciative and active in economically and environmentally balanced

natural resource use and management.

Hobbs soon realized that he would need resources beyond the capabilities of the Selma School Board in order to



Ahmed Shukri (center) supervises students in a science project.

quickly build the capacity of his new school to carry out its purpose. In his pursuit of community/school partnerships, Hobbs contacted State Forester Timothy C. Boyce and asked for assistance in creating a nine-week forestry curriculum that would provide many of the science requirements for the school. Boyce agreed to provide both financial and technical assistance to develop a forestry curriculum that could be used at other schools in addition to the School of Discovery. As a part of this agreement, Commission Resource Specialist Ahmed Shukri was assigned to the school for one year to help them in any way necessary to conduct and develop the school's forestry program.

Shukri has been instrumental in assisting the science teachers in a variety of ways. He has found, used and reviewed forestry and a wide variety of other conservation education lessons and aids from around the country and assisted the teachers with their use. Many of the


lessons are taught by student participation in fun indoor or outdoor activities. The students and teachers have enjoyed several tours, walks and guest speakers arranged by the Forestry Commission.

Shukri has made many of the forestry presentations himself with good results. He has a very unique African/British accent and a confident delivery style which the school children find mesmerizing. He is not only effective in teaching forestry to the children, but is an excellent role model to the predominantly black student membership. Shukri has also brought in other successful technical and business men and women who have applied their knowledge and experiences to teach lessons on conserva-

tion education.

So far this new program has lived up to its expectations. The first class of about 100 children "graduated" from the first session of the forestry program better informed on forest conservation issues; better thinkers and decision makers; and with the possibility that some of them will pursue careers in forestry or some other natural resource field.

The School of Discovery's forestry program will continue to be refined throughout the rest of this school year with the assistance of the Alabama Forestry Commission, the Alabama Forestry Association and the USDA-Forest Service. Local partners such as Henry Hughes, International Paper Corporation nurseryman, will also be helping the school establish outdoor learning centers (miniature forests) during the winter.

This unique concept is expected to spread throughout the Selma School System and to other areas of the state in the near future. 



PART 1

Forestry Misconceptions

by BRIAN BRADLEY, Forest Management Specialist, Alabama Forestry Commission, Huntsville

There are many misconceptions among the general public about forestry and forest practices. This article attempts to outline some of the facts and falsehoods relating to this often misunderstood aspect of our natural resource.

MISCONCEPTION:

National Parks And National Forests Are The Same

In the late 1800s Congress began the establishment of national forests to provide the nation with a continuous source of wood products. Over the years that mandate evolved to a "multiple-use" philosophy of providing recreational opportunities (hiking, camping, fishing, etc.), wildlife habitat enhancement, soil and water protection, scenic beauty, environmental education and wilderness experiences, as well as a source of timber.

Currently, timber production is allowed on only about 30 percent of the total National Forest system's land base (191 million acres). The U.S. Forest Service, within the Department of Agriculture, is responsible for the task of managing the property.

National parks, on the other hand, are intentionally devoted to non-commercial uses, primarily recreation. Timber harvesting and other resource production is not allowed. The U.S.

Park Service, under the Interior Department, is charged with the responsibility of managing our National Parks.

MISCONCEPTION:

Alabama's Forestland Is Disappearing

Throughout Alabama, individual, family and corporate landowners are harvesting trees from their forests on a regular basis. To the casual observer it may appear that our state is undergoing a reduction in forest acreage. However, the opposite is actually true.

Comprehensive forest inventory surveys began in Alabama around 1936. At the beginning of each decade, updated surveys are completed and the latest was finished in 1990. Results provide a unique comparison over the past 60 years.

The 1936 survey revealed 18.8 million acres of timberland, but by 1990 forests had increased to 21.9 million acres, or two-thirds of Alabama's total land area. In spite of almost 60 years of population gain, urban expansion, a growing road system, extensive power distribution right-of-ways and other permanent "deforestation" activities, the forest land base is at a historic high point since inventories began.

From 1982 through 1990, 15 counties did experience a net decline of at least 5 percent in forestland. Those counties were located around the major metropolitan areas of Birmingham, Mobile and Huntsville. However, gains in other counties offset these isolated losses.

Because trees are a naturally renewable resource, **harvesting them does not reduce the forest land base.** New forests quickly re-establish themselves on cutover land throughout Alabama, even without planned reforestation efforts. Moreover, as open land is withdrawn from farming or pasture, it too reverts to forests, a process called natural "succession."

