

Alabama's **TREASURED** Forests



Summer · 1989

STATE FORESTER'S MESSAGE

by C.W. MOODY



The other day I was in the State House attending a legislative hearing, and I ran into Melvin Cooper, Director of the Alabama Ethics Commission. He said, "There's something I've been wanting to tell you. I get your *TREASURED Forests* magazine and I'd like to say it is the finest magazine that any department puts out. I read each issue with great interest, and many of the pictures I've wanted to cut out and frame. You do a great job! Keep up the good work!"

You can imagine Melvin's comments filled me with pride. It is not an unusual comment about the magazine, however. I use this opportunity to express appreciation to the editorial board, editors, writers, and all who are involved in writing articles and putting the *TREASURED Forests* magazine out.

I have been inspired by Kelly Mosley's accomplishments since Pineland was certified as TREASURE Forest Number One in 1975 when he was 73 years old! An article on pages 28 and 29 of this issue "revisits" his forest to give us a look at the progress he's made over the past seven years.

What better way to celebrate the Alabama Reunion than to invite your friends and family from other states to come and see the fruits of your TREASURE Forest? The TREASURE Forest program and ideals need to be made known to every Alabamian and American. The time is right to take another step. Tell others the good news!

Sincerely,

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

C. W. Moody
State Forester

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

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Cover Photo: White-tailed deer bucks shed and grow a complete set of antlers each year. The "velvet" state of antler development occurs during the summer, and is the time of most rapid growth.

Alabama's TREASURED Forests

Volume VIII

Summer Issue, 1989

Number 3

CONTENTS

State Forester's Message 2
By C.W. MOODY

Making Alabama a Better Place Through Forestry 4
By COLEEN VANSANT, Information Specialist, Birmingham

Oceanfront Property for Sale 7
By NEIL LETSON, State Urban Forestry Coordinator

Rocks of Alabama's Forest Trails 8
By EVERETT SMITH, Assistant State Geologist, Geological Survey of Alabama

Management Considerations for the Red-Cockaded Woodpecker 11
By FREDERICK A. BUSCH, TREASURE Forest Coordinator and Wildlife Specialist

A New Market for Alabama Wood: Southern Hardwood Chip Exports 13
By GARY FAULKNER, Alabama Development Office and L. LOUIS HYMAN, Alabama Forestry Commission

Landowners Legislative Alert
NATIONAL—By TERRI BATES, Legislative Liaison, National Association of State Foresters 16
STATE—By FRANK SEGO, Legislative Liaison, Alabama Forestry Commission 17

Leasing Hunting Rights 18
By FREDERICK A. BUSCH, TREASURE Forest Coordinator & Wildlife Specialist

Forest Insects 23
By JIM HYLAND, Chief, Forest Management

From TREASURE Forest To TREASURE Ship 25
By STANLEY R. ANDERSON, District Forester, Bay Minette and MELANIE CURRY, Information and Education Specialist

Pineland—A Second Look at Alabama's First TREASURE Forest 28
By LARKIN WADE, Extension Service, Auburn University and KIM GILLILAND, Managing Editor

Cone And Seed Development in Southern Pines 30
By BILL PADGETT, Chief, Tree Improvement

DEPARTMENTS

Editor's Understory 6

In Memorium 27

Activities 20

Calendar 22

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Roy Gamble has spent his life

Making Alabama a Better Place Through Forestry

by COLEEN VANSANT, Information Specialist, Birmingham



This field of red clover attracts deer to feed, while the tall stand of hardwood and pine timber provides cover for a variety of wildlife.

In general, most TREASURE Forest landowners share many of the same qualities. All of them have a very deep and devoted love for their land. Each one is proud of the improvements he has made on his property over the years, and is always eager to share what plans he has for the future. But the unique common denominator that each seems to have is the commitment and the enjoyment derived from sharing the TREASURE Forest concept with fellow landowners.

You could search the state of Alabama and probably not find a better example of this than Roy Gamble of Cullman County. Roy is a career forester and a TREASURE Forest landowner. Not only has he adopted TREASURE for his own acres of forestland, but he has been either directly or indirectly involved in developing all but one of Cullman County's TREASURE Forests, as well as making contributions to forestry in Alabama through his craft as a forester—contributions that will be around for many generations to see.

Roy Gamble was born and brought up in southern Cullman County in the small community of Damascus. Living in a farming community, Roy learned from a very early age that good stewardship of the land was vital. It was important not only to support the livelihood of the family, but to nurture the land for the future.

As a young man, Roy went from a farm in Cullman County to serve a 26-month hitch in the U.S. Marine Corps. During World War II, he was a participant in the Okinawa Campaign, and served 10 months of occupational duty in China.

Following the Marine Corps, Roy entered Auburn University's School of Forestry, and received his bachelors degree in 1951. Seven years later, in 1958, Roy was among those included in the first group of foresters to be registered by the State of Alabama. The number on his registration certificate is 50.

After Auburn, Roy landed a position with Gulf States Paper Company and moved to Centreville in Bibb County. For the next 15 years, he served as both assistant forester and district supervisor to one of the state's largest timber owners.

In the mid-60's, the urge to strike out on his own was strong, so Roy and his wife Jane packed up the children and moved back to Cullman County. In 1966, in the small community of White City, just north of Hanceville, Dixie Pulpwood

Company was born. It wasn't long before Dixie Pulpwood was a recognized and industrious business. Over the years, Roy Gamble and Dixie Pulpwood has served hundreds of timberland owners in Cullman and surrounding counties.

Looking back over the years spent running the pulpwood yard, Gamble laughs when he tells about buying pulpwood from Governor Guy Hunt, when Hunt was Probate Judge of Cullman County. "I'm the reason the governor was never paid enough for pulpwood," he says smiling. He went on to say that during a recent dinner where Governor Hunt was the guest speaker, the governor pointed him out of the crowd and told the story about selling pulpwood to Roy Gamble. Governor Hunt jokingly noted that the reason he ran for office was due to the prices he received for his pulpwood. "I had to do something I could make a living at," Roy added as he described what Governor Hunt had said.

"I put him straight on that," Roy chuckled. "Of all the timber people in the state, how many ever had a pulpwood producer that made governor?"

Roy went into a second business in 1979, when his son David graduated from Auburn with a degree in forestry. Joining as partners, the two opened Gamble Timber Suppliers in Hanceville, and for five years worked together managing forestlands in and around Cullman County. In 1984, Roy withdrew from the partnership to go into semi-retirement, and his son continued the business until 1988. The company went out of business when David took a forester position with Drennen Forestry Services, Inc.

Through his years of doing business with Dixie Pulpwood and Gamble Timber Suppliers, Roy came into contact with hundreds of landowners. Through these contacts, and because of his method of forest management, Roy was able to spread the word of multiple-use forest management to landowners in Cullman County. Of the 12 TREASURE Forests that have been certified in Cullman County since the beginning of the program, Roy or his son David has been the managing or consulting forester on all but one. Roy's 250 acres of forestland, and 50 acres owned by his sister, Bea Cartron, are included in this select group of Cullman County landowners.

According to his son David, one of the reasons Roy has had so much success with supporting the TREASURE Forest

program over the years is the fact that he works with each landowner independently, striving to meet the needs and wants of each one. For instance, when others were supporting clearcutting, Roy was "always willing to do thinning and select cutting instead." And with this philosophy and the help of Cullman County Ranger Darrell Johns, they were able to get local landowners interested in managing their land under the concepts of the TREASURE Forest program.

Roy is no different from any other landowner when it comes to his own tract of forestland. As he takes you on a tour of his acreage, you can't help but pick up on the pride in ownership that he displays. He enjoys showing off his property, noting the things he has done to improve it, and explaining the things he wants to do in the future. Some of the property he inherited from his father. He and his sister laugh when they tell a story of the days they worked hoeing cotton on a section of his sister's property that now supports 30-year old loblolly pine.

Being a career forester, naturally his primary objective is growing timber. But it's not so much the monetary rewards Roy is looking at, as much as it is the pure satisfaction that he gets from his land. Most of his acreage is pine hardwood mix, with dogwoods so thick the forest seems almost white as Mother Nature puts on a show.



Roy says he thinks the squirrels "sit and wait" for him to restock his homemade squirrel feeder.

Natural stands of healthy pine are showing through in areas where hardwood fire logs have been cut, and snags are left scattered across the woods to provide a haven for birds and small animals.

Roy's secondary objectives are recreation and wildlife with one supporting the other. With the help of his good friend

Dick Evans, Roy has planted food plots of clover and grass for deer and turkey, built homemade feeders and thrown an occasional ear of corn in a hollow log to entice squirrels to come just a little closer than normal. This is where Roy and his wife Jane escape to enjoy the recreational benefits offered by their land, as they take in all of the sights and entertainment that nature has to offer.

The couple owns a small camper, and one of the things they enjoy the most is pulling the portable home to any one of several favorite sites on their property. They set up camp, and for the next few days Roy practices his craft as a forester. They spend time together working on their land and taking in the quiet and peaceful beauty of the forest.

Along with making a difference in Alabama through his work and support of the TREASURE Forest program, Roy has also left his mark on forestry in the state through other areas. He has served on the Board of Directors of the Alabama Forest Products Self Insurers Fund, served six years as chairman of the Auburn Forestry Foundation, and currently serves on the Alabama Forestry Legislative Study Committee.

Out of the field of forestry, he was recently named to the Board of Trustees of Troy State University, and an American Legion Scholarship in the name of Roy J. Gamble will become effective at Troy State this fall. This scholarship will provide \$850 dollars annually to the scholarship winner. For 10 years, Roy devoted much of his time to the task of being scout master to a group of young men. During this period, he helped graduate six Eagle Scouts from his troop.

In January of this year, Roy took the oath of office as Chairman of the Cullman County Commission.

There is an old saying that comes to mind when you think of the contributions that Roy Gamble has made to forestry in Alabama. It's the one that refers to the fact that we should "leave the land in better shape than it was when we found it." This saying applies so much to the work that Roy Gamble has done.

For so many of us, we come and go from this world, barely leaving a reminder that we were even here, but not Roy Gamble. Reminders of his handiwork will not only be seen by his children and grandchildren—he has made the world a better place for all of the children and grandchildren in Alabama's future. ♣

EDITOR'S UNDERSTORY

by COLEEN VANSANT, Information Specialist, Birmingham

Retirement. For most people at or near the retirement age, it's a moment long awaited.

Years and years of working for a living are slowly approaching a close. No more eight-to-five, cranky bosses, and the day-in-and-day-out routine of going to work.

Now the kids are grown and gone. The house and the farm are paid for. There are grandchildren to spoil, and the spouse is talking about doing all of those things that have been put off "until we retire."

Have you ever considered running for a public office when that golden time in life arrives? That's exactly what Roy Gamble did!

After working 15 years for Gulf States Paper Company, opening and operating Dixie Pulpwood Company, and then joining his son as a partner with Gamble Timber Suppliers, Roy Gamble had finally reached the point of retirement, or "semi-retired" as he calls it.

Roy explains that he had closed the wood yard, dissolved the partnership with his son, and was "buying and selling a little timber" on the side. For the first time in many years, he had the free time to spend with his wife Jane, play with his five grandchildren, and do some of the things he had always wanted to do.

And then Roy's photograph began to pop up on campaign posters across Cullman County. He was a candidate for chairman of the Cullman County Commission.

The foremost question on my mind (which I'm sure the same question has crossed the minds of many people who know Roy) was, "Why did you want to

run for County Commission Chairman?" With a shy smile and slight chuckle he answered, "I got talked into it in a weak moment."

Roy, who has just celebrated his 65th birthday, noted that he has "always been interested in good government," so when some of his friends approached him about bidding for the Commission Chairman seat, he really didn't think that much about it.



From forester to politician—Cullman County Commissioner Chairman Roy Gamble.

Months and months of campaigning and preparation for the primaries, only led to the ritual intensifying again for the general election. Making speeches, handshaking, and attending political meetings were necessary to present his views on the issues of local government.

All of the sweat and hard work that he, his family, and supporters put into the long months on the campaign trail paid off. On election Tuesday in November of last year, Roy J. Gamble was elected as the first Republican County Commission Chairman in Cullman County since the mid-60's. Roy won over his incumbent

Democrat challenger by 975 votes. He received 52 percent of the ballots cast in Cullman County.

In January of this year, Roy took the oath of office as County Commission Chairman, and went from years in the timber industry and semi-retirement, to being the chief government official of a county with a population of over 61,000 and a budget of approximately \$11.5 million.

Roy Gamble's life experienced a big change. Dozens and dozens of phone calls a day now come into his office on the second floor of the courthouse, and his presence as Commission Chairman is requested and needed at numerous meetings a day. Not all of these meetings are held during normal business hours. Many take place early in the morning before the doors of the courthouse open, and then there are those committee functions and board meetings that go on when everyone else is at home enjoying supper with the family.

The job also requires him to be out of town much of the time, representing Cullman County's interests on both current and future matters of politics and economic development.

"Our main goal is to get the financial situation in Cullman County in a good solid condition," he says as he describes some of the leading items on the County Commission's agenda. Although he's been in office only a few months, it didn't take long for him to discover that one of the most pressing matters facing the county was paying bills left by the previous administration. Since taking office, many of the decisions regarding Cullman's financial situation have not been popular, but Commission Chairman Gamble has voiced his opinion more than once that the bills were going to be paid first.

Roy points out that some other priorities include working with other local officials and developers on a \$500,000 expansion and upgrading of Folsom Field, Cullman's airport; developing projects to promote Cullman County's two parks to make them more financially independent; and working with his two associate commissioners to tackle the county's road situation, a problem faced by all county governments.

"There are many areas that have been neglected," Gamble adds. "I think there will be some significant changes when I leave office in four years."

When asked whether he had considered running for a second term in office, he laughed and said, "The only way I'd do it would be if I didn't have opposition." ♠

Choice Gulf front property for sale! Only five minutes from Birmingham on the banks of Red Mountain. Good view and access to beautiful Oak Mountain Island and only a days trip by charter boat to great saltwater fishing at the world famous Montgomery capitol reefs. Hurry! Good coastal property like this won't last long!

You won't find ads like this in your local newspaper, but if you have been listening to the latest about global warming, you begin to wonder if stories like this might one day become a reality. Global warming has become the environmental buzzword in today's society.

Recent events indicate it will not simply pass away into oblivion, but will become a major policy issue into the next generation. When President Bush promised "the year of the earth is back," global warming was the number one concern. Major environmental and public interest groups also have signaled this as their number one concern. And throughout the world community, researchers and scientists are documenting conditions which could put into place the initial stages of a global climatic change in our generation. According to NASA scientist Robert Watson, "Global warming is inevitable-it's only a matter of time."

Concept

Global warming (also called the "Greenhouse Effect") occurs when the earth's atmospheric level of carbon dioxide and other gases increases, thereby trapping infrared radiation emitted by the earth's surface. This excess heat, according to theory, causes a "vigorous" climate system resulting in a generally warmer planet and a more active water cycle. The predicted warming will vary according to latitude, longitude, altitude, and season.

Atmospheric patterns and ocean currents may also be affected. Computer models predict that a three to five degree change in the earth's average temperature would turn America's breadbasket into a desert and flood much of Florida and the Caribbean. It is estimated there has been an increase in the surface temperature of the planet of one degree Fahrenheit during the past 100 years, although there is some uncertainty over the accuracy of the data recording methods. Some events have occurred which are

Oceanfront Property For Sale

by NEIL LETSON, State Urban Forestry Coordinator

undisputed. The United States has experienced five of the ten warmest summers on record just in the 1980s alone. Data collection indicates a steady rise in the level of certain atmospheric elements and compounds which are expected to contribute to global warming. Just between the period of 1975 and 1985, the level of carbon dioxide increased by 4.6%, the level of methane by 11%, the level of nitrogen oxide 3.5%, the level of chlorofluorocarbon-11 by 103% and the level of chlorofluorocarbon-12 by 101%. Each one of these compounds has its own primary source, though the increase is due almost entirely to human activities.

How will global warming affect forest industry if computer models are correct? The USDA Forest Service examined this question and said that if no man-made reductions of carbon dioxide or other compounds occur, then an increase of six to 12 degrees Fahrenheit can be expected within the next 50 to 100 years. Weather pattern changes would have a dramatic impact on forest industry as we know it. The Lake States conifers would be replaced by hardwood forests and sugar maple and northern hardwoods by oak-hickory. Much of the South's pine forests would be turned into grasslands. And the Douglas fir forest on the Pacific coast would retreat northward. Another concern is the ability of species to move northward in the event of a "rapid" climate change. Barriers might prevent this adaptation to occur and result in their extinction.

With such a heavy scenario, is there anything that we as individuals can do? The cure for global warming lies in a worldwide response. Nations, states, towns and individuals are all part of the

solution. Together they can reduce their use of fossil fuels and other products which produce greenhouse gases. They can also retain and increase the earth's ability to modify this global phenomena. Because of the role green plants play in the carbon cycle, those interested or involved in forestry are key players. An individual tree can absorb carbon dioxide at a rate of 13 pounds per year—about 2.6 tons per acre each year. Therefore landowners and homeowners can make an impact. Here are some of the ways:

1. *Maintain existing forests—*

Alabama has over 21 million acres of forestland. Landowners should be encouraged to manage their forest for a variety of resource values and at optimum vigor. A well managed forest is not only more profitable and enjoyable, but can "store" more carbon.

2. *Increase rural forest acres—*

Alabama has 1,200,000 acres of marginal cropland that should be in trees or grass. Landowners should be encouraged to plant trees, especially where it would be more profitable and environmentally sound.

3. *Encourage city tree plantings—*

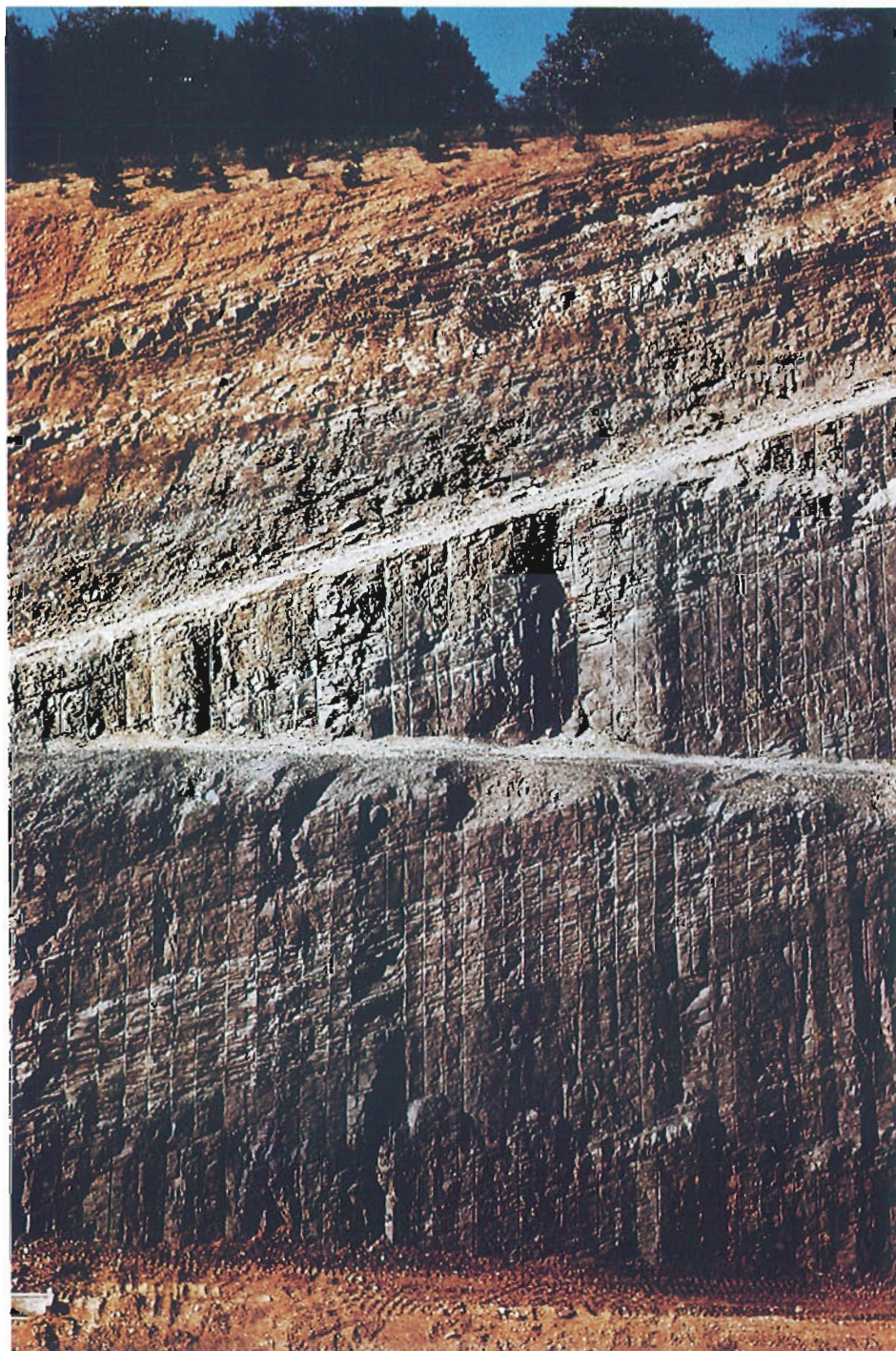
Alabama has over 430 incorporated towns and cities. Each year additional acres of rural land is being converted to urban classification. City governments should be encouraged to implement community tree programs which promote the planting, maintenance, removal and replacement of trees on city property.

4. *Plant a tree—*Anyone—regardless of age, wealth, or position—can make a difference by simply planting a tree. Opportunities are boundless, whether around a home, school, park, or business. If each Alabama citizen planted one tree, that would put over four million carbon "sponges" at work.

Although no one can say for certain what the world's climate will be like in the future, there is strong evidence that man's impact has drawn us into a new age. Much of what might happen in the future will depend on actions we take today. The continued stewardship and wise use of our natural resources will be a positive factor. Fortunately, this is not an alien concept in Alabama. It should make us a model for other states and countries to keep our planet's climate in order. ♣

Rocks of Alabama's Forest Trails

by EVERETT SMITH,
Assistant State Geologist, Geological Survey of Alabama



Upturned fossiliferous sedimentary rock, including the reddish-brown iron ore seams of hematite, are seen in the Red Mountain Expressway cut at Birmingham. The Red Mountain Museum features a guided walkway through the cut.

In Alabama, the distant mountains, ledges of rock along roadways, and boulders along wood trails are so familiar that many of us give them little notice. Occasionally, an unusual form or color of an exposure of rock will evoke moments of curiosity, but usually we see no simple explanation for them and they become just an unexplained part of the landscape. However, explanations are at hand for many of the geological curiosities around us. If one is willing to read and do a little personal field investigation, surprising discoveries will be made.

Geologic maps and reports have been published for most areas of the state by the Geological Survey of Alabama. These maps show outcrop areas of the underlying rock formations and accompanying reports describe their character. With this information, together with what can be learned from local roadcuts or other rock exposures, an observer can develop a practical knowledge of an area's geology, which can lead to an understanding of why the topography, soils and other natural features of an area are as we find them.

Geologists recognize several different geologic terranes (or provinces) in the area known as Alabama (shown by the index map). Within these provinces the physical and chemical character of the underlying rock formations and their geologic structure—whether flat lying, tilted, folded or faulted—have led to development of the present configuration of the land surface (topography), soil types, stream character, and, ultimately, to the nature of forests and wildlife habitats.

Weathering of the bedrock in most localities has led to development of some type of soil that covers the underlying rock. Clues to the nature of an area's geology and mineral deposits can be found in the rocks that are frequently exposed in roadcuts, streambeds or on hillsides where erosion has removed the soil.

Most rocks within Alabama began as mud, sand, silt or other sedimentary materials in shallow seas or broad river deltas that once covered this part of the continent. It may seem an unnecessary complication of matters to learn that some geologists think that our continent has been displaced thousands of miles across the face of the earth since these seas and deltas became filled with sediment and were uplifted to become hills and mountains.

After formation, a particular sedimentary deposit may have been buried under thousands of feet of additional sediment,

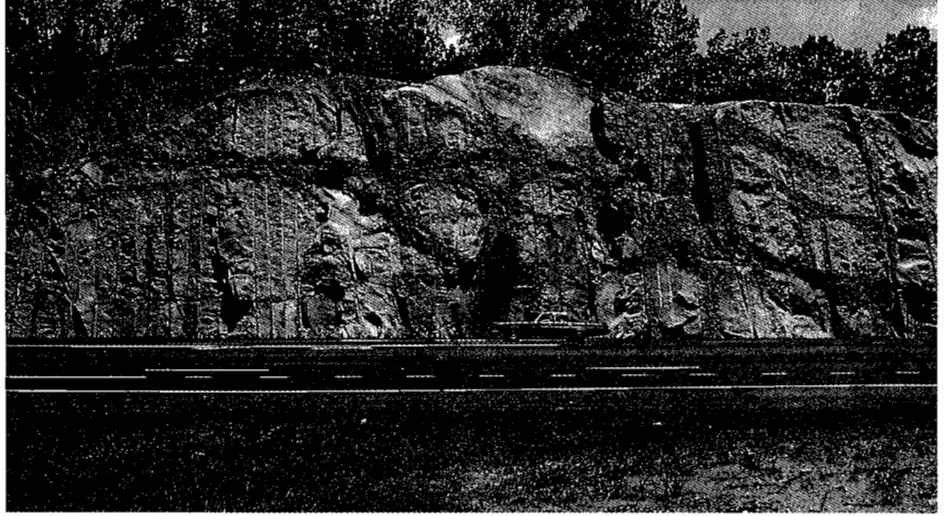
changed chemically, hardened and subjected to stresses, resulting in fracturing or bending of the rock.

Of all the rocks in Alabama, those underlying the Piedmont region have been subjected to the greatest alteration, resulting in metamorphic rocks such as schist and phyllite that were originally silt and mud, quartzite that was originally sandy beach or offshore bar deposits, or marble that was originally an accumulation of marine animal parts. Igneous rocks such as granite or diorite were intruded into some of these rocks while they were buried at great depths. Later movement in the earth's crust exposed some of these rocks on the land surface. On the southern outskirts of Alexander City at the junction of U.S. Highway 280 and State Highway 63, an intrusion of diorite is exposed by the highway cut.

Those familiar with the Piedmont region may recall seeing reflections of sunlight from spots on the roadside that appear to be piles of broken glass. This could be evidence of a pegmatite, a mineralized zone in the bedrock. A platy mineral, muscovite mica, frequently weathers from such zones. Other minerals such as quartz, feldspar, tourmaline, beryl (mineral of emerald) or corundum (ruby and sapphire) may occur also. If you stop to look, remember—it may be just a pile of broken glass.

On a few rare occasions persons have found diamonds in Alabama. A diamond in its natural state, without the light-reflecting facets put there by the diamond cutter, would be an unobtrusive thing in the gravel at your feet. One diamond, a 4.5 carat yellow octahedron, now in the American Museum of Natural History, was found at an unspecified location in Lee County. Most gravel in the Piedmont area, especially if it is white or light colored, is quartz or quartzite, forms of silicon dioxide. Window glass is principally a noncrystalline form of silicon dioxide.

On the ridges of Clay and Coosa Counties around the time of World War I, as many as 30 mills processed graphite-bearing metamorphic rock. Here, the upturned layers of graphitic rock, being resistant to weathering, form the ridges. Primitive trucks and mule drawn wagons hauled the graphite ore through dust that sparkled with mica to the mills built on the slopes. After World War I, graphite, which was useful primarily in making high temperature crucibles for the metals industry, had diminished use. Soon the mills were closed and dismantled and the mines and haul roads left to the forests. People, who for the



This diorite near Alexander City is igneous rock and is thought to have been intruded in melted form into rocks of this area when they were buried many thousands of feet in the earth.

first time in their lives had felt the security of a steady job, were again hard pressed to survive. Today a few scattered bricks, mill foundation pillars or peculiar cuts along ridgetops cause the hunter or hiker to pause and wonder what happened here.

There is now little trace of the lively gold mining activity of the 1830's in Cleburne, Randolph, Clay and other counties. Gold mining towns of Goldville, Chulafinnee and Arbacoochee grew up around the mines, which usually were nothing more than red dirt pits. Near Sylacauga in Talladega County, one of the world's whitest marbles lies beneath the valley floor. Prized for tombstone and building stone since the early 1800s, it is now ground to a fine powder for whiting and filler in many modern products such as PVC pipe.

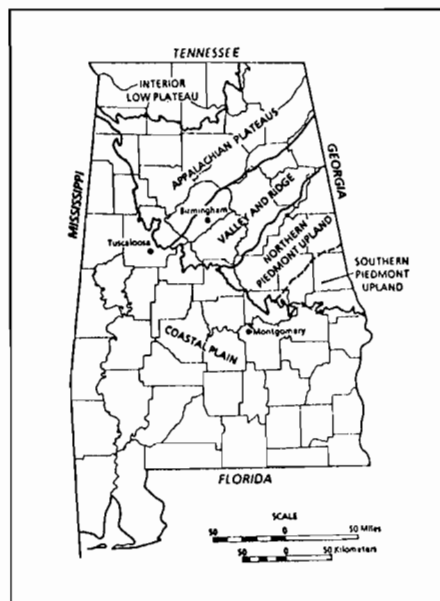
Some of the oldest rocks in the state show in the creek bed at Chewacla State Park near Auburn. Rock here—called

augen gneiss—displays large “eyes” (or augen) of feldspar minerals. The rocks were formed by deformation and recrystallization of older rock along a major stress zone deep in the earth's crust.

A visitor to Mt. Cheaha will see some very hard metamorphic rock called quartzite. This rock was beach or offshore bar sand of a now vanished sea. Faulting and buckling of the earth's crust have pushed these rocks over a thousand feet above present sea level. The Valley and Ridge province, with its ridges of upturned resistant sandstone and chert and valleys of weathered shales and limestone, developed by the folding and faulting of rocks that were formed much earlier.

Spectacular views of the Valley and Ridge terrane and the sandstone and shale underlying this region can be seen where U.S. Highway 280 crosses ridges southeast of Birmingham. The ridges alongside the highways between Birmingham, Gadsden, and Chattanooga are part of this terrane. A good locality to see Valley and Ridge rocks is in Birmingham, where the Red Mountain Museum features a walkway through the expressway cut. Here one can see limestone, shale, sandstone and other types of sedimentary rock that were at one time soft sediment in shallow warm seas. Fossils of marine animals can be seen in the now hardened and upturned sedimentary rock, and unusual chemical conditions of the long ago seas is evidenced by the reddish-brown beds of hematite. This was the iron ore that was the basis for Birmingham's steel industry. Iron ore mines dotted the slopes of Red Mountain in the early days of Birmingham. In this area, limestone, once used for flux in iron and steel making, is quarried for aggregate or cement.

A few miles to the north from the prominent Valley and Ridge terrane is a



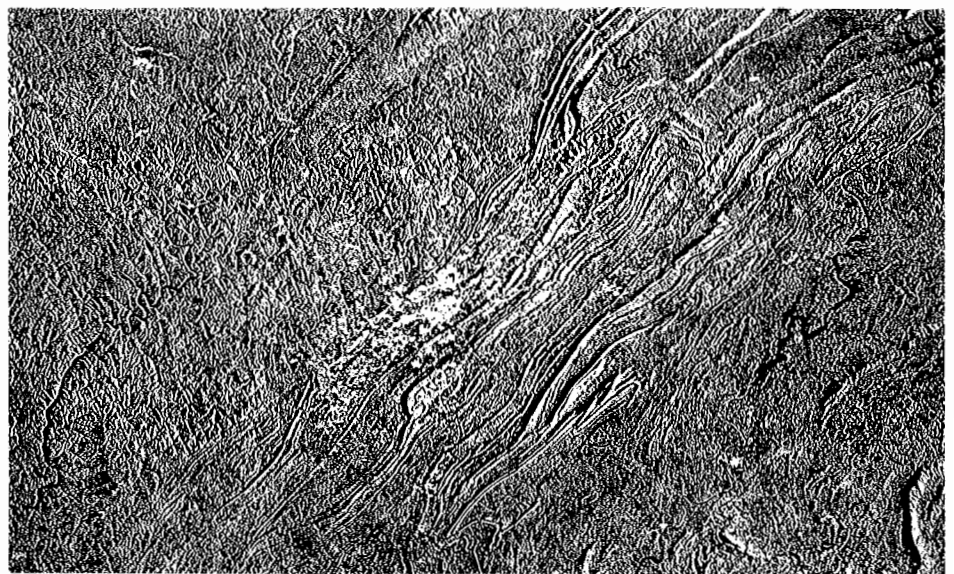
final flexure or fold in the rocks—the Sequatchee Anticline. As one travels north from Birmingham along Interstate 65, evidence of the fold is seen in slightly upturned light-gray limestone and tan to orange sandstone. The old resort community of Blount Springs lies near the center of the fold, the long axis of which extends to the northeast into Georgia.

The Plateau region, with its nearly flat-lying rock strata, occupies much of northern Alabama. These rocks were originally sand, silt, mud and gravel deposited upon extensive river delta plains by generally northward flowing streams. Microscopic examination of sandstones now found in this region shows grains that were originally part of older sedimentary, igneous and metamorphic rocks. Such rocks lay in mountains and upland areas to the east, south and southwest of central Alabama. This erosional and depositional system existed for so long that thicknesses of more than 10,000 feet of sediment were deposited in some areas.

In the swamps and wetlands of the Piedmont, the rocks were thick accumulations of plant remains. Such organic material was buried by sediment and eventually transformed into the coal beds now found in the coal fields of the Plateau and Valley and Ridge regions. In the mountains and a part of the Piedmont, the rocks have been eroded, we see limestone and other rocks that were formed even before deposition of the sand, silt and clay of the Plateau region. Such limestone was formed by accumulation of marine animal parts such as shells and sponges. The formation was an unusual manner in that the rocks are a lime, hard rock. In Birmingham, the limestone is swayed with the ocean currents. The "bank" was a sea level. The small disk-like plates that scattered upon the ocean floor when this peculiar animal died. Such rocks were each one a million years old. The fossils are small, but they are beautiful. Detail and texture of the fossils are noted and studied by the geologist.

The final chapters in the geologic history of the state are the Valley and Ridge and the Coastal Plain. Much of the geologic history of this province has been written in the rocks of the Coastal Plain. The rocks of the Coastal Plain are of recent origin. They are the result of stream deposits on land areas.

Coastal Plain marine deposits of sand, silt, clay, limestone and various gradations of these materials usually show bedding that dips slightly toward the south and southwest. At Mobile the total thickness of these sediments is over 20,000 feet. Accumulations of oil and gas have been tapped in this region. Mineral resources of the Coastal Plain include iron ore, limestone, chalk, lignite, sand, gravel, clay, and oil and gas.



Valley and Ridge terrane, as seen by side-scanning radar. Birmingham lies near the lower center of the image. Talladega Mountain shows as a small curving ridge in the lower right corner.

In the vicinity of Demopolis and Selma are thick deposits of chalk, a type of limestone that formed by accumulation of the remains of microscopic sea life. Limestone formed in the sea by algae and chemical processes, as well as other organisms, such as sponges, corals, and shells. The rocks are a lime, hard rock. In Birmingham, the limestone is swayed with the ocean currents. The "bank" was a sea level. The small disk-like plates that scattered upon the ocean floor when this peculiar animal died. Such rocks were each one a million years old. The fossils are small, but they are beautiful. Detail and texture of the fossils are noted and studied by the geologist.