Should Alabamians worry about our state becoming a "prairie" state? No! Since forests are naturally renewable, it's almost guaranteed that our children's grandchildren will still marvel at the multiple benefits provided by Alabama forests.

MISCONCEPTION:

Smokey Bear's Message Benefits All Forest Plants

Preventing forest fires has been a consistent message from Smokey Bear since he became the fire prevention symbol in 1944. Generally, the prevention of wildfires has been extremely beneficial to society and Alabama's forests, especially upland hardwood trees.

However, some plant species in the forest have been negatively affected by the exclusion of periodic wildfires. Two species in particular stand out: the endangered green pitcher plant (*Sarracena oreophila*); and the longleaf pine (*Pinus palustris*). Both species are fire dependent for optimum natural regeneration and a successful Smokey Bear campaign has helped reduce the distribution of these species.

According to published accounts, longleaf pine once dominated some 60 million acres, but today its range is around 4 million acres. Several factors have contributed to this reduction (conversion to other pine species, etc.), but the exclusion of fire played a significant role by allowing herbaceous and woody vegetation to successfully compete with longleaf seedlings. Often this other vegetation shaded out the seedlings and over the years successful regeneration of longleaf pine forests dwindled.

Similarly, the green pitcher plant needs moderate fires to prevent encroachment of competing plants for natural regeneration and growth. Many populations of this carnivorous plant have disappeared, and others have declined over the past 70

years due to fire suppression and the subsequent vegetative competition. One way to increase the frequency of these two species is to promote increased *controlled* burning on suitable areas.

Smokey's message has certainly benefited society and is still important, but at least two plant species have been adversely impacted. This situation shows how choices involving natural resource issues are frequently neither all positive nor all negative.

MISCONCEPTION:

America's Forests Are Being Overcut

Publicity from a variety of sources would lead some to believe that our country's forests are being overcut. The fact is that roughly one out of every three acres in the United States is covered with trees (731 million acres). Historically, our current forest acreage equals about two-thirds of the forestland that existed when Columbus landed in America.

Not all of the forestland in the U.S. is available or suitable for timber harvesting. In fact, over 200 million acres (roughly the combined size of North and South Carolina, Georgia, Alabama, Tennessee, Mississippi and Louisiana) is considered "non-commercial timberland," since it can't grow 20 cubic feet of wood per acre per year. By comparison, all of Alabama's forestland is classified as "commercial timberland" with an average growth of 60 cubic feet per acre per year.

Another 35 million acres of U.S. timberland (slightly more than the size of Florida) is reserved or set-aside for non-timber uses, mainly as parks and wilderness areas.

On the nation's commercial timberland, net annual growth exceeds timber harvests **and** losses due to insects and diseases by 27 percent each year. This means that in addition to the existing standing timber volume, or "savings account," we are adding interest yearly above the amount harvested and dying.

Through active reforestation efforts on private and public lands, roughly 4 million trees are planted *every day*. That's almost six trees planted each year for every American. Considering the average person uses the equivalent of the wood from one tree 16 inches in diameter and 100 feet tall annually—the six newly planted trees is a good ratio for sustainability. ♣

References:

- "Land Management Plans for the Pacific NW Region," USFS, 1991.
- "Forests of Alabama," AFC, 1993.
- "Managing Timber and Wildlife in So. Piedmont," Univ. of Georgia and U.S. Fish and Wildlife Service, 1981.
- Save the Redwood League publications, 1989.
- "EPA National Water Quality Inventory," EPA, 1992.
- "Stewardship and Environmental Responsibility," American Forest and Paper Association, 1993.
- "Longleaf Pine: A History of Man and a Forest," USFS, 1987.

Is Your Mailing Label Correct?

Are you receiving *Alabama's TREASURED Forests* at the correct address? If not, please complete the following form and return to:

Alabama's TREASURED Forests Magazine, 513 Madison Avenue, Montgomery, Alabama 36130

New Address

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Old Address as it appears on mailing label

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Please check here if receiving duplicate copies and enclose both mailing labels.

The Red Hills Salamander

by MARK A. BAILEY, Zoologist, Alabama Natural Heritage Program



The story begins with Leslie Hubricht's trip through Butler County in the spring of 1960. A renowned expert on land snails, he was seeking specimens from the poorly studied Red Hills of Alabama. At an interesting spot with bigleaf magnolias growing on steep bluffs, he grabbed up a handful of leaves and there it was. Not a snail, but a huge purplish-brown "spring lizard" glistening in the subdued light. Hubricht had just stumbled upon one of the most sensational North American herpetological finds of the century. Within a year, Dr. Richard Highton of the University of Maryland determined that it was not only a new species, but the first new salamander genus discovered in North America since 1939. He named it *Phaeognathus hubrichti* after its discoverer. The generic

name, pronounced *fee-oh-NATH-us*, means "dark-jaw."

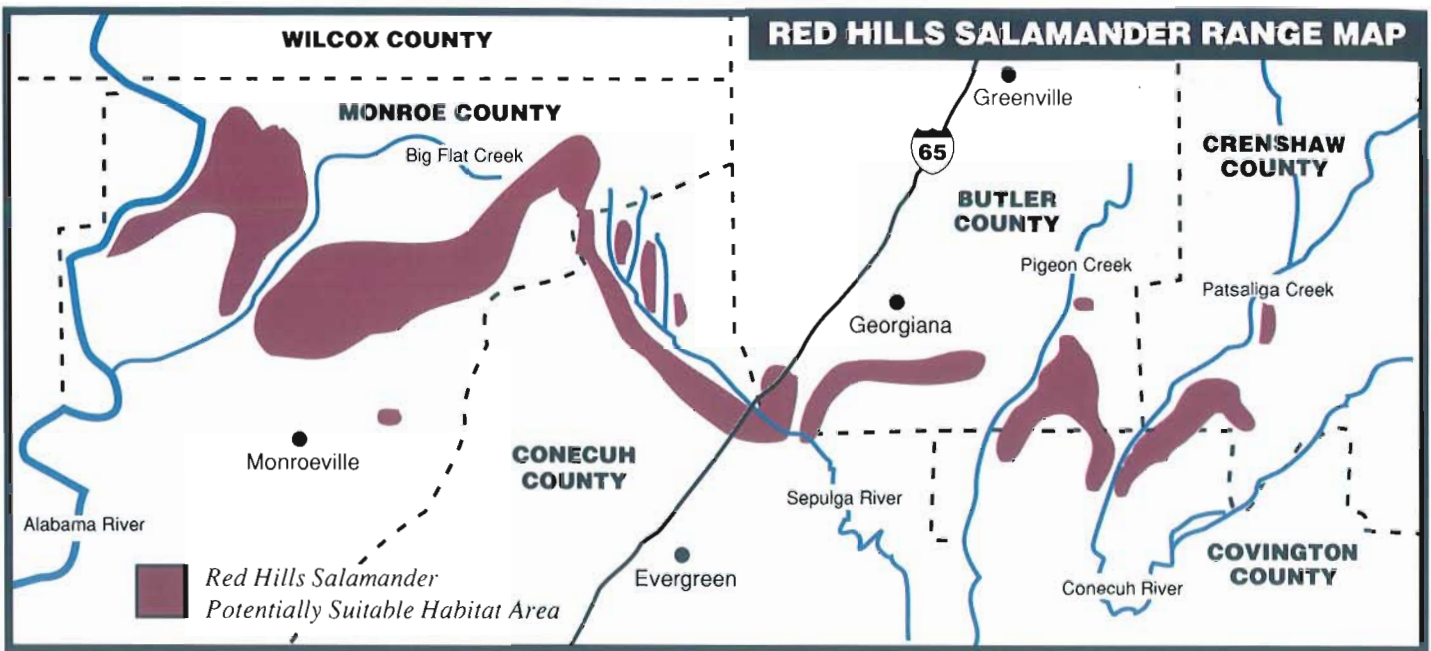
A second specimen was not obtained until March of 1963, when a team from Ohio State University discovered that the salamanders live in burrows on slopes. Searching at night with flashlights, they saw about 60 peering from their burrow entrances. Today, an experienced observer in occupied habitat can generally detect the presence of Red Hills salamanders within five minutes by searching for their characteristic oval burrow opening.

The Red Hills salamander grows to a maximum length of about 10 inches, making it our largest non-aquatic salamander. Having no close relatives, it is the sole member of its genus. Adding to its uniqueness, the Red Hills salamander is the only terrestrial vertebrate species that

is found **only** in Alabama. Its entire range falls within parts of Butler, Conecuh, Covington, Crenshaw, and Monroe counties.