Deposits of chalk, over 700 ft. thick in the Coastal Plain were formed by accumulation of the remains of Coccoliths, microscopic sea life. This magnified view of a piece of chalk shows coccoliths. Over 50,000 coccoliths would cover an area about the size of a square millimeter—about the size of the head of a straight pin.

are much younger than rocks elsewhere in the state and have not been appreciably altered since their deposition.

Of special interest to paleontologists are well preserved remains of sea life ranging from bones of whales to microscopic organisms. Outcrops of Coastal Plain sediments are usually inconspicuous, for they erode and weather easily. Today along our coast they are being eroded and shifted about by gulf waves and currents, forming new sedimentary deposits.

For anyone interested in geology, Alabama offers an almost limitless diversity. Today in Alabama, knowledge of such things is of practical importance and plays a vital role in the state's everyday affairs. Geologic data are required for the construction of houses, highways, dams, pipelines and other structures, for exploration and mining of mineral resources, and for the recovery of oil and gas. Development of water resources vital to agriculture, industry, cities and rural areas depends on a sound knowledge of the rock strata at various depths. Disposal of garbage and hazardous wastes in a responsible manner is dependent on a knowledge of geologic principles. Much government activity is related to environmental protection and resource conservation. The geologist has long been a key member of the team that has handled the graphite industry and mining. He has planned the production of Alabama's geology, you may wish to learn the author of this article, requesting a list of Geological Survey publications. Everett Smith, 420 University Lane, P.O. Box 6, Tuscaloosa, AL 35602-9780.

Management Considerations for the Red-Cockaded Woodpecker

by FREDERICK A. BUSCH,
TREASURE Forest Coordinator and Wildlife Specialist



Mike Lemmartz, USDA Forest Service

Figure 1

Figure 2



Mike Lemmartz, USDA Forest Service

The red-cockaded woodpecker (*Picoides borealis*) was declared an endangered species in 1970 and enjoys the same protection as the better-known bald eagle and whooping crane. Once a common bird in the open, mature pine forests from Virginia through Texas, most are now found in small colonies scattered throughout the South.

The highly specialized habitat requirements of the red-cockaded woodpecker account for its endangered status. Unlike other ladder-backed woodpeckers, the red-cockaded roosts only in cavities excavated in live southern pines. Older (usually 60 years old or older) pine trees in stands that are fairly open and free of a hardwood understory are required. Historically maintained by wildfires and fires set by native Americans, these sites once covered millions of acres in the South's coastal plain. Today, much of the red-cockaded woodpeckers' traditional range has been cleared of older-aged forests for agriculture and development and much of the remaining forests are unsuitable habitat.

Description

The red-cockaded woodpecker is a small (7 in.) black and white bird with a white cheek patch (Figure 1). The cheek patch, ladder-backed appearance and distinctive call are readily identifiable. Males and females are similar except males have a small streak (cockad) of red feathers above the cheek that is rarely visible. All other ladder-backed woodpeckers of similar size have one or more of these characteristics that are not found on the red-cockaded:

- Conspicuous red on the head
- A prominent, white vertical streak on the back

- A prominent white patch on the wings
- Brown feathers

General Biology and Life History

The red-cockaded woodpecker has an advanced social system and lives in a group (clan) with other red-cockaded. A clan is composed of the breeding pair and sometimes helper birds which are usually the male offspring. These helpers assist in incubating eggs, feeding the young, making new cavities and territorial defense. While a clan may be comprised of two to as many as nine birds, there is never more than one breeding pair.

The Colony

The clan nests, roosts and stays together year-round in a group of cavity trees called a colony. The colony may have only one or more than twelve cavity trees, but they are used by only one clan. Typically, some cavities in the colony are under construction, some are in use and some have been abandoned, and only one bird roosts in a cavity. Colonies are usually circular and about 1500 feet in diameter.

Nesting and Feeding Behavior

Red-cockaded nesting takes place between late April and July. Two to four white eggs are laid and hatching takes place in ten to twelve days. The young spend about 26 days in the nest and feed on spiders, wood roaches, centipedes and other arthropods that are brought to the nest by the breeding pair and helpers.

The clan spends much time flying about their territory searching for food

on the trunks and limbs of pine trees. While clinging to the bark, they dig into the crevices for the adult, larval and egg stages of many insects. Adult birds also occasionally feed on wax myrtle, blueberry, poison ivy and sweet bay berries.

The Cavity

The red-cockaded woodpecker is the only bird that excavates its nest cavities in live southern pines. The bird spends much of its time digging through the tough sapwood and heartwood of a living tree; it may take more than a year to construct one nest. The red-cockaded woodpecker also pecks around the cavity hole into the sapwood of the nest tree, causing large quantities of sap to coat the tree (Figure 2), giving it a white, candle-like appearance. This coating of sticky, resinous sap is thought to aid in deterring climbing predators such as raccoons and rat snakes.

Red-cockaded cavities have been found in virtually all species of southern yellow pine and cypress. Trees chosen for cavity excavation must have enough heartwood to contain the nest chamber because a cavity constructed in sapwood would soon fill with resin. Most of the older pines selected for nesting are also infected with a fungus called red heart disease which weakens the heartwood and makes excavation easier. Cavities are rarely found in trees as young as 30 to 40 years old and most cavity trees are twice that old.

Management

Habitat alteration is the chief threat to the red-cockaded woodpecker's continued existence. A forest management plan that creates and maintains red-cockaded habitat should accomplish the following:

1. Retain and protect existing colonies and cavity trees.
2. Provide a continued supply of living trees suitable for new cavities.
3. Maintain adequate foraging habitat through control of the hardwood understory within the colony site.
4. Provide future colony sites.

Colony site rotation lengths should be at least 100 years for longleaf pine and at

least 80 years for other southern yellow pines. An uncut buffer zone of about 200 feet should be left around each cavity tree to protect the colony and maintain a continued supply of future cavity trees. Within the buffer zone, use controlled fire and mechanical removal to reduce the hardwood understory to less than 15 feet in height.

The Future

The red-cockaded woodpecker is in danger of becoming extinct because at least one critical component of its habitat (older-aged southern pines) is in short supply. Forest landowners having active red-cockaded colonies should remember that each individual colony is important to the survival of the species. Tracts without colonies but maintained in suitable habitat may entice red-cockaded clans to move into the area.

We have modified our world to such an extent that the extinction of a species like the red-cockaded woodpecker is no longer entirely in the control of nature. Each species that becomes extinct causes our quality of life to diminish; imperceptibly, perhaps, but diminish it does. The loss of a plant or animal species is not only an aesthetic loss, but also deprives us of a little of the natural diversity of

life that we depend upon for survival. Such a loss could cause environmental problems that are not easily predicted or solved. But perhaps the most compelling reason of all to protect the red-cockaded woodpecker is to fulfill our responsibility of continuing the existence of all species.

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Join Us for a Landmark Event

Oct. 19-20 has been set as the date for a statewide celebration in Mobile of an alliance of all the forest interests in the state—The Alabama Forest Resources Center.

The Alabama Forest Resources Center was incorporated in 1986 as a non-profit organization for the purpose of promoting, developing and creating public awareness for the forest resources of Alabama. Not only does the center serve to promote Alabama forest products, it also fosters the idea of high quality and acceptance of Alabama products to the world economy. Other focuses of the center are to promote privately owned forest lands as assets, to encourage good stewardship, and to promote the free enterprise system—all in a spirit of cooperation with various groups and organizations with similar interests.

During the two-day celebration, participants can expect the following:

- expert speakers on timely environmental and economic issues relative to the forest resources.
- celebration banquet featuring representatives from agencies, industry and the Alabama legislature.
- grand opening of the Meaher Park boardwalk and "Gateway to the Delta" on the Battleship Parkway.
- exhibits highlighting forestry's contribution to the state's economy and environment.
- a reunion of forestry professionals and leaders.

Mark your calendars now to be a part of the dynamic present which leads us into a progressive future.

To receive more information, write to:

**Alabama Forest Resources Center
Conference, 513 Madison Ave.,
Montgomery, AL 36130.**



A New Market for Alabama Wood: Southern Hardwood Chip Exports

by GARY FAULKNER, Alabama Development Office and
L. LOUIS HYMAN, Alabama Forestry Commission

In recent months, exports of Southern hardwood chips have increased dramatically. This sudden expansion has caused responses ranging from excitement to anxiety. This article examines what is occurring in hardwood chip exports.

Historically, hardwood log exports have been a steady product from the Gulf Coast ports. Log exports to Asia were steady during the early eighties but began an exponential growth in 1985. The bulk of the early shipments were grade logs being sent to make veneer or lumber for the furniture industry. Much of the recent growth in these exports has been in lower quality pulpwood.

In 1988, there was a pronounced increase in the shipment of Southern hardwood chips from the southern U.S. In 1987, Gulf Coast ports shipped 66 short tons (dry weight) of wood chips to Europe and Asia. In 1988, this went up to 173,125 short tons, nearly all to Asia.

An analysis of customs data from the U.S. Department of Commerce Census Bureau shows that during 1988, there were 11 shipments of hardwood chips from Gulf Coast ports. Eight of these originated in the Mobile Customs District and three from the New Orleans District. The bulk of these shipments went to Japan, with Taiwan purchases being less frequent but larger in tonnage. No shipments of chips from Gulf Coast ports to Europe were documented. An additional large amount of wood was shipped from Texas, but this wood just went across the line to Mexico. Wood chip exports from Gulf ports to Asia totalled 312,906 short tons, green weight (173,125 short tons, dry). This is roughly equivalent to

125,162 cords of wood being shipped overseas.

The Far Eastern Market

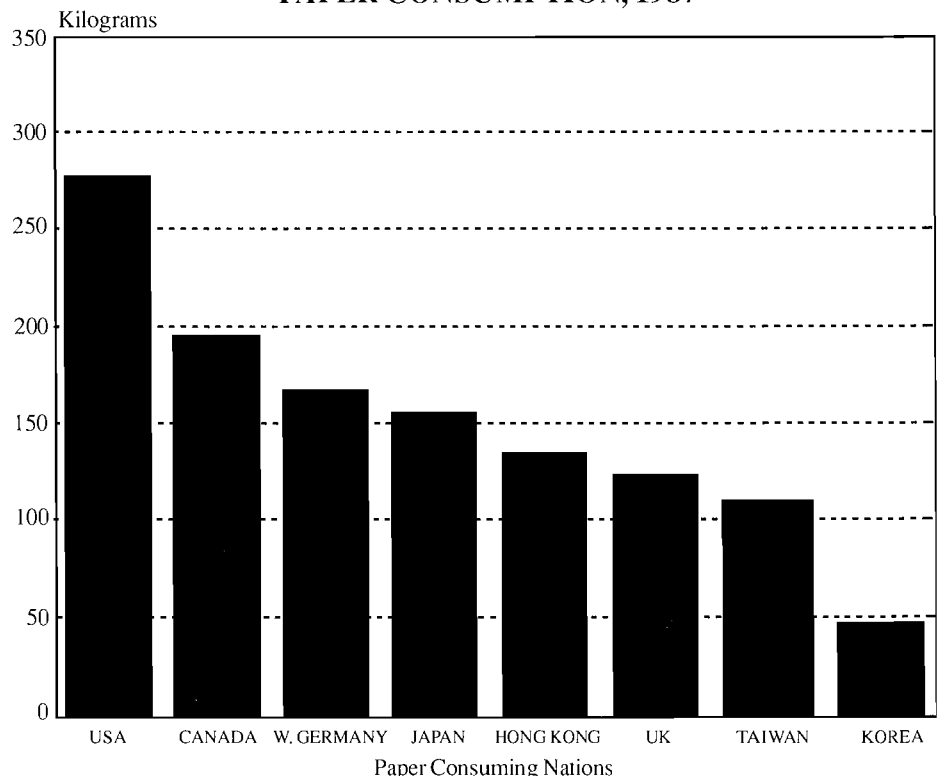
With the bulk of Southern chips going to the Far East, an analysis of the market demand for such chips is needed. Some dominant factors that draw Pacific Rim

pulpmills to Southern hardwood chip suppliers include domestic paper demand, existing natural resource bases, and international competitiveness.

Chip demand is driven by pulp and paper demand. A comparison of apparent per capita paper consumption from selected countries shows that there is little difference in paper use between the developed countries of the Far East and

Figure 1.

APPARENT PER CAPITA PAPER CONSUMPTION, 1987



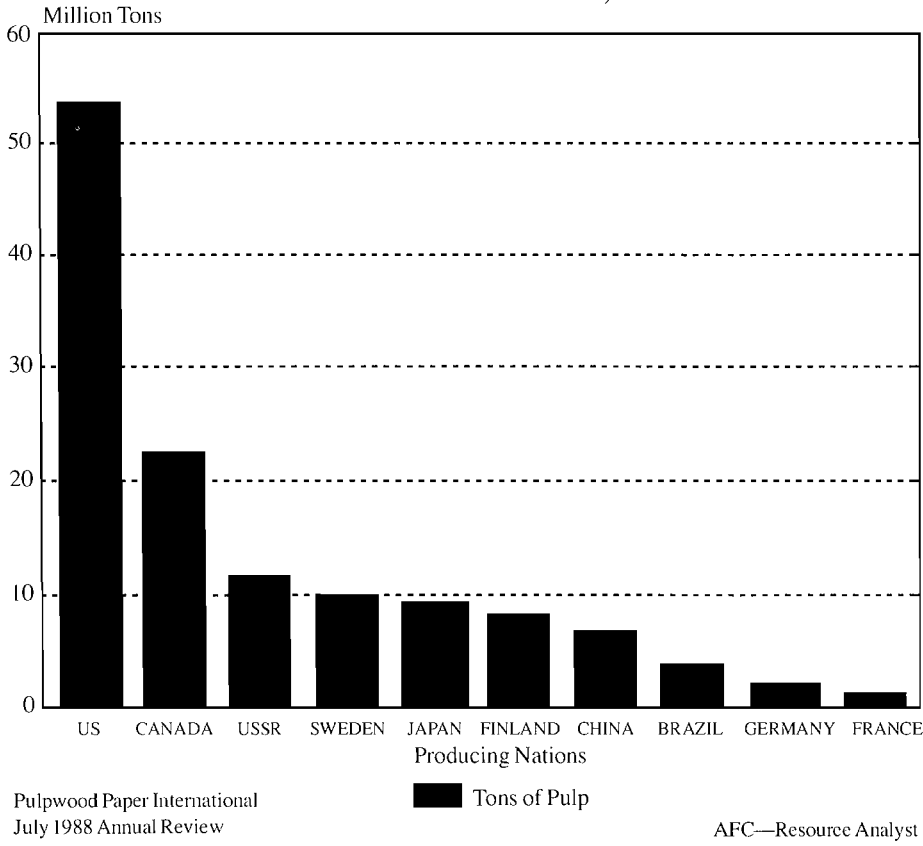
Pulpwood Paper International
July 1988 Annual Review

Paper Consuming Nations
■ Volume per Person

AFC—Resource Analyst

Figure 2.

PULP PRODUCTION BY SELECTED COUNTRY, 1987



Western Europe (FIGURE 1). However, this region lacks the strong resource base of Western Europe and North America.

It should also be noted that nearly all of the Asian paper production is used domestically. In contrast, West Germany exports 34.1 percent, and Sweden exports 78 percent of their paper production.

A review of the top ten pulp producing countries show that only two are located in Asia (FIGURE 2). Japan is the only country among this group that does not have a timber resource base to adequately supply its mills. A closer look at pulp producers in Asia shows six major players (FIGURE 3). China, India, and Indonesia have a timber resource base. Japan, Taiwan, and Korea are major pulp producers who do not control an adequate timber base. These countries are dependent on imported roundwood and chips to fully supply their mills.

Japan's pulp industry dominates the Far East. Japan has been importing wood chips and roundwood pulpwood since the 1960's. The Japanese pulp industry is in an expansion phase, especially in bleached hardwood kraft pulp. This expansion is being pushed by increases in domestic consumption as the Japanese economy continues to boom. Japanese companies are expanding because of these increases in demand, lower energy costs, lower raw material costs and modernization programs to streamline their operations.

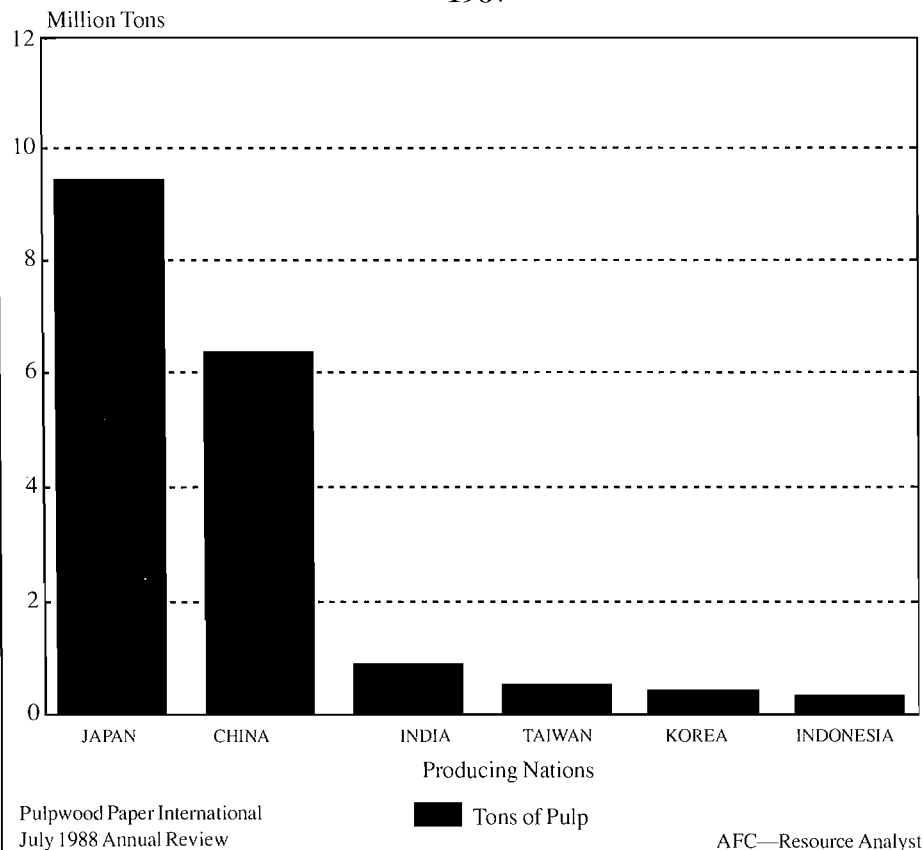
Japan relies on imported hardwood logs and chips to supply its pulpmills. Japan buys chips from several sources (FIGURE 4). Australia is the dominant source, followed by the U.S. South and Chile. The Japanese firms are in the international wood chip business over the long haul. Besides chip purchases, many firms are interested in making direct investments in chip making and other manufacturing facilities.

The economy in Taiwan, Republic of China, is going through a transition. Most Taiwanese exports went to the U.S., and the decline of the U.S. dollar against the New Taiwan dollar (NT\$) has slowed exports and the economy. In addition, a lowering of import tariffs has increased paper and board imports. Taiwan has three pulpmills, of which two produce bleached kraft pulp and one produces dissolving pulp.

Taiwanese fiber importers have shown great interest in Southern hardwood chips, at least for the short term. The main reasons the Taiwanese want to use Southern hardwood chips are price, quan-

Figure 3.

PULP PRODUCTION IN ASIA 1987



tity and species quality. They have not selected any particular port for shipping, basing the decision on the cost effectiveness of each shipment. Presently Taiwan imports wood from Indonesia, Malaysia, Thailand, Australia, South Africa and the U.S. The Southern U.S. has the longest shipping distance of the Taiwan suppliers. The Taiwanese companies expect to increase their purchase of Southern hardwood chips.

South Korea is another example of a country with a very strong, export oriented economy and few natural resources. South Korea has five pulpmills, of which only one produces bleached kraft pulp. The other four produce groundwood pulp. The Koreans presently import hardwoods from the U.S., Australia, and Indonesia.

One Korean firm projected hardwood chip needs to exceed the equivalent of 200,000 cords on an annual basis by 1991. Another firm is interested in moving a pulpmill to the U.S. or Canada in the near future. The mills are interested primarily in oak and are attracted by the South's strong oak reserves. The Koreans have shipped chips from Mobile and are very satisfied. They have indicated a strong desire to increase their use of Southern hardwood chips in the near

future. The Koreans look to the Southern U.S. as a long term supply base, and are willing to set up their own Southern U.S. operations to meet their needs.

Factors Influencing the Hardwood Chip Market

Based on an evaluation of these data, there are four main factors that influence Southern hardwood chip exports. The first is that the market for Southern hardwoods has been remarkably stable over the last ten years. This is true on both the stumpage level and on the delivered-to-the-yard cost level. This shows the relative abundance of hardwoods in the South and the historically low demand for hardwood pulpwood. The price jumped in 1987 because of increased demand, but has since leveled off.

The Mid-South is blessed with a tremendous transportation infrastructure. The opening of the Tennessee-Tombigbee Waterway has greatly increased the ability of companies to move wood supplies greater distances at lower costs. Wood has become one of the dominant items of commerce utilizing the Water-

way. The impact of the Tenn-Tom on exports is that it enables companies to efficiently move a high volume, low value product like roundwood or chips a great distance. This has greatly increased the amount of wood that can be brought to the Port of Mobile at a price the exporters are willing to pay.

Another major factor that influences hardwood chip exports is the exchange rate of the dollar. The recent decline in the value of the dollar, especially against the yen, has increased the buying power of the foreign pulp mills. A yen now buys more wood than it used to.

The final factor, which limits the amount of hardwood chips exported to Asia, is competition from other growers. The main competition is eucalyptus from Australia and South America, especially Chile. Changes in the availability of logs and chips from these sources has an impact on the demand for Southern hardwood chips.

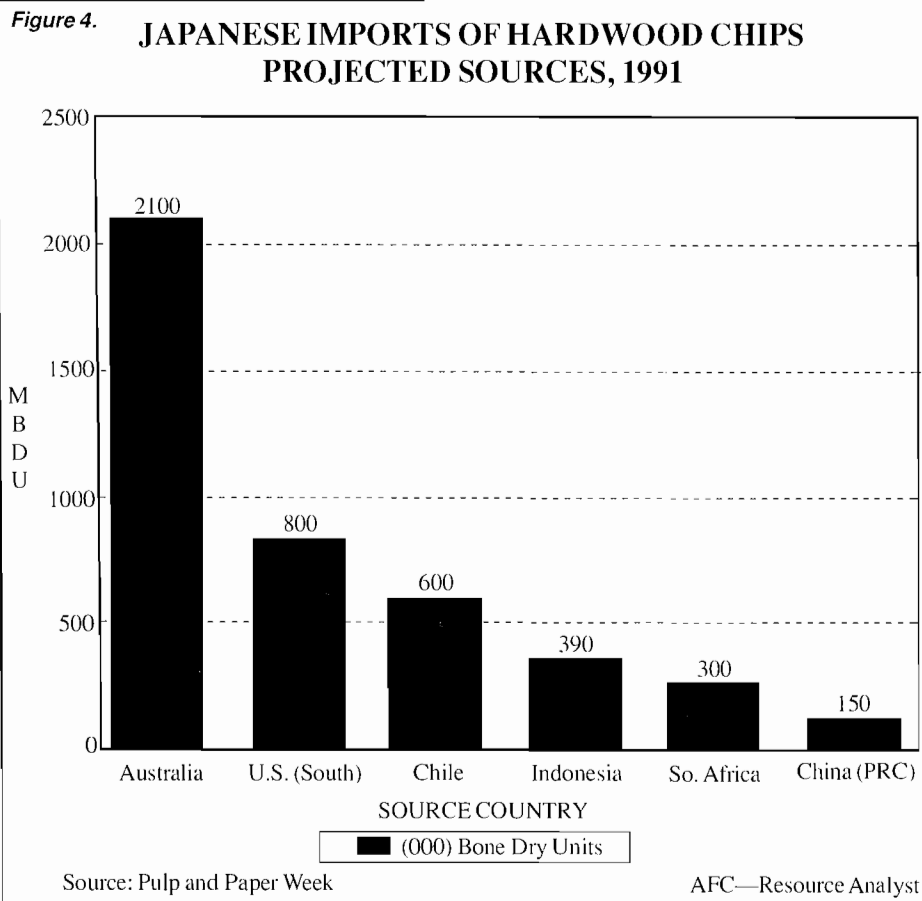
Impact on Alabama Landowners

The southern U.S. is a prime source for hardwood chip exports. Our vast resources, stable local market, excellent ports and good river transportation systems, result in relatively lower alongside ship prices. Pacific Rim countries are aware of this great resource, and are trying to increase their use of it, either through export purchases or through direct investments in processing facilities.

The advent of the hardwood export chip market has resulted in a strong increase in demand for hardwood stumpage. This has pushed up prices in some parts of the state and stabilized prices in other parts. In fact, this demand now enables landowners to sell wood that we couldn't give away five years ago.

The push from the export market has spread this demand for hardwoods across the state and region. The waterway system, which lowers the cost of transportation tremendously, has enabled hardwood suppliers in North Alabama and Tennessee to sell wood to Southwestern Alabama pulpmills and wood chip exporters.

We are in an international market now, and what happens across the world has a definite impact on the local economy of the South. We have always known that the hardwood trees of the South are the hidden **TREASURE** in our Forest. Now the world has noticed. ♠



LANDOWNERS

LEGISLATIVE
ALERT

NATIONAL



by TERRI BATES, Legislative Liaison, National Association of State Foresters

The first 100 days of the Bush Administration and the 101st Congress—the traditional testing period for a new President—have been eventful for forestry interests.

Two issues have dominated the forestry agenda so far. One is a potential tug-of-war between forestry initiatives introduced in both houses and the competing need for deficit reduction. Another source of contention is the possible controversy over the White House choice for the USDA Assistant Secretary overseeing the Forest Service.

Nomination

The administration has announced it will nominate **James E. Cason** to become the next USDA Assistant Secretary of Agriculture for Natural Resources and Environment overseeing the U.S. Forest Service and Soil Conservation Service. Cason has been Acting Assistant Secretary at the Interior Department for Lands and Mineral Management. Environmental groups, upset by what they perceive as an unsympathetic nomination, have been actively stirring opposition by casting Cason in the shadow of James Watt. The Senate Agriculture Committee does not expect to begin hearings on the nomination until June.

Legislation

Both houses have passed budget resolutions setting guidelines to be followed by the Appropriations Committees in allocating funds to agencies and programs.

The House and Senate Appropriations Committees have completed hearings on the 13 separate funding bills and have begun reporting their recommendations to their respective houses. Funding levels are expected to be similar to Fiscal Year

1989 levels—perhaps postponing until a later date reductions that might be required to meet deficit targets set by the Gramm-Rudman-Hollings law.

Twenty-nine bills relating to capital gains treatment have been introduced since January. Several would restore preferential capital gains treatment on timber sales eliminated by the Tax Reform Act of 1986. The administration continues to push for President Bush's campaign proposal to reduce the capital gains tax rate to 15 percent. However, the applicability of the Bush proposal to timber sales is ambiguous at best. It would apply to timber treated strictly as an investment and not at all to corporations.

Another bill that would help private non-industrial forest landowners has been introduced with the full support of the Forestry 2000 Task Force, a House of Representatives caucus on forestry issues with over 100 members and co-chaired by Representative Sonny Callahan (R-AL). The bill (*HR 1086*) would require the Internal Revenue Service (IRS) to treat small timberland owners as "active" participants for tax deduction purposes.

Under the leadership of Senator Howell Heflin (D-AL), chairman of the Senate Agriculture Subcommittee on Rural Development, a major rural development initiative will be introduced in the Senate. It is hoped that a forestry section will be included.

President Bush has signed legislation making permanent the "Temporary Emergency Wildfire Assistance Act" enacted in 1988. This allows the federal government to enter into reciprocal firefighting agreements with other nations (i.e., Canada, Mexico).

Forestry legislation (*HR 2144*) has been introduced in the House of Representatives which would provide technical assistance and public education programs for urban areas. These programs are intended to assist state and local organiza-

tions in assessing, expanding and restoring their urban forest resources. A competitive grants program would provide up to 50 percent of the support for implementing urban and community forestry projects.

Both the Senate and House Agriculture Committees have begun work on the 1990 Farm Bill with hearings in Washington, D.C., Alabama and other southeastern states. Senator Patrick Leahy (D-VT) and Congressman 'Kika' de la Garza (D-TX), chairmen of the agricultural committees, both publicly stated they wish to complete the 1990 Farm Bill by next summer. Early congressional concerns had been expressed that USDA Secretary Yeutter would attempt to "hold hostage" the 1990 bill until after the GATT (General Agreement on Trade and Tariffs) negotiations are completed in late 1990. In testimony before both committees, Yeutter dispelled any doubts that he would seek to delay the process and noted the general satisfaction with the working of the 1985 bill. He particularly applauded the success of the Conservation Reserve Program (CRP).

Senator **Wyche Fowler, Jr.**, (D-GA) has introduced a major conservation bill with important forestry provisions. In it, the Conservation Reserve Program (CRP) would be expanded to 60 million acres and extended to 1992. Contracts would be extended to 15 years for acres planted in hardwood trees.

Alabama enrolled 39,187 acres into the CRP out of a national total of 3,223,662 acres bid in the eighth signup period which ended in February. Of those, 26,431 were acres bid to be planted in trees. **The ninth signup dates have been set for July 17 through August 4.**

As busy as the 101st Congress has been, members still need to hear personally from their constituents on forestry issues important to them. You can make a difference! ♣



by FRANK SEGO, Legislative Liaison, Alabama Forestry Commission

Some of the old sages who have made it their business to follow the Alabama Legislature through the years said, "Who are they kidding?" when lawmakers came back in 1989 and said, "We're going to have both budgets (General Fund and Education) in record time."

The rail birds were still wiping their eyes in disbelief when, in 24 legislative days, legislators did what it took a 30-day regular session and two special sessions to accomplish in 1988.

The result was passage of a \$734 million budget for operation of State government which went to the Governor's office for his signature on April 27. Following this, legislators went back into action and passed a \$2.4 billion vehicle for the state's elementary, secondary and higher education programs in Fiscal 1989-90.

With both budgets under their belts, lawmakers heaved a sigh of relief, went into a huddle, and decided to call signals for a surprising 29-day session which ended on a harmonious note on May 11, with no special session being contemplated for the remainder of 1989. The '89 Session will be remembered as one of many accomplishments other than the record-time budgets.

Success for Forestry

Forestry, perhaps, enjoyed one of its finest hours. State Forester **Bill Moody** was exuberant over passage of the long awaited forest acreage assessment bills. Five years ago, the Forestry Commission initiated its first attempt at statewide acreage assessment. In each succeeding year, the bills fell prey to the sine die clock.

This time they were not to be denied. Through the unrelenting efforts of Senator **Ann Bedsole** of Mobile, *SB 31* and *SB 32* weathered delays and attempted substitutes before final Senate action the first week in May. From that point, Rep. **Nolan Williams** of Newton grabbed the ball and sent both measures sailing through the House on the 27th legislative day.

You've read about these bills in previous *Legislative Alert* columns, but to refresh our readers, *SB 32* (now *Act 89-459*) proposes an amendment to the State

Constitution relating to the promotion of forestry and forest fire protection. The proposed amendment would assess forest lands at a maximum of 20 cents per acre for forest fire protection in each of the 67 counties. Only 39 counties have any acreage assessment at this time, and there's no uniformity in current rates. Some counties collect 5 cents, some 10 cents and another 15 cents, while still another gets only 2 cents per acre.

Voters Will Decide

All of the above depends on ratification by the state's voters at the next general election. Should the voters accept this proposal, the way would be cleared for a vote of forest landowners, which is spelled out in *SB 31* (now *Act 89-652*). Following statewide ratification, the Forestry Commission would conduct a referendum among owners to determine whether an assessment of 10 cents per acre would be levied for forest fire protection. All existing levies would be repealed by the landowners' acceptance of this referendum.

Passage of these bills signalled a clear victory for forestry in Alabama. The Forestry Commission, the Forestry Association, private landowners and the Legislative Forestry Study Committee have long advocated statewide acreage assessment as a "must" for improving the state's forest protection program. At 10 cents per acre, it is estimated that the assessment would generate almost \$2 million annually.

Hazardous Waste Bills

In other action, the Legislature approved, or modified, several of Governor **Hunt's** proposals for hazardous waste and solid waste landfills. **Governor Hunt** had proposed raising to \$50 a ton the state fee for disposal of hazardous waste in Alabama. The legislature approved a fee of \$30 per ton within three years. The current fee is \$14 per ton.

The legislature also approved a bill to prohibit the shipment of hazardous waste into Alabama from any state that does not allow disposal of such waste within

its own borders.

Still another measure would allow Alabama to collect the same hazardous dumping fees as states where the waste originates.

On the final night of the session, Governor **Hunt's** proposal to ban construction of garbage landfills for two years was approved by the House on a vote of 84-0. The governor had sought a temporary ban on construction of solid waste landfills, except in an emergency declared by a County Health Department or County Commission.

The bill also requires the Alabama Department of Environmental Management to develop a statewide plan for solid waste disposal that would go into effect when the moratorium is lifted in 1991.

Stronger Litter Law

The PALS (People Against A Littered State) organization also received attention from the '89 Regular Session as legislation strengthened the code prohibiting litter to be thrown from a motor vehicle on a highway, road, street or public right-of-way. The amendment (*SB 281* by Senator **Bill Drinkard** and others) would allow for the Uniform Traffic Citation to be used for such violation. The bill was pushed vigorously by PALS and the Forestry Commission.

Farewell to Perry

The Senate said goodbye to an old friend and colleague on the final night of the session as Senator **Perry Hand** of Gulf Shores moved on to become Secretary of State. The appointment was made by **Governor Hunt** following the election of **Glen Browder** to the 3rd Congressional District seat vacated by the death of longtime Congressman **Bill Nichols** of Sylacauga.

Hand was given a rousing send-off by his fellow senators in a glowing resolution highlighting his six years of service. Forestry will sorely miss his presence in the upper chamber. He was also chairman of the Alabama Legislative Forestry Study Committee. ♣

Leasing Hunting Rights

An Organized Approach to a Popular Enterprise

by FREDERICK A. BUSCH, TREASURE Forest Coordinator & Wildlife Specialist

Priate landowners control the access to hunting opportunity on about 75 percent of the forested land in Alabama. Many of these landowners enter into agreements that provide hunters with exclusive right-of-access to their properties. Such an agreement is generally called a hunt lease.

The practice of leasing hunting rights was initiated in America along the east coast where waterfowl hunt leases were common in the 1870's. Hunt leases for deer and other big-game animals proliferated just after WWI when wealthy industrialists found that the deer hunting in Texas was far superior to hunting the depleted northern herds. Texas ranchers were only too happy to collect substantial fees for the rights to hunt on their properties. Through the late 1920's, 30's and 40's, as sport hunting became more popular throughout the South, so did the practice of granting hunting rights based on the payment of access fees. In Alabama, hunting rights have gained the status of a land-based commodity that can be traded in the same manner as timber or agricultural products.

Alabama's forest landowners can enter into a profitable and satisfying hunt-lease agreement for a minimal investment of time and money. As with any other full- or part-time enterprise, an organized approach to this enterprise will increase your chances for success.

Initial Considerations

Before offering your land for lease, some preparation and organizational work would be prudent. In order to begin your new enterprise as smoothly as possible, you should consider the following:

1. Map the different forest types, roads, building and bodies of waters. Be sure to clearly identify any areas considered off limits.