Range and Habitat

With a current estimated range of only 50,000 acres or so, the Red Hills salamander has never been as common or widespread as most of the other 40 salamanders occurring in Alabama. It has probably always been confined to moist deciduous forest over a narrow east-west geologic band called the Tallahatta formation. Below the steep bluffs and ravines is a water-retaining chalky clay called siltstone, and the Red Hills salamander's burrows invariably come in contact with this source of moisture. Although the formation extends into both



Mississippi and Georgia, the salamander has apparently never become established across the Alabama River to the west or the Conecuh River to the east.

The rugged Tallahatta terrain supports an Appalachian-like forest with beech, magnolias, oaks, hickories, rhododendrons, and mountain laurel. As many as five species of magnolia can be found on some slopes, and where undisturbed, such habitats are among the most biologically diverse and visually impressive in the Eastern United States. Up until the middle of this century, man's activities probably had little lasting effect on the Red Hills salamander, since its habitat is generally too steep for easy cultivation, and logging was usually in the form of select cutting.

Attention was drawn to the salamander's declining conservation status in 1975. Auburn University biologists reported a steady decrease in Red Hills salamander habitat due to conversion of natural forest to pine plantation, noting that 44 percent of the remaining suitable habitat was owned or leased by paper companies using pine plantation silviculture, and 15 percent was owned or leased by companies using selective cutting. The remaining 41 percent was owned by private individuals, most of whom owned less than 100 acres each.

Studies Yield More Information

A 1976 study estimated the amount of remaining suitable habitat at 54,900 acres. At least 3,670 acres of habitat that

almost certainly supported salamander populations had been lost between 1966 and 1976. It was found that complete canopy removal on south-facing slopes tended to eliminate populations. Naturally regenerating north-facing slopes continued to support low densities of salamanders even after having been heavily cut as much as 10 years earlier, but no salamanders were found in places where all canopy had been removed. Based largely on these findings, the U.S. Fish and Wildlife Service listed the Red Hills salamander as a threatened species in 1976. It was the first North American amphibian to receive federal protection.

A reassessment of the status of the Red Hills salamander was undertaken by the U.S. Fish and Wildlife Service in 1988. A total of 144 sites was visited in all five counties; 92 of those sites were visited in the 1976 survey. Habitat conditions for the salamander at over 75 percent of the sites had either remained unchanged or had improved, but some sites had been negatively impacted by timber harvesting. Because the salamanders are very sensitive to habitat disturbance, especially drying and/or compaction of the ground surface, the following suggestions were made to reduce impacts from timber harvesting:

1. Clearcutting should be avoided on the steep slopes occupied by Red Hills salamanders.
2. Mechanical site preparation should be avoided where salamanders occur.

3. Selective cutting should maintain at least two-thirds canopy cover.
4. When areas above or below occupied slopes are cleared, a forested buffer strip should be left to provide shade and moisture retention.

In 1991, International Paper Company, which owns an estimated 12 percent of the salamander's entire range, began work on a Habitat Conservation Plan (HCP) for the Red Hills salamander. Under such a plan, the U.S. Fish and Wildlife Service issues an incidental take permit (allowing degradation of some occupied habitat), provided the applicant protects and monitors a certain portion of its salamander habitat elsewhere. The plan was approved in 1993. International Paper's initiative raised awareness among other paper companies with holdings in the salamander's range, and others have since conducted surveys for the salamander and/or stepped up protection of its habitat. Three companies have begun work on their own HCPs.

The Red Hills salamander is listed as threatened, which is one step closer to recovery than endangered. If the current level of concern and cooperation of the corporate landowners within the salamander's range is any indication, enough habitat may eventually be incorporated into HCPs to permit the provisional removal of the Red Hills salamander from the list of endangered and threatened species. That would be good news for industry, environmentalists, and the entire Red Hills ecosystem. ♻️

A Vision Becomes a Reality

by COLEEN VANSANT, Information Specialist, Alabama Forestry Commission, Gardendale

Many things in the world start out as visions. A small seed in the mind of an individual or a far away goal of a group of people—really nothing more than a thought or an idea.

But in many cases that thought or idea grows and grows and grows until the small seed has grown out of its boundaries. What was once just a thought has now developed into reality.