2. Evaluate your wildlife resources by first listing the game animals known to be present. If you wish to conduct a more thorough assessment of wildlife resources on your property, contact the Alabama Department of Conservation and Natural Resources. Biologists employed by this agency will offer technical assistance regarding wildlife management.

3. Determine the amount of land you wish to lease. You may want to lease a portion of your property to others and save a favorite hunting spot for yourself.

4. Decide what kind of lease you will offer. Will it be multi-year, all-game lease, or do you wish to sell only the right to hunt deer on an annual basis?

5. Procure a complete and properly prepared lease agreement. Although it is possible to prepare a written hunt lease on your own, consultation with an attorney is recommended.

6. Make arrangements to protect yourself from liability for accidents or injuries that might occur due to hunting activities on your property.

3. Use of a real estate agent or a forester or wildlife consultant as a hunt lease broker.

The Hunt Lease

In theory, a hunt lease is a simple document that protects certain agreed-upon rights of both the landowner and the sportsman. In practice, however, conflicts often arise due to the casual and incomplete nature of many lease agreements. The lease should, for example, address subjects pertaining to incidental uses of the leased lands such as camping, fishing and wet weather road use. It should guarantee that the lessee has the exclusive right to use the described property for the purpose of hunting and it should describe exactly what penalties are to be suffered if the lease agreement is broken by either party.

By entering into a complete and properly prepared agreement, many of the conflicts that arise between lessor and lessee can be easily solved and a good relationship maintained throughout the hunting season. Consult the example of a hunt lease included with this article when making your agreement, but remember that this is an example only and is not intended to be copied word for word; rather, adapt it to your specific situation.

Marketing

Most marketing of hunt leases is accomplished simply by word-of-mouth; expense is minimal and effectiveness is usually good. Other methods successfully employed to market hunt leases include these:

1. Classified advertisement in local newspapers or the newspaper of a nearby city or town.

2. Posters or bulletins placed at sporting goods stores, supermarkets and taxidermy shops.

Landowner Liability

The threat of a lawsuit for an injury incurred by a lessee is a consideration that forces some landowners to abandon the idea of leasing hunting rights. To reduce this concern, a landowner must exercise what is considered reasonable care for all visitors to his land.

In general, a landowner is not liable for harm to *trespassers* except through gross negligence or willful misconduct. However, if the landowner discovers or

can foresee the presence of trespassers, especially children, he is expected to exercise reasonable care for their safety.

A *licensee*, is a person who enters property with the permission of the landowner. The landowner is expected to use reasonable care to know about the activities of a licensee, avoid injury to him and to warn him of any dangerous conditions which exist on the property. The responsibility owed to a licensee is higher than that owed to a trespasser.

The *invitee* is a person who enters onto land for the benefit of the landowner. Most hunt lessees would be considered invitees. The landowner is required to exercise reasonable care to warn the invitee or to make the premises safe for him with regard to dangerous conditions.

The landowner involved in lease hunting can further reduce his economic peril by carrying liability insurance that not only provides financial protection but legal representation as well. Remember that every liability problem is different and special concerns or problems should be discussed with an attorney. While liability suits against private landowners for negligence in hunting accidents are not common, liability insurance, legal consultation and a properly drafted lease agreement should help reduce the liability exposures for a lease-hunting enterprise.

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Sample Hunt Lease

I, _____, hereinafter referred to as the Lessor do grant to _____, hereinafter referred to as the Lessee, the right to hunt and shoot subject to the following stipulations and the laws of Alabama on the tract of land described as: _____ for the sum of \$ _____ per year beginning on _____ and terminating on _____.

Terms, stipulations and conditions of this lease agreement:

1. If the lessee is a group of one or more members, the terms of the lease shall apply to all members and their guests.
2. The lessee shall maintain control over any persons other than the lessor using the above-described lands.
3. Should the lessee fail to comply with the terms of this lease, the lessor shall have the right to cancel this lease without further liability.
4. The rights granted in this lease are solely to hunt and shoot (or camp, fish, etc.).
5. Hunting and shooting are prohibited within 200 yards of any occupied dwelling or designated safety zone.
6. The lessee will not interfere with the lessor in the planting, growing and harvesting of timber and agricultural products.
7. The lessee may post the leased property in order to keep unauthorized personnel from hunting therein, using only aluminum nails as fasteners.
8. The lessee will not start any fires upon the premises or take any actions to damage or destroy timber, livestock, crops, fences, or other improvements.
9. The lessee shall be responsible for damage to the lessor's property caused by the lessee.
10. The lessee will extinguish any fires on the leased lands, without cost to the landowner if the fire occurs while the lessee is using the leased lands.
11. The lessee shall hold the lessor harmless from any claims whatsoever resulting from injuries to the person or property suffered by the lessee while on the premises.
12. Members shall have in their possession a membership card while hunting on the leased property, and guests shall possess a card granting permission to hunt on the leased lands.
13. The lessee shall use only designated areas for the development of campsites. All campsites, clubhouse grounds, gathering places and leased properties shall be kept free of litter.
14. Vehicles shall be parked in designated areas and driven only on designated roads. Use of roads on leased lands shall be restricted to dry weather.
15. No permanent tree stands will be erected in or on any trees. Use of nails in trees is prohibited in the construction of any tree stands.
16. All existing locked gates will remain closed and locked at all times except at the instruction of the lessor.
17. The lessor reserves the right to cancel this agreement with three months notice. The lease fee will be refunded on a 12-month pro-rated basis.
18. The lessee may cancel the lease agreement with three months notice.
19. As an indication of acceptance of the terms herein, the "acceptance" will be signed below and \$ _____ will be paid.

Signed

(Date)

(Lessor)

(Date)

(Lessor)

(Date)

(Witness)

ACTIVITIES

DISTRICT
1

Huntsville City Forester and former AFC County Supervisor **Chuck Weber** was recently presented with a **W. Kelly Mosley Award** for his efforts of promoting urban forestry. District Forester **Sam Gravel** who nominated Chuck presented the award at the International Society of Arboriculture's Southern meeting. The Mosley Award was the result of Chuck's work above and beyond his normal job responsibility. Assistance to neighboring cities, developing training programs, articles in national magazines, and practical video presentations are but a few of his documented efforts. As a former AFC employee and forestry professional, we are proud of Chuck's urban forestry activities.

Etowah County celebrated an Alabama Reunion event that coincided with Arbor Week at the AFC's county office complex. **Eloise McClendon**, TREASURE Forest landowner and member of Duck Springs Garden Club was the mistress of ceremonies. Numerous dignitaries were on hand for the event which included a video on Tree City, USA, distribution of free pine and hardwood seedlings and talks about Alabama Reunion events. County Supervisor **Philip Smith**, Ranger **Mitchell McClendon** and Forestry Worker **Jason Wolf**, along with the Garden Club members, organized the activities attended by forty people. Additionally, the County AFC folks planted a Bradford pear in Gadsden, and Hoykino cherry's in Altoona and Walnut Grove in support of the Alabama Reunion.

The Calhoun County Forestry Association held their regularly scheduled meeting in March and heard District Management Specialist **Brian Bradley** discuss forest industrial development opportunities. This talk was an outgrowth of a Coosa Valley RC&D Economic Conference in which Calhoun County expressed interest. Bradley explained the organization and activities of the **Jackson County Forest Industry Committee**. Approximately thirty landowners and agency people attended.

Two new TF landowners were recently certified: Dr. **Rush Smith** of Etowah County and **Mark Loyd** of Jackson County. Congratulations to our newest members.

A weed identification course for AFC employees and area consultants was held in Jackson County. The course was conducted by **Auburn Extension** and organized by the **Jackson County Forestry Committee**. Common weeds found in cultivated fields which are planted with pines were the target of our identification efforts. Additionally, the use of specific herbicides was discussed and sample tracts visited. An excellent field book on weed identification was obtained from the University of Georgia and distributed to the attendees.

Forest landowners in and around Madison County now have the opportunity to attend quarterly informational seminars on various topics. County Supervisor **Mark Sullivan**, Ranger **Mark Roberts** and Forestry Worker **Phillip Drake** utilize a listing of landowners (many of which are absentee landowners) to invite to each meeting. To date the response has been outstanding. The first workshop on taxes attracted 45 people and the second highlighted wildlife management and had 25 attendees.

The **Coosa Valley RC&D Council** which is composed of conservation-minded landowners, several of whom are TREASURE owners, recently met in Calhoun County to adopt the Annual Forestry Plan of work. **E. D. Whiteside** stepped down as the Forestry Committee's chairman after a long and productive term at the helm. The recent conversion to wood energy by **Welborn Cabinet Company** is one of the highlights of Mr. Whiteside's tenure. **Bill Thomas** of Chambers County has assumed the position as chairman and we look forward to working with him on upcoming projects.

The **Mountain Lakes Chapter** of the Society of American Foresters recently held its quarterly meeting in Huntsville and heard **Harry Murphy** formerly of Resource Management discuss forestry in Central and South America. His very interesting and informative talk was attended by a diversity of people from ecologists, wildlife biologists, foresters and an Alabama A & M's forestry professor and a student. Harry explained various forestry activities and their impact on the environment. Contrary to much published information, forest management activities, including harvesting, play a minor role in the damage to the rain forest and other ecosystems. The primary culprits are the conversion of forestland for short-term crop production and for cattle production. On a positive note, however, programs and incentives are in effect to reverse the trend of destruction, especially in countries like Costa Rica.

DISTRICT
2

The Alabama Forestry Commission was a co-sponsor of the Birmingham Beautification Board's 16th Annual Plant Dig, held at New Georgia Land Fill. Thousands of people come to the event each year to dig wild plants and shrubs for their yard.

Jefferson County Forester **Phearthur Moore** and Technician **Bill Hamner**, recently conducted a brush fire training course for Comer Fire Department.

Information Specialist **Coleen Vansant** has been working with officials in Cullman County to start a local PALS chapter. Presentations of PALS and the litter problem in Cullman County have been made to the Cullman County Mayor's Association, the Cullman County Beautification Committee and a special called meeting at the courthouse for local government, development and educational leaders. County Supervisor **Darrell Johns** and PALS Executive Director **Spencer Ryan** attended the special organizational meeting.

Several Jefferson County associates have completed the Red Cross First Aid and CPR courses. Those participating in the two programs were: County Forester **Phearthur Moore**, Ranger **Larry Clark**, and Forestry Worker **Bryan Langford**.

Cullman Ranger **Jimmy Moody** assisted youngsters in planting dogwood seedlings at **East Elementary School** in Cullman. The event was held after school and was part of the Cullman Community Education Program.

District Urban Forester **Lee Laechelt** was recently re-elected Vice President for Administration of the Alabama Conservancy. Lee also serves on the Advisory Board and Executive Committee of the Alabama Conservancy.

The **St. Clair County Forestry Planning Committee** sponsored their first Forestry Trade Show recently. Over 100 people and approximately 13 exhibitors braved bad weather to attend the dinner, trade show, and lectures.

Over 30 people attended the Cullman Tree Commission **TREE CITY USA** awards ceremony and flag raising held recently at the Cullman City Hall. The City of Cullman is the first **TREE CITY** in Cullman County.

According to the 37 ladies of the **Hanceville Garden Club**, Blount County Ranger **Steve Bowden** was a hit when he presented a program on forest rangers and wildflowers to their group in March.

Bankhead National Forest of the U.S. Forest Service, presented fire prevention programs to all fifth grade and kindergarten classes in Winston County during the month of March. Winston County AFC associates **Danny Dodd** and **Steve Rogers**, along with personnel from the **Smokey Bear** also went along as a special guest.

Steve Bowden participated in the

Fireman's Competition held at the Snead Fire Department. Five volunteer fire departments from across Blount County were on hand for the competition. Winners were: Snead - first place, Susan Moore and Oneonta - second place, West Blount - third place, and Royal - fourth place.

Congratulations go out to **Phearthur Moore**. He was recently selected as the District Forester Trainee. Phearthur, who just completed his 12th year of service with the AFC, began his career with the Commission as a Ranger 1 in Jefferson County. Good Luck to you Phe!!

The **Walker County Forestry Planning Committee** sponsored a pine seedling give-away for all third grade students in both the City of Jasper and Walker County School systems. Several hundred students were involved with this project and received a loblolly seedling to take home.

Jefferson Rangers **Larry Clark** and **Brian Morgan** conducted a fire prevention program for 66, sixth graders at Gardendale Elementary School. The rangers also assisted the students in planting a tree in observance of Arbor Week.

The **Snowville Church of God** was the site for a fire prevention program conducted for residents in the West Jefferson community. Jefferson County rangers **Brian Morgan** and **Bill Hamner** presented the program.

Urban Forester **Lee Laechelt** recently presented the **TREE CITY USA** program to the **Ragland City Council**. Ranger **Tim Davis** has been working with the mayor and council on the **TREE CITY** project.

A Prescribed Burning Training Session for local landowners was hosted recently by the **St. Clair County Forestry Planning Committee**. The program was held on the property of **Betty Thomas** in St. Clair County.

Congratulations to St. Clair County for their hard work in the **TREASURE Forest** program. During the latest Services Subcommittee Meeting they had 5 landowners to certify as **TREASURE Forests**. This brings their total number to 13.

Members of the **Ragland FFA Forestry Judging Team** received first place honors recently at the St. Clair County Forestry Judging Contest held on Canoe Creek Farm near Springville. **Springville High School** placed second and **St. Clair County High School** came in third. **Scott Reaves** of Ragland received a trophy as the Individual High Scorer. Prize money and the trophy were donated by International Forest Seed Company. The event is an annual project of the St. Clair Forestry Planning Committee.

Walker County's Forestry Planning Committee sponsored the Walker County FFA Forestry Judging Contest this year. **Curry High School** was the winning team and will advance to district competition.

Congratulations to **Argo** and **Hay Valley Volunteer Fire Departments** in Walker County. They were recently issued new fire suppression trucks.

DISTRICT
3

District 3 congratulates the following landowners for receiving certification as TREASURE Forest landowners: **W. Keith Swendenburg**--Pickens County; **Hance Pearson**--Pickens County; **Jane Green**--Pickens County; **Dorothy Madison**--Fayette County; **Delaney Development**--Sumter County; and **Ed Parker**--Sumter County.

The following landowners are to be commended for maintaining the standards of a TREASURE Forest. Receiving recertification were **Billy Rumley**--Sumter County; **Strother Deerman**--Sumter County; **Clinton McClure**--Greene County; **James Cochran**--Greene County; and **Joseph McGiffert**--Greene County.

Over thirty people attended the recent **Tombigbee RC&D Forestry Planning Committee** meeting in Tuscaloosa. The objective of the meeting was to develop forestry planning measures for the 1990's.

Seedling Coordinator **Linda Pearson**

has done an excellent job managing the ordering, maintenance and distribution of this year's seedlings. Local landowners are pleased with her efficiency and with the added convenience of the seedling cooler.

Hale County Supervisor **Jim Junkin** is delighted to have two new volunteer fire departments. The **Friendship** and **Stewart-Havana Volunteer Fire Departments** will provide a valuable service to all of Hale County.

Richardson Brothers Wood Preservers of Northport donated 16, 4 x 4 posts to be used for erecting "Watch Us Grow Now, Granddaddy" signs.

Smokey Bear visited over 700 school children in Tuscaloosa during the first few months of the new year. Of special note was his trip to **Myrtlewood Elementary** for a tree planting ceremony. The local Burger King franchise "adopted" the school as part of a county-wide program in which local businesses agree to help support a public school. Burger King representatives, Forest Rangers **Everett Brown** and **Harry Kepler**, and **Smokey** planted ten oak seedlings on the school playground to commemorate the first anniversary of the adoption.

Tuscaloosa County Supervisor **William Moore** and **Harry Kepler** distributed over 2000 pine seedlings at the annual **Tuscaloosa Kiwanis Club Pancake Breakfast**.

The **South Lamar High School Forestry Judging Team** members were advised on tree evaluation techniques by County Forester **Dan Lasseter** and Forest Ranger **Harold Jordan**.

Ken Elmore, **Jerry Fulmer** and **Jim Junkin** completed a Firearms Tactical Seminar at the Law Enforcement Academy.

District Pilot **Bill Ignatz** and seasonal pilot **Charlie Squires** continue to fly surveillance for the southern pine beetle. The results are encouraging. There continues to be a decline in both the number of beetle spots sighted and the number of trees involved.

Greene County Supervisor **Earnest Edmonds** has gathered strong support for an anti-litter campaign. He has involved local scout troops and civic organizations in the **Alabama Reunion Clean-Up** effort along Interstate I-59 exits. He hopes that these activities will increase citizen awareness and lead to a county-wide beautification program.

The **Annual Home and Garden Show** in **Vernon** was again an excellent opportunity for public education. **Alton Terrell**, **Dan Lasseter**, **Harold Jordan** and **Bailey Woods** provided advice on proper planting and maintenance of the thousands of seedlings distributed at the event. They also stressed the importance of obtaining a burn permit and practicing fire prevention measures.

District 3 welcomes several new employees. On board as forestry workers are **Brian Davidson**--Fayette County; **James Jennings**--Greene County; **Kenneth Owens**--Hale County; **Kenny Poole**--Pickens County; **Ronnie Lockhart**--Sumter County; and **Willie Stewart**--Tuscaloosa County. **Charles "Chuck" McDaniel** is a new forest ranger stationed in Tuscaloosa County and **Tilda Mims** is the new information specialist stationed in the District 3 Headquarters.

In their ongoing efforts to clean up the litter in Fayette County, **George Lowrey**, **Jerry Fulmer** and **Randall Aldridge** have made **People Against a Littered State (PALS)** orientation available to all public school's faculty members. Over 50 PALS Litter Activity Guides have been distributed to Fayette County schools.

After signing an Arbor Week proclamation, the **Tuscaloosa City Council** adopted a tree ordinance. The ordinance established a tree commission to serve as an advisory board to the Council.

Gainesville citizens were very pleased to have their town receive certification as a **TREE CITY, USA**. A designation of the National Arbor Day Foundation, **TREE CITY, USA** gives national recognition to an urban forest program.

TREE CITY, USA recertification ceremonies were held during Arbor Week in **Brookwood**, **Livingston**, **Moundville** and **York**.

Clayton Schwind presented the slide presentation "Birds of Alabama" to a club in Lanett with 50 in attendance. He presented programs to the **Lanett K Club** and the **Lafayette K Club** with 90 people attending the two presentations.

The **Firefighters Association** met at Five Points Community Center; the Hon. **Gerald Dial**, State Senator; and the Hon. **Richard Laird**, State Representative, were present. Grant checks were given out to the representatives from the volunteer fire departments.

The **Lafayette Sun**, the **Valley Times-News**, and the **Opelika-Auburn News** gave excellent coverage to the 29 Chambers County citizens who attended the Farm-City luncheon in Montgomery. Seven of these people won awards; among them **Leonard and Hazel Blanton**, TREASURE Forest landowners. The newspapers mentioned covered all the county activities leading up to Farm-City Week through the year. Radio stations **WRLD**, **WCJM**, and **WPLV**, as well as **Saminons Cable TV** in Valley, Alabama regularly ran spots covering Farm-City activities. The newspapers carried a total of 20 articles.

Clay County, along with Talladega County, has the most active PALS chapter in the district. **C.W. Moody** and **Spencer Ryan** helped **Earl Smith** and the **Clay County Historical Society** organize the **County Chapter of PALS**. The Historical Society had already begun an effort to clean up the County when they learned about PALS so they immediately agreed to sponsor the organization and are taking an active part in bringing PALS to each town and community in Clay County. The officers are **Wayne Creed**, chairman; **Walter Farr**, co-chairman; **Carolyn Dunagan**, secretary-treasurer; **Don Fulbright**, chairman of public education; **Dennis Robertson**, chairman of recycling; **Berford Griffin**, chairman of Adopt-a-Mile; **Lineville Mayor Jack Whatley**, chairman of law enforcement; and **Ann Thompson**, chairperson of highway beautification. The regular meetings are held at the Clay County Country Club at 6:30 p.m. on the first Thursday each month.

The **Millerville Volunteer Fire Dept.** held a note burning ceremony on Thursday, March 16. The occasion was celebrated at the **Otho Catchings Firehouse** in Millerville. **Mr. and Mrs. Otho Catchings** donated the land on which the 40 x 60 concrete block building was constructed. The Millerville VFD obtained their loan in 1984; Chief **Terry Bowen** thanked all the people who had made donations or helped in the fund raising activities. They are now working hard to obtain new equipment and a lower ISO rating.

The Clay County Volunteer

Firefighters Association meeting was held at the **Coleta Valley Fire Dept.** Grant checks were given to the various VFD representatives by the Hon. **Richard Laird**, state representative.

Glenn Berry, Cleburne County supervisor, gave a presentation on March 9 to the U.S. **Forest Service Talladega and Shoal Creek Districts** on cooperation in fire control. Glenn also planned the organizational meeting of the Cleburne County Chapter of Alabama PALS (People Against a Littered State). **Delores Fields** gave a presentation on PALS statewide and the need for local chapters in each county. The Cleburne County PALS officers are **Sarah Ballard**, president; **Rudy Payne**, vice-president; **Jayne Payne**, secretary-treasurer.

Glenn Berry, **Forrest Johnson**, **Darrell Durham**, and **James Barker** organized and conducted the FFA Forstry Judging Contest for Cleburne County. **Ranburn High School** was over-all winner.

Dr. Mac Gilliam of JSU reported on the Calhoun County Chapter of PALS and their activities and gave the Cleburne County Chapter his full support at the recent chapter meeting; Dr. Gilliam and **Delores Fields** have assisted several county chapters other than their own counties.

The **Coosa County Forestry Planning Committee** met in Rockford at the Courthouse on March 7. TREASURE Forest certificates were presented to **Larry Hilyer**,

Chuck Simpson, and **Owen Smith**.

Bill Nixon, Randolph County forester, and **Charles Sikes** hosted the program for the **Wadley Blue and Gold Scout banquet**. Charles was Smokey and Bill spoke on the importance of fire prevention and showed a film, **Time Is Running Out**, to approximately 25 Scouts and their parents.

Arbor Week was celebrated with the **Wedowee Garden Club**. **Bill Nixon** presented a video on Alabama Wildflowers and highlighted **TREE CITY, USA** as it applied to Wedowee. The group then planted a dogwood on the median of Hwy. 431 in Wedowee. **Wedowee Mayor Tim Coe** signed the Arbor Week proclamation.

The **Randolph Forestry Planning Committee** landowner meeting was held in February. The subject was pine tree pruning and prescribed burning. The site demonstration on pine pruning was done by the **Randolph-Roanoke Area Vocational School** on the land of TREASURE Forest landowner **Luther Rice**. **Jim Morris**, R. F., of the faculty of the Vocational School explained the pruning and burning operations.

On March 24, the **Forestry Planning Committee** landowner meeting was held at the Farm Bureau Bldg. **Dr. Bob Mitchell** and **Dr. John McVay** of the Alabama Cooperative Extension Service gave the program to 35 landowners. A catfish dinner was sponsored by the **Farm Bureau Federation**. **Tom Burnside** of the Randolph County Extension Service coordinated and conducted the meeting.

Mike Highfield inspected the **Fayetteville and East Providence Fire Depts.** Both met AFC guidelines and were certified!

Dan Taylor is welcomed as the county forester trainee and management specialist to replace **Blake Kelley**, who is now Coosa County Forester.

Also we welcome **Barry Snow**, FR11, who came to Randolph County replacing **Doyle Foster**.

District 5 had three new TREASURE Forests certified on March 10. They were **Don Harmon** and **Farley Moody** of Bibb County and **David Wendt** of Chilton County.

Also recertified was the **Gates Shaw** property in Bibb County. Congratulations are in order for all of these landowners who manage under the TREASURE Forest concept.

Smokey Bear entertained approximately 200 school children in downtown Prattville during Arbor week. **Prattville** was also recertified as **TREE CITY USA** for the 6th year.

Also certified as a **TREE CITY USA** was **Autaugaville**.

Autauga County Forester **John Pirtle** served as judge for the **Autauga County FFA Forestry Judging Contest** held in April.

Chilton County Rangers **Tim Albritton** and **Danny Clark** presented a program to the **Clanton Kiwanis Club**. The program concerned the need for pine regeneration.

Tim Albritton and **Mike Clecker** set up and administered the FFA Forestry Judging Contest for Chilton County High Schools in April.

Chilton County personnel presented **Thorsby**, **Maplesville**, and **Jemison** with their **TREE CITY** awards in February. **Clanton** was recertified as a **TREE CITY USA**. Chilton County now has all of its municipalities certified as **TREE CITY USA**.

Dallas County Forester **Alan Williams** and Forest Management Specialist **Tom Lang** were guests on Selma's WHBB radio station in February. They spoke on fire laws, Southern Pine Beetles and the **Champion Tree Program**.

Selma was recertified as a **TREE CITY USA** for the sixth time. **Neil Letson**, AFC Urban Coordinator, has been assisting the Selma Tree Commission in surveying Selma's trees.

Marengo County personnel were busy on February 23 escorting **Smokey Bear** to two schools. They also conducted their annual tree giveaway that day.

Alan Williams and Perry County Ranger **David Stewart** served as judges at the District FFA Forestry Judging Contest held in Marion in April.

Coffee County personnel have been busy working with several Treasure Forest landowners and creed signers.

Annual maintenance of permanent firelanes and 140 acres of prescribed burning have been done on **Dr. J. E. Pittman's** Treasure Forest.

Dr. Kenneth Strong was assisted in setting up a select thinning of 90 acres of his Treasure Forest.

Prescribed burning has also been done on **NASCO Insurance Recreation Area** and on **A. B. Bryar's** property in preparation for Treasure Forest nomination this year.

Wayne Roberts coordinated the **Annual Ned Folmar Treasure Forest Landowner Day** held May 17 in New Brockton.

Foresters **Chris Murphy** and **Paul Thomas** put on a program explaining what we do in the Commission for 140 tenth graders.

County Supervisor **Kenneth Blalock** and Forester **Chris Murphy** presented Treasure Forest programs for local **Kiwanis** and **Garden Clubs**.

RC and D Forester **Barry Lawrence** talked to the **Abbeville City Council** about Tree City, USA.

Charles Vickery was presented his Treasure Forest certificate.

An Arbor Week proclamation was signed by **Abbeville Mayor Jimmy Crawford**.

Henry County Supervisor **Kenneth Blalock**, Forester **Chris Murphy**, Forestry Worker **Steven Snuggs**, and District Fire Specialist **Bruce Bowden** attended a county Volunteer Fire Department Association meeting in honor of **Screamer VFD's** one year anniversary.

Barbour County Forester **Don VanHouten** has been reappointed to a two-year term on the **Eufaula City Tree Commission**. The Commission gave input into tree plantings in downtown Eufaula as part of a revitalization project. Also, a memorial tree was planted for past presidents of **Eufaula's Garden Clubs**.

Don VanHouten is serving on the **Barbour County Anti-Litter Committee**. A "clean-up" day is in the planning.

Rangers Edd Fenn and **David Gulledge** worked at an information desk at the annual "Farmers Day" in Clayton. Hand-outs on wildfire prevention, cost sharing, and forest management were made available to over 500 landowners. An AFC video on rangers was shown as part of a continuous program sponsored by the **Barbour County Forestry Planning Committee**.

The **Barbour County** staff is happy to have **Mark Ford** as a forestry worker. Welcome aboard Mark!

Governor Hunt visited **Dothan** and participated in tree planting ceremonies during Arbor Week.

Twenty thousand free seedlings were given out to the **City of Dothan** and **Houston County Commission** for urban beautification.

Thomas Harris and **Smokey Bear** participated in several parades and dedicated a new RCFP firehouse in **Madrid**.

Houston County provided an appreciation luncheon to local community leaders and supporters of forestry (48 people attended).

Houston County gave away approximately 5,000 pine and hardwood seedlings during their annual tree give-away to local residents.

In January, **Geneva County personnel** attended a pesticide workshop sponsored by **DuPont Chemical Company** to assist landowners in control of unwanted hardwoods.

Geneva County personnel have been busy checking CRP tree plantings to the tune of 84 landowners for a total of 3,820 acres!

Brandon Burkett, Butler County Supervisor; and **Madeline Hildreth** attended the State PALS meeting in Birmingham on February 16.

The Tree City, USA program was presented to the **Georgiana City Council** by **Brandon Burkett**.

Barbara Parmer presented a Smokey

Bear program to kindergarten and first graders at **R. L. Austin Elementary School** in Georgiana on March 29.

Butler County Supervisor **Brandon Burkett** retired after more than 40 years of service. Brandon was honored with several parties. On March 9 **Union Camp**, **Albert Morris Middleton**, **Tommy Casey** and **ALFA Insurance** co-hosted a barbecue supper for Brandon. Approximately 85 people attended. On March 21 **Pigeon Creek Volunteer Fire Department** gave Brandon a retirement party. They presented him with a plaque in appreciation for his help. A tea at **Bealand Park** in Greenville was held on March 30. Approximately 175 people came to honor Brandon. **Charles Pigg**, Assistant State Forester, presented Brandon with a paper weight and letter opener in appreciation for his 40 years of service in the Alabama Forestry Commission. District 7 personnel gave Brandon a camera outfit. The **Greenville Fire Department RCFP Association** and the **Shackleville RCFP** each presented Brandon with plaques.

Paul Hudgens is Butler County's new supervisor.

Senator **Foy Covington** and Rep. **Charles Newton** presented checks to **Butler County's** fourteen volunteer fire departments on April 24.

Arbor Week was busy in Conecuh County. In addition to a tree give-away program, **Evergreen** and **Castleberry** had tree planting ceremonies. County Supervisor **Victor Howell** presented **Evergreen** with Tree City, USA re-certification.

Covington County Supervisor **Tammy Ellis** met with the **Andalusia City Council** and mayor. She discussed the Tree City, USA program.

In February, **Tammy Ellis** presented a program to **WINN**, an organization of single mothers and displaced homemakers on careers for women in forestry. She also attended the **Opp Rattlesnake Rodeo Parade** with Smokey Bear.

Covington County Supervisor **Tammy Ellis** presented a program to the **Opp Rotary Club** on March 8. She discussed the role of the Alabama Forestry Commission and cost-share programs.

The **Carolina Rural Volunteer Fire Department** held its annual Fun Day on April 8. **Tammy Ellis** and **Smokey** attended.

On April 24 Rep. **Seth Hammett** presented each of **Covington County's** rural volunteer fire departments a check for \$1,250.

On February 21 the **Crenshaw County Forestry Planning Committee** sponsored a Turkey Management Seminar. **Kenneth Johnson**, district biologist; and **Eddie Salter**, champion turkey caller, were on the program. Ninety-one people attended the seminar.

Rep. **Charles Newton**, Senator **Foy Covington** and Probate Judge **Dwight Faulk** presented checks to RCFP departments on April 24.

Escambia County Supervisor **Robert Knowles** presented **Atmore** and **Flomaton** with their Tree City flags at the cities' Arbor Day celebrations. Also having tree planting ceremonies were **Brewton** and **East Brewton**.

On April 8 the **District FFA Forestry Judging Contest** was held in Atmore. The first place winner was **Clarke County High** from Grove Hill. The second place team was **Monroe County Vocational School**. **W. S. Neal** of East Brewton was third place winner. **Gib Burke**, **Johnny Kline** and **Madeline Hildreth** were judges. **Richard Royce** and **Robert Knowles** assisted in setting up the contest.

Monroeville had a very successful Arbor Week commemorative tree planting and program. **Monroe County Supervisor Gary Cole** served on the program.

Gary Cole, **Johnny Kline** and **Jeff Dunn** have been working with **Maggie Briggs** of the Corps of Engineers. They have presented sixteen school programs on litter with the help of Smokey and Woodys Owl.

On April 21 **Smokey Bear** made an appearance at the **Special Olympics**.

Monroe and **Covington Counties** are proud of their new computers. **Tommy Pat-**

erson held a training seminar in Monroeville.

District Forester **Robert Dismukes** gave a program at the **Rotary Club**.

A **Brewton Cub Scout troop** was given a tour of the district office and grounds by District Forester **Robert Dismukes**. They were especially interested in the radio room.

PALS District Chairman **Brandon Burkett** and **Madeleine Hildreth** took part in an **Extension Service** program on litter and recycling on April 27.

Monroe and Escambia County rangers are testing a portable fire suppression unit for MARCO. They will give recommendations on the unit which is pulled behind an all-terrain vehicle.

DISTRICT 8 During February several **Arbor Week** activities took place throughout the district. In Baldwin County, **Foley** held their annual **Tree City, USA** proclamation and tree give-away. The video crew from the AFC headquarters in Montgomery was on hand to record the event.

County Forester **John Martin** was present at other Tree City, USA presentations and tree give-aways in **Roberstale** and **Sommerdale**.

The AFC video crew spent several days recording Baldwin County Arbor Week activities. These tapings were part of a video spotlighting Baldwin County's urban forestry program shown at the **Fifth Annual Urban Forestry Conference** in Fairhope in May.

In **Choctaw County**, the town of **Bulter** held their Tree City, USA recognition program followed by a tree give-away at the **Bulter Town Hall**.

Greg Kelsoe, AFC Forester in Choctaw County, conducted several special school programs during Arbor Week. Using **Project Learning Tree** materials, Greg visited grades K-12 throughout the county.

Arbor Week in **Clarke County** began with **Clarke County Probate Judge Clarence Watters** and **Grove Hill Mayor S.P. Hudson** proclaiming the week and encouraging citizens to plant trees. A tree give-away was held with the seedlings provided by the **Alabama Forestry Commission**, **MacMillan Bloedel**, **Boise Cascade** and **James River, Corp.**

Mobile County Forester **Steve Lyda** and Forest Rangers **Major Harris**, **Bobby McAdams** and **Aaron Hunt** along with District I&E Specialist **Melanie Curry** assisted the **Mobile Tree Commission** in their annual tree give-away project at the **Mobile Fairgrounds** on February 18. The AFC had several exhibits on display, as well as having **Smokey Bear** available for the children.

RC&D Forester **Gordon Durham** was a guest speaker of the **McIntosh High School FFA** class on February 10. Gordon discussed all aspects of forestry with the class.

Greg Kelsoe and **Lemoral Coleman** held several fire prevention/Smokey Bear programs in the **Choctaw County School System** during March. One special Smokey Bear event was his appearance at the **Choctaw County Special Olympics**.

Mobile County Forester **Steve Lyda** and **Smokey Bear** visited the first grade class at **John Wills School**. Mobile County Forest Rangers **Major Harris** and **Bobby McAdams** assisted Steve and Smokey with the school program.

John Fenn, Baldwin County forest ranger, and **Melanie Curry**, district I&E specialist, presented a "Forest Is More Than Trees" program to the sixth grade class at **Halls Fork School**. **TREASURE** Forest supplements to **Project Learning Tree** were used as instruction guides and the AFC video "Forest Rangers" was shown. A question and answer session followed the video. Several Smokey Bear posters were presented to the class.

Melanie Curry served as a judge at the **Baldwin County 4-H** public speaking contest which was held in **Roberstale** in March.

RC&D Forester **Gordon Durham** represented District 8 at the **March 8 State Tree**

Farm Committee meeting in Montgomery.

An **Alabama People Against a Littered State (PALS)** chapter has been formed in Washington County. This county chapter is very active in their work in becoming a **PROUD PAL** County. **Karl Richardson** is chairman with assistance from **Bob Jenkins**, co-chairman; and **Sarah Hazen**, secretary.