This is the case of Palisades Park in Blount County. Over 21 years ago it was only a thought in the minds of just a few individuals. Now it is the pride of Blount County.

Owned by the citizens of Blount County and managed by the Blount County Park and Recreation Board, Palisades Park became the state's first county-owned TREASURE Forest in 1986. The rustic forest setting and natural scenic beauty was ideal for their management objectives of recreation and aesthetics.

Since the park's beginning, enhancing and preserving the native fauna and flora of the 84-acre tract of land has been one of the main objectives. At the same time park managers have been able to provide recreational opportunities to thousands of people each year.

"This is a natural rustic area," says Blount County Park Board Chairman Doc Lloyd. "We don't have too many of those places left. We try to keep it that way."

At Palisades Park, the first thing you notice is the breathtaking view of Sand Mountain as you stand atop 60-foot cliffs at a 1,300-foot elevation. Located in the center of Blount County, the panoramic view of the rolling hills and plateaus of north Alabama has become a favorite spot for Blount County citizens, as well as visitors from surrounding counties and places even farther away.

For many years before development of the park began, county residents traveled



Blount County Park and Recreation Board Chairman Doc Lloyd (far left) meets with three of Palisades' full-time employees. From the left are Jane Chaviers, June Chaviers, and Park Manager George Henderson.

to Ebell Mountain to picnic beneath the Alabama Forestry Commission's fire tower. It was a favorite spot for family picnics, as well as a popular place for the younger set who trekked to the mountain to take advantage of the romantic setting.

In February 1973 work began on the park with funds obtained from a United States Department of Interior grant. In the last 21 years the park has known tremendous growth and has added many new additions to the craggy hillside.

According to Lloyd, one of the first attractions at the park was the Murphree log cabin, which is considered to be one of the oldest log cabins in the county. Over the years it has been joined by the Blackwood cabin, the old Compton School, an old barn, a corn crib, and meditation chapel.

After the old buildings were installed, a children's playground was added and "the attention grew," added Lloyd.

In 1982 the Amelia Porter Center was constructed, and in 1986 the Dalton Moss Lodge was opened. Porter and Moss were both instrumental in the "vision" of Palisades Park. Both facilities are equipped with kitchens and restrooms and serve as meeting centers.

In the 15 acres of the park currently developed, there are 8 picnic shelters with tables, 48 outside rock tables, 21 cooking grills, 29 swings and the Girl Scout campfire amphitheater.

In 1989, a Museum and Nature Center was completed. The museum houses farming tools used in earlier times. The nature center portion of the center is used for educational sessions and where native plants are displayed.

There are also 3 1/2 miles of walking trails in the park. If you're planning a wedding in the future you might want to consider Palisades Park. According to Lloyd, approximately 50-60 couples marry in the park each year.

Two additional projects are in the works for Palisades. The first is a building which will be the home of the local quilting guild. The other project will be the E.L. Blackwood Arboretum.

There is no admission charge to the park. The development of Blount County's "vision" has been through grant money, private contributions, and support from the county commission and other groups and agencies. There are two full-time and four part-time employees at the park. The rest of the help is volunteer.

According to Lloyd, the success of the park has to be credited to the "roles volunteers have played." He explains that individuals and organized groups have taken the responsibility for many projects in the park and through these cooperative efforts Palisades has become a success.

Although reservations are required for the Porter Center and Moss Lodge, there is no rental fee. Reservations are optional for the picnic shelters. The park is open from 9 a.m. to 9 p.m. during daylight savings time and from 9 a.m. to 5 p.m. during standard time.

It's open every day of the year except Christmas Day. ♣

Treasured Get-A-Way

by GLENN BERRY and EARL SMITH, Alabama Forestry Commission

Everyone needs a place where they can get away from the everyday routine we all go through. For Walt Stone, who grew up in Lineville, Alabama, that place is his TREASURE Forest.

After Stone graduated from Auburn University with a degree in electrical engineering, his work took him to other parts of the country. While working in Pittsburgh, Pennsylvania, he read an article in his company magazine about the Southeast becoming the future timber growing region of the United States. He called his father and asked him to look for property to buy in Clay County. In 1947 his father began purchasing property for him as an investment for timber production. He kept adding adjacent tracts until he had acquired approximately 500 acres of timberland. At that time Stone, as an absentee landowner, was primarily interested in land and timber as an investment for the future.