Baldwin County is on its way to having a county PALS chapter. **Melanie Curry** and **Lynn Booth**, assistant county supervisor in Baldwin County, presented the PALS program to the **Baldwin County Commissioners** in March. **Tim Savage**, director of Baldwin County's Parks and Land Management Department, is serving as county chairman.

During January, February, and March, District 8 forest rangers were called to 705 wildfires burning 12,953 acres. During this time a special law enforcement thrust was organized to patrol the "hot-spots" in Baldwin, Mobile and Washington Counties. AFC law enforcement officers from across the state were sent to District 8 to assist in this effort.

Bobby McAdams, Mobile County forest ranger, was named **Outstanding Volunteer Emergency Medical Technician** at the annual banquet of the **Mobile County Volunteer Fire and Rescue Association**.

DISTRICT 9 Colbert County received the first **Proud County Award** on March 14, 1989. **Frank Sego** and **Spencer Ryan** presided at a luncheon held in Sheffield at the **Holiday Inn**. Sego

presented the award to **Charles Thompson**, Chairman of the Colbert County Commission. After the Proud County Award, Sego presented **Carol Jean Grisham** with a resolution commending her late husband, **Homajean Grisham**, on his work during the term he served on the AFC's Board of Commissioners. Sego announced that Mrs. Grisham had received the appointment to complete her husband's second term as commissioner. A buffet luncheon sponsored by **Central Bank** followed the presentations.

District 9's forestry workers attended a fire behavior course held in Florence. **Mike Lanier**, district fire specialist, served as instructor for this training.

Danny Deaton, **Teresa Cross**, **Richard Holst**, District Pal's Coordinator; **Danny Allison**; **Wilma Moody**; **Mike Lanier**; and **Louise Bone** attended the PAL'S meeting held in Vestavia on February 16. On February 25, **Wal-mart** stores in **Florence** and **Sheffield** held their annual Arbor Day Free Tree program. **Steve McEachron** and **Cary Rhodes** were assisted by **Cub Scouts** in their tree giveaway. The urban forestry display was placed in front of the store during this weekend. In **Sheffield**, **Wayne Winsted** and County Supervisor **Danny Deaton** gave away trees to **Wal-mart** customers of Colbert County.

The **Florence Tree Commission** presented a special Arbor Week placemat to restaurants in Florence. These placemats gave planting instructions and information on species selection for urban areas. **Champion International** furnished paper for the placemats.

Louise Bone, **Steve McEachron** and **Gerald Steeley** participated in the **Florence Garden Club's** annual Arbor Week Project.

Steve McEachron presented several TV programs on Arbor Week and assisted the **Florence Housing Authority** in a tree planting program.

Lou Hyman was guest speaker for the **Marion County** landowner meeting on March 7. He spoke to a large group of landowners on forest taxes.

Roger Nichols presented a fire prevention program, and **Smokey Bear** attended the Annual Kite Day held for **Hartselle's** school children.

The **Valley Journal Newspaper** in **Decatur** devoted their entire front page to a forestry story titled "Alabama's Forests Fuel State's Number One Industry."

The **Decatur Daily** carried extensive coverage on the **Reunion Trees** donated by the **Alabama Forestry Commission**. In addition to trees planted on school property in **Morgan** and **Limestone Counties**, they told about trees planted by the **Limestone Cor-**

rectional Facility and **Limestone County Commission**.

Don Burdette and **Steve McEachron** participated in the "Farming for the Future" seminar held at the University of North Alabama. The seminar was sponsored by Auburn University.

The mayors of **Hamilton**, **Guin** and **Winfield** participated in tree planting programs in their towns.

In Athens, **Howard Swanner** and **Greg Wood** assisted with an Arbor Week ceremony at the **Athens City Cemetery**. Arbor Day programs were held at schools throughout the county.

Louise Bone assisted the **Muscle Shoals Chapter of the Alabama Wildflower Society** with their annual plant sale. About 75,000 plants were sold in just a few hours. The Wildflower Society has several ongoing landscape projects in this area.

The **Colbert County Chapter of PALS** has been awarded a \$1750 grant from the **W. Kelly Mosley Environmental Awards** program. The money is to be used for educational work in Colbert County.

District 9 staff members and county supervisors attended a tree farm program at **Holiday Inn** in **Sheffield**. **Ron Blackwelder**, **Champion International**, serves as District Tree Farm Chairman. Ron led a discussion on certification and recertification of tree farms. **Champion International** hosted a luncheon for AFC employees and other county chairmen.

DISTRICT 10 Union Springs in Bullock County planted a **Reunion Tree** donated by the **Vaughn Road Nursery**.

Montgomery County associates conducted a prescribed burning program February 14. About 30 landowners attended.

Opelika earned the national honor of becoming a **Tree City**. The ceremony took place February 21. The community of Opelika is thankful for the diligent work of former Lee County Forester **Randy Quick** who helped make this award possible.

Bullock County Supervisor **Otis French** and county associates **James Thomas** and **Carey King** picked up and delivered 15,000 loblolly pine seedlings for use by the City of **Union Springs** for the reclamation of a dump site, for the **Bullock County Correction Facility** for planting on the site, and the **Bullock County Commissioners** for planting on county property.

Lowndes County Supervisor **Bill Davis**, Lowndes County Extension Agent **Sam Wiggins** and Staff Forester **Sharon Clark** are training the all girl 4-H Forestry teams for the upcoming contest in **Montevallo**, June 13 and 14. The girls took third at state last year and they are going for first place this time around.

The **Extension Service Leadership Awards** were presented at the annual banquet sponsored by the Montgomery County Extension Service in March. County Supervisor **Bruce Johnson** stated awards were given to the President of the Montgomery County VFD Association **Randolph Thompson**, **Pike Road VFD Fire Chief Jim York**, **Snowdown VFD Fire Chief Bobby Taylor**, **Pintalla VFD Fire Chief Tony Fischer**, **South Montgomery County VFD Fire Chief Tom Ellis**.

District PALS Chairman **Sharon Clark** spoke to Lee County on starting a PALS program. **Clarence Holly** accepted the chairmanship and should do an excellent job.

Elmore County Forest Landowners Association had an educational meeting March 23 on non-game birds of Alabama by **Dr. Joseph Meyers** of the Alabama Department of Conservation and wildflowers of Alabama by **Dr. Douglas T. McGinty** of **Huntingdon College**.

Fort Deposit Reunion Chairman Dela Nora and Mayor **Ralph Norman** represented the community at the planting of a tree to celebrate the **Alabama Reunion**. **Pates Landscaping Company** donated the tree and assisted in the ceremony by planting the tree for the community.

Elmore County's Annual TREASURE Forest Tour is planned for **October 1989** on the property of **Milton**

Stickland and **Ted Watts** in **Central**. Contact **Elmore County Supervisor Lynn Justiss** for more information. 567-5486.

The **Bullock County Forestry Planning Committee** did an excellent job holding the **Area Forestry and Wildlife Field Day**, April 18. Approximately 175 landowners attended from surrounding counties in AFC Districts 4, 6, and 10. Topics covered were use of herbicides, wildlife management, and reforestation practices. Exhibitors attending were **Walt Sellers** with an **Omni sprayer**, **Central Alabama Reforestation, Resource Management, Timberland Enterprises, American Cyanimid, Dow, Dupont** and **Brabham Tree Planting Service**.

Approximately 30 landowners, **Rick Beauchamp**, Extension Service; **Eddie Dennis**, Chairman of the **Elmore County Forestry Landowners Association**; and **Lynn Justiss** and **Jimmy Foreman** of the **Alabama Forestry Commission** attended the **Area Forestry Field Day** held at the **Sedgefield Plantation**.

The **Sedgefield Field House**, used in the **World Championship Bird Dog Competition** and the site of several forestry field days and retirement parties, was reduced to ashes on Thursday, April 27, one week after the **Bullock County Forestry Planning Committee Area Field Day**. It was a total loss.

Elmore County Rangers Lynn Justiss and **Jimmy Foreman** along with Forestry Worker **Billy Magee**, held the **Elmore County FFA Forestry Judging Contest**, April 19. **Elmore County High's (Eclectic) team** placed 1st with the **Stanhope High** team placing 2nd. The Eclectic team competed at the **District Competition** held at **Tuskegee National Forest**.

Fire Specialist Cliff Cobb and **Bullock County Supervisor Otis French** attended the **Rural Fire Protection Meeting**, April 20. Grant checks of \$1250 were given to **Midway** and **Union Springs Volunteer Fire Departments**. **Bullock County Commissioner Alonza Ellis** attended and expressed interest in establishing a **Volunteer Fire Department** in the **Comerstone/Fitzpatrick** area.

Lee County Supervisor J.B. Coker and **Management Specialist Robert Wiggins** set up and held the **District FFA Forestry Judging Contest** for ten counties on the **Tuskegee National Forest** April 21 and 22. Forty high school students attended (38 boys and 2 girls.)

CALENDAR

August 10-11—Montgomery, Sixth Alabama Landowner and **TREASURE** Forest Conference. Registration form is on page 31 of this issue; agenda for the 2-day event is on the back cover.

July 23-25—Clemson University, Clemson, S.C. First Symposium on **Free Hunting on Private Lands in the South**. For more information contact **Rick Busch**, 240-9364.

September 27—Georgia Experiment Station, Griffin, Georgia. **Land-Use and Forest Management Field Day**. Management practices will be demonstrated in the field. Numerous exhibits will be provided by forestry and land-use related firms. For more information, call the **Georgia Forestry Commission**, 1-800-GA-TREES.

October 19-20—Alabama Forest Resources Center Conference. See page 12 of this issue for more information.

October 24-26—Birmingham. **Timber Bridge Conference** to address problem of deteriorating bridges in rural Alabama. Sheraton Perimeter Hotel. Contact **Jim Gober**, 798-3227 or **Dr. John Haygreen**, 826-4050.

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

FOREST INSECTS

Should You Let Them Bug You?

by JIM HYLAND,
Chief, Forest Management

Insects seem to be everywhere! You hear of some insects killing large areas of trees. What do they really do? Do they cause that many problems? What is the impact of insects on the forest?

Definition of Impact

There are several different and yet acceptable definitions of the term "impact." The term can be used to describe the effects of insects on the multiple values associated with forest property. Typical values include timber and fiber production, fish and wildlife, hydrology, grazing, recreation, real estate, and aesthetic enjoyment.

There are a number of additional definitions reported in literature: (1) in the context of Integrated Pest Management (IPM), impact assessment is directed to species of insects considered to be *pests*—and most forest insects are not pests; (2) impact occurs when an insect causes some type of change in forest growth, productivity, or use; (3) this change is in conflict with planned or projected uses of the forest; (4) the conflict created by the change requires alteration of forest management plans, schedules, or uses; and (5) the change created by the insect can be measured and evaluated through some type of value system; thus some unit of value is affected.

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Impact on Resource Values

Forests are managed primarily for the following purposes: timber and fiber

production, hydrology, fish and wildlife, recreation, and grazing. Impact of insects on these resource values can be viewed from economic, ecological, and social perspectives. The exact nature of the impact is determined by (1) the type of activity of the insect (e.g., defoliation, tree killing, etc.), (2) the distribution and abundance of the insect, (3) the particular resource value of concern, and (4) the particular perspective of the individual or organization involved in making the impact assessment with regard to the category of impact (economic, ecological, or social). Most emphasis on impact assessment in forests has been directed to insects that directly affect the economics of timber and fiber production. Furthermore, the assessments have been made when the damaging insects were abundant and widespread. Often the motivation behind impact assessment is to determine the various costs and benefits associated with suppression or prevention projects.

Timber Production

If our interest is simply evaluating the effects of insects on forest productivity, specifically the rate of production of wood and fiber, the significant interactions at the tree and stand level are illustrated in **FIGURE 1**. The various changes in the stand parameters caused by insects influence the value of the

stand. The economic impact shows that there is a direct and immediate loss attributable to insect damage, but that this loss must be discounted at least to the end of the rotation.

Specific insect pests exert different primary economic impacts. For example, bark beetles that kill their host, e.g., *Dendroctonus* spp., influence the stand parameter mortality rate first. This impact directly and immediately influences timber and fiber production and would likely be of greatest concern to the forest manager. The other stand parameters are, of course, also affected. By contrast, the most significant direct impact of a defoliator may be on the stand parameters **mean growth rate** and **net volume increment**. In an urban forest the primary stand parameter affected would likely be appearance.

Hydrology

Hydrologic impacts of insects on forests are measured in terms of water quantity (yield), timing and duration of high and low flows (regimen), and water quality. Most hydrologic studies are conducted in gauged watersheds where these three variables can be monitored. In general, water yield increases as precipitation increases and as vegetation decreases. Insect outbreaks in forests increase water yield and decrease water retention time on watersheds. These

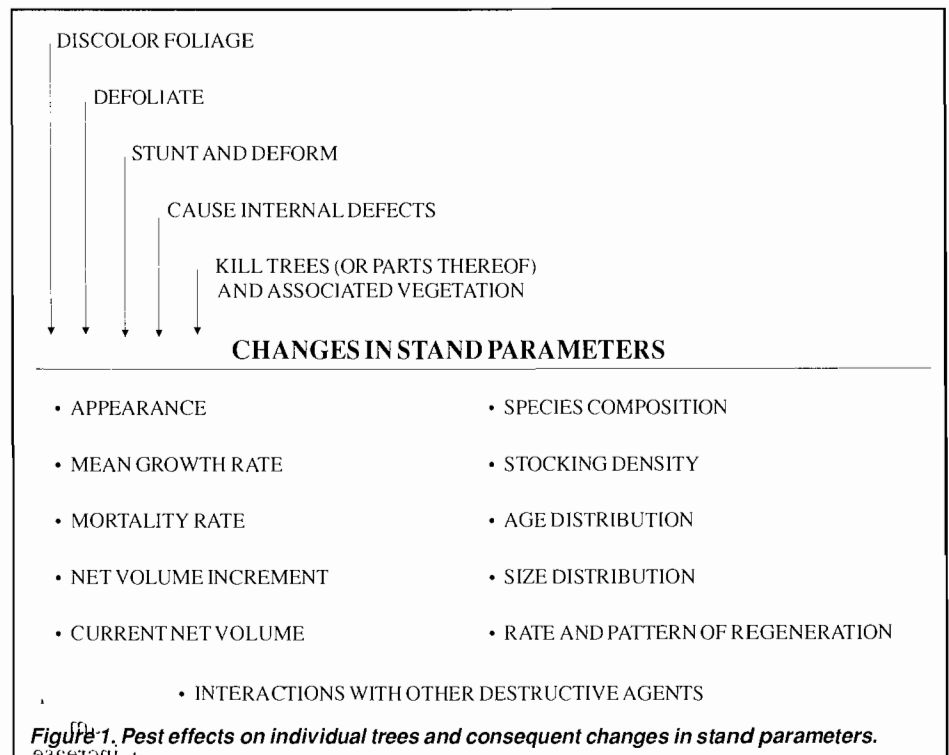


Figure 1. Pest effects on individual trees and consequent changes in stand parameters.

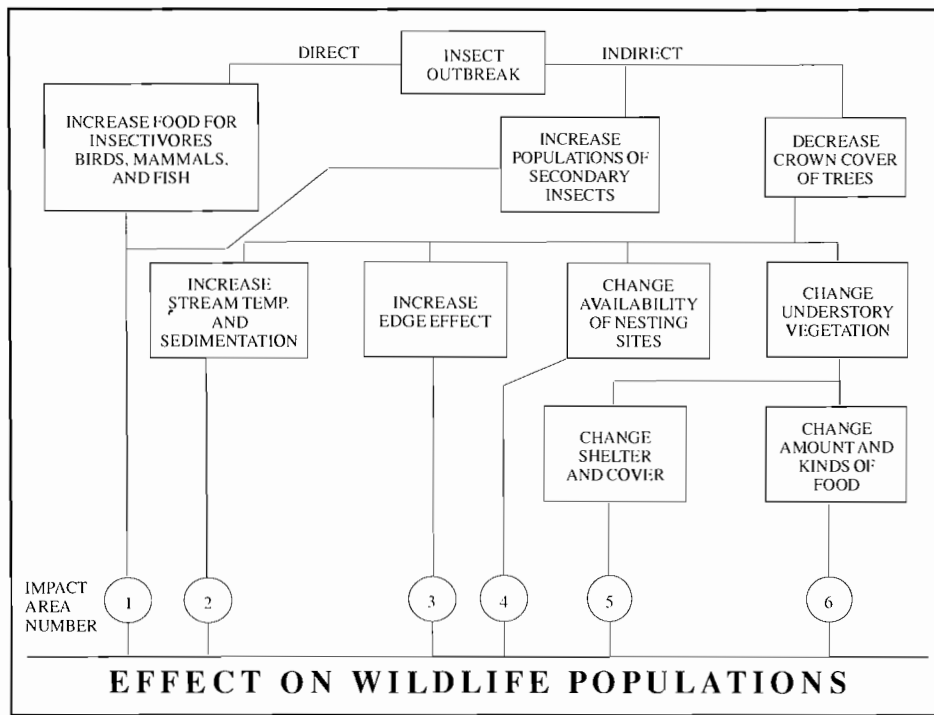


Figure 2. Flow diagram illustrating the relationship of six areas of impact of the southern pine beetle on fish and wildlife populations. (From Maine et al 1980.)

circumstances occur because reduced vegetation levels, resulting from insect consumption, decrease the rate of evapotranspiration and increase the rate of runoff.

Water quality is influenced in several ways: increased nutrient content of streams (primarily phosphorous and nitrogen) and organic debris, increased turbidity, and slightly increased temperature. The nutrient loading of streams and increased turbidity occur as a result of increased levels of frass production and increased rates of transport out of the watershed. The amount of runoff (retention timber) is a function of duration and intensity of storm events, steepness of terrain (percent slope), permeability of the soil, and previous soil moisture conditions. Increases in stream temperature occur because of reduced shading resulting from tree mortality or defoliation.