After Stone moved back to Birmingham, he began a more active role in managing his property. His investment became more than a timber growing operation. He became more aware of the other benefits associated with the land and wanted to make the property more visually attractive.

Stone began to enjoy the get-a-way from the city life. Now he makes regular trips to the property for the enjoyment of working to improve his investment. Since taking a more active role, he has developed a prescribe burning program; marked streamside management zones




Clay County Forester Earl Smith and Walt Stone.

for timber harvesting; has done selective harvesting of timber; timber stand improvement; planted areas that were under-stocked; and marked and painted the boundary line and interior 40 lines around his property. Stone was one of the first landowners in Clay County to take advantage of the Stewardship Incentives Program. In 1992 he established three wildlife food plots, repaired the forest roads by reshaping, establishing water bars and seeding the critical erosion areas. He also did a pre-commercial thinning and tree planting under the SIP program.

Stone believes absentee landowners must get professional help to manage their property. He has utilized the Alabama Forestry Commission, Soil Conservation Service, Agricultural Stabilization and Conservation Service and timber company foresters in managing his prop-

erty. He also leases the hunting rights of his property to a local hunting club. Stone believes that a good relationship with a local hunting group is beneficial to both the hunting club and the absentee landowner.

Stone has been in the Tree Farm program since the 1950s and was certified as a TREASURE Forest landowner in 1993. He is a past vice-president of the Alabama Forest Owners' Association, Inc., and now serves as a board director. His involvement with the AFOA has been very informative and beneficial because of the valuable information he has received.

Walt Stone has enjoyed the many hours of work he has invested in developing and making improvements to his land, but most of all he treasures the time he spends away from the city working on his get-a-way. 

HARDWOODS OF ALABAMA

WHITE OAK

Quercus alba

by TOM V. CAMBRE, Statewide Hardwood Specialist, Alabama Forestry Commission

The white oak is an outstanding tree among all trees and grows throughout Alabama except some areas in Baldwin and Mobile Counties. It is the most important tree for lumber of the entire white oak group.

This tree grows on a wide range of soils and sites and grows well on all but the driest and shallowest soils. Mineral nutrition is not limiting to white oak except in very sandy soils where moisture is a limiting factor.

The major factors influencing white oak growth are latitude, aspect, and topography. It has the ability to grow on all upland aspects and slope positions within its range except extremely dry, shallow soil ridges, poorly drained flats and wet bottomland. It grows best on north and east facing lower slopes and coves and grows well on moderately dry slopes and ridges with shallow soils.

The white oak grows in association with many other trees, the most impor-

tant of which are upland oaks, hickories and poplar.

White oak flowers in the spring at about the same time leaves appear. The time in Alabama is usually late March. Its monoecious flowers of both sexes are present on the same tree. The acorns are mature in 120 days after pollination; acorn drop follows about 25 days later and is complete within 30 days of the start. The white oak can produce seeds prolifically, but good acorn crops are irregular and occur only every 4 to 10 years. Trees normally bear acorns between the ages of 50 to 200 years; however, open grown trees may produce seeds as early as 20 years.

The white oak's growth and yield is as follows. It is a large, long-lived tree, often 80 to 100 feet tall and 36 to 48 inches in diameter. Individual trees 150 feet high, 96 inches in diameter at breast height, and 600 years old have been recorded. In the open it is characterized by a short stocky

bole with a wide spreading rugged crown. In the forest it develops a tall, straight trunk with a compact crown.

White oak is generally classed as intermediate in tolerance to shade. It is most tolerant in youth and becomes less tolerant as the tree grows larger. White oak seedlings, saplings and pole sized trees in the understory can persist for 70 to 90 years. When harvested for a regeneration cut, they will respond very well if cut to a low stump. Most research and field experience suggests that even-aged silviculture is most suitable for white oak growing in pure or mixed hardwood stands.

The white oak produces high quality wildlife food preferred by more than 150 types of birds and animals. The wood produced is of high quality and durable. It is sometimes planted as an ornamental because of its broad round crown, dense foliage, and purplish to red fall coloration. This tree is truly an asset to our forests and our environment. ♣



Alabama's TREASURED Forests
513 Madison Avenue
Montgomery, Alabama 36130

Bulk Rate
U.S. Postage
PAID
Permit No. 109
Montgomery, AL