Although insects have been demonstrated to exert measurable impacts on water quality and quantity, in general these impacts are not of economic importance.

Fish and Wildlife

Forest insects' impact on fish and wildlife populations occurs primarily through influences on habitat structure

and food resources. Insects and other arthropods are also involved in vectoring diseases of wildlife, but we do not consider this type of impact.

The activities of forest insects alter the distribution and abundance of plant species that are used as food and habitat by wildlife. Changes in the pattern of vegetation also influence fish populations through modifications of water quality and quantity. Of course, insects serve as a primary or secondary food source for insectivorous birds, mammals, and fish. The major effect of outbreaks of insects on wildlife in forests is a change in stand parameters such as density, species composition, and age distribution. Of course, the high population density of the insects during outbreaks is exploited by the insectivores.

There have been few studies directed specifically to defining quantitatively the effects of insect outbreaks on populations of fish and wildlife. Most of the information available has been interred.

Maine, et al. (1980), conducted a qualitative study on the impact of southern pine beetle infestations on wildlife. In this study six different areas of impact were examined (FIGURE 2): increase in food supply for insectivores resulting from high population levels of secondary insects, increase in stream temperature and sedimentation, increase

edge effect (i.e., increase in plant species diversity created by gaps produced as a result of infestations), change in availability of nesting sites for birds, change in shelter and cover, and change in amount and kinds of food available. The wildlife species considered included woodpeckers, turkey, quail, other birds, squirrels, rabbits, deer, small mammals, fish, and other mammals (opossum, foxes, skunks, etc.). This study concluded that southern pine beetle infestation had a positive impact on the species studied, principally because of increased food and habitat diversity.

Recreation

Forests are used for many different types of recreation. The most common activities include camping, hiking, fishing, boating, hunting, and observing. There are five distinctly different phases of outdoor recreation: anticipation, travel, on-site experience, travel back, and recollection. The net effect generated to the recreationist of a single recreation experience is a composite of these phases. Insects can have an impact on recreation by intervening into one or more of the phases. Negative or positive impacts influence not only the individual(s) involved directly in the recreation activity, but the service industries that provide the facilities and means for recreation.

Other Forest Values

In the preceding sections we have emphasized insect impact as it relates to timber and fiber production, hydrology, fish and wildlife, and recreation. There are other areas of impact that we have not addressed. For example, residential property and risk of fire are both influenced by insect outbreaks. Furthermore, insects and other arthropods are of considerable importance in the transmission of disease.

Before control strategies are implemented, the impact that a particular insect is causing to that forest must be determined. The cost of the control should not be more than the cost of the impact.

References

Coulson & Witter, Wiley. "Forest Entomology—Ecology and Management," *Interscience*, 1984. ♣

From TREASURE Forest To TREASURE Ship

by STANLEY R. ANDERSON, District Forester, Bay Minette and
MELANIE CURRY, Information and Education Specialist

Editor's Note: *Approximately 80% of all TREASURE Forest landowners choose timber production as their primary management objective.*

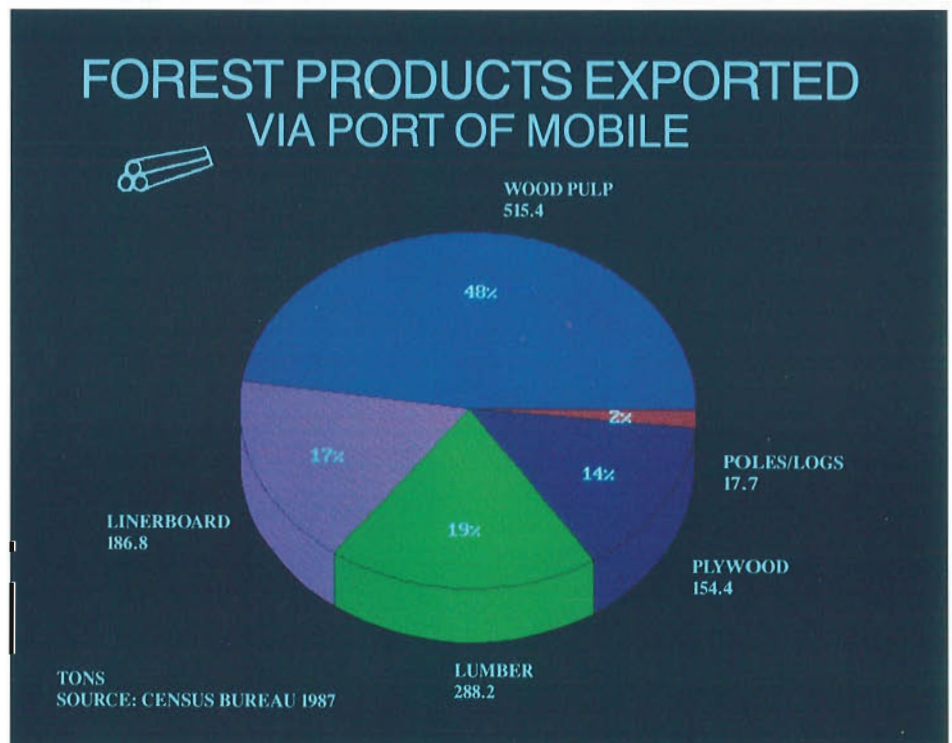
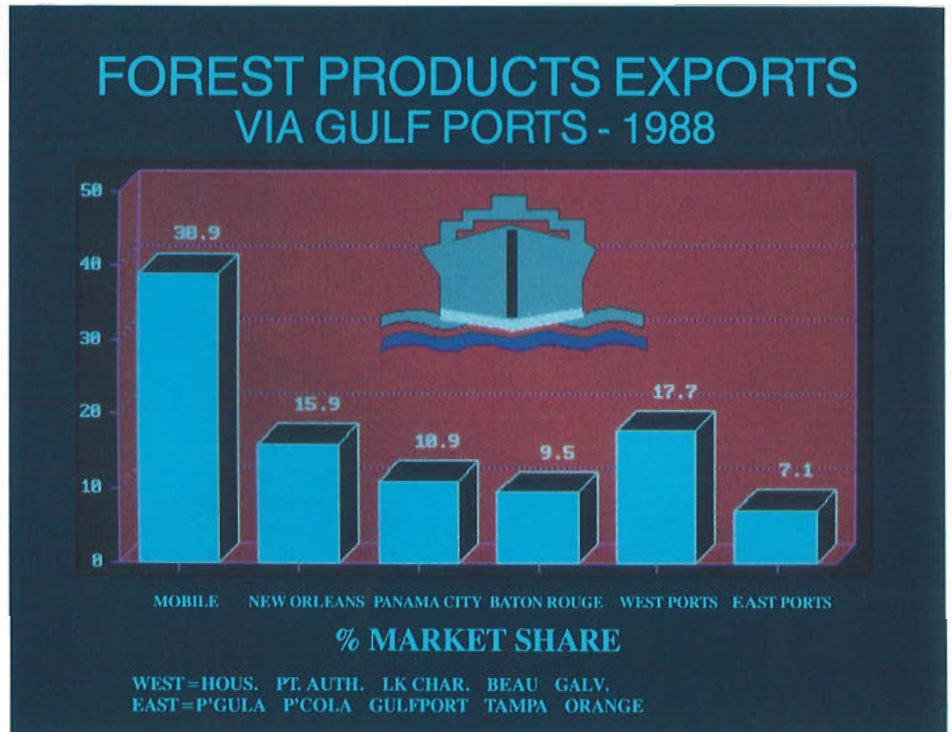
Anyone traveling to Mobile from North or Central Alabama will notice that the forest intensifies. The portion of land use that is forest increases in the Southwest Alabama counties. Also apparent is the funneling of Alabama's major rivers toward Mobile Bay. At the Port of Mobile, these two natural resources merge to create tremendous economic opportunities for the forest landowners of Alabama.

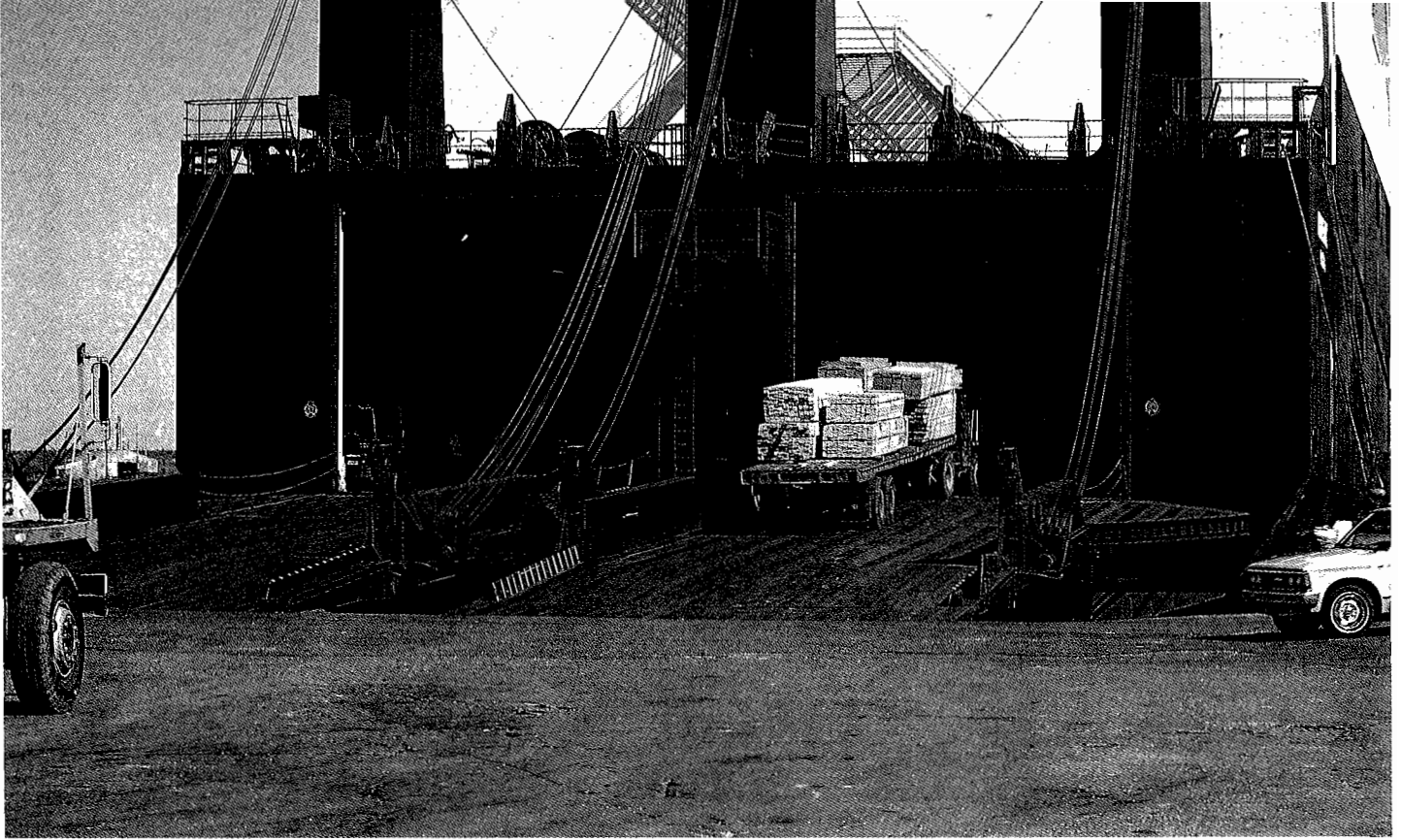
Forest products is the leading general cargo handled by Alabama State Docks. In fact, sixty-two percent of all tonnage shipped through the Port of Mobile is some type of forest product.

A visit to the Alabama State Docks with Buddy Browning, Director of Marketing for the State Docks, allowed the authors to see forest products on the move to both foreign and domestic markets. One such shipment routinely makes trips every two weeks aboard a huge roll-on/roll-off vessel. This modern ocean-going giant is loaded with linerboard, pulp, lumber, coated paper, hickory billets and plywood. The first stop is Tilbury, England, then on to Rotterdam and Hamburg, West Germany. From these ports the Alabama forest products will be distributed to France, Belgium, the Netherlands, Ireland, U.K., Switzerland and Austria.

Docks Attract Industry to Alabama

To underscore the importance of the Port of Mobile to forestry, a recent site dedication of a \$340 million newsprint plant took place in Claiborne, on the Alabama River. Alabama's waterways and seaport will play a major role in the export of the newsprint produced at this new facility. Governor Hunt said this is the largest new industry announced in





Alabama since 1981. The plant is a joint venture of Abitibi-Price, Inc., of Toronto, Canada and Parsons & Whittemore, Inc.—the parent company of Alabama River Pulp Company. Monroe County is the site for the new plant which will bring 1,150 to 2,000 permanent jobs to the area as well as 300 to 400 forestry related jobs and approximately 1,400 construction jobs. The mill will have a rated annual capacity of 220,000 tons and should begin production in 1990.

In addition to the inland port in Claiborne, the Mobile Port connects rivers and also operates inland State Docks' facilities at Bridgeport on the Tennessee River; Montgomery, Selma, and Claiborne on the Alabama River; Cordova and Tuscaloosa-Northport on the Black Warrior River; and Demopolis on the Tombigbee. With 1,500 miles of navigable waterway, Alabama has the largest river system in the nation.

In addition to many private ports, Mobile is the terminal port for the 234-mile Tennessee-Tombigbee Waterway and has been called the "Gateway to the World." The Tennessee-Tombigbee is one of the finest waterway systems in the world and has just completed its busiest year. The summer drought of 1988 brought record low water levels to the Mississippi River diverting a large number of cargos to the Tenn-Tom which remained open all summer. Unaffected by the unusually dry weather, the Tenn-

Tom Waterway served the nation as the only viable barge route to the U.S. Gulf for much of the summer.

Alabama is on a fast economic pace with expansion of existing industries. Three out of nine major expansions (over \$50 million) were forest products industries.

The Alabama State Docks plays an important role in attracting such economic growth, as does the Alabama Forestry Commission. The Alabama Forestry Commission is dedicated to increasing the economic opportunities of Alabama through forest product exportation by supporting a full-time forest products specialist, Gary Faulkner, who works at the Alabama Development Office in areas of economic development and international trade. Faulkner also works closely with the International Trade Center in locating export markets for Alabama's forest products.

This past fall a video was made for the purpose of attracting forest industry to Alabama. The Alabama State Docks, Mobile Port, was a feature part of this video which was shown to Taiwan businessmen and government leaders during a presentation made by State Forester Bill Moody on his forest industry seeking mission to Taiwan.

The New Forest Products Terminal

The new Forest Products Terminal

replaces one of the oldest State Docks' warehouses built in the 1920's. The 172,000 sq. ft. terminal features an adjacent 20 foot dual-track rail receiving platform with a canopy for all-weather loading. Ceiling height has been raised from 16 to 24 feet. Better lighting, ventilation and wider doors have been incorporated in the design. The ship loading apron has been widened from 40 to 100 feet. Dock officials say the new Forest Products Terminal handles some \$150 million worth of wood pulp, linerboard, plywood and lumber annually. The complex is the most modern and efficient forest products terminal on the Gulf!

Alabama State Docks Director John Dutton reported 1988 as the new record for the general cargo handled by the State Docks. A major contributor to the record tonnages was the large increase in the export of forest products. Director Dutton referred to forest products as "one of the fastest growing cargoes at the port." The State Docks' new Forest Products Terminal is expected to handle some 500,000 tons annually.

Largest Shipments

The Port of Mobile is the premier forest products load center on the U.S. Gulf. Some of the largest roll-on/roll-off vessels in the world visit the Alabama State Docks at Mobile. An all-time

record was set in February of 1989 when the Norwegian-flag vessel TAMPA took on 28,253 tons of forest products including plywood, lumber, linerboard, particle board and wood pulp.

The second largest forest products shipment took place in April, 1988 when the Panamanian-flag vessel M.V. PERENNE took on a total of 23,790 tons of raw logs for export to Taiwan and China. These pine and hardwood logs harvested in Alabama were transported down the Black Warrior River to Alabama's seaport by a fleet of 22 barges. This vessel was the first in 40 years to take on a complete cargo of raw logs for export.

Shipping Around the World

A recent drive through several warehouses with Pressley Jackson and Jane McKinney, sales and marketing representatives for the State Docks, provided an overview of the multitude of various forest products destined to markets all over the globe. The State Docks loads forest products on vessels going to Europe, the Mediterranean, Central and South America, the Caribbean and the Far East.

Basic raw materials from Alabama's forests also help to narrow the huge balance of trade deficits the U.S. has with the Pacific Rim countries. Pulp is

shipped to Taiwan and Korea and raw wood chips are sent to Taiwan and Japan. Caribbean ports served on a routine basis include Puerto Rico, Jamaica, Dominican Republic, Caraca and Aruba.

Last fall, Hurricane Gilbert forged a path across the Caribbean ruthlessly destroying everything in its path. The island nation of Jamaica received full impact leveling or badly damaging 60 percent of the homes leaving more than 550,000 homeless. Efforts to rebuild were underway immediately.

The Port of Mobile played a very important role in this rebuilding by supplying forest products to this devastated nation. The Alabama State Docks made an initial shipment of 60 million board feet of lumber to start the rebuilding of homes and businesses. Subsequent shipments of three to five million board feet per month continued until the main Jamaican port of Kingston was backing up with shipments of lumber.

Alabama Forest Industries Supply Foreign Markets

International Paper Company (I.P.) relocated its wood export division to Mobile in 1986 due to promising markets for Southern Yellow Pine in Europe, the Middle East and Asia. I.P. sees the Alabama seaport has excellent access to

Caribbean and South American markets as well.

The Stallworth Timber Company of Beatrice, Alabama, has been busy exporting creosoted utility poles to markets in Cyprus and to Tanzania, Africa. Stallworth, which has offices in Mobile, New Hampshire and London, hopes to be exporting Alabama poles to the Dominican Republic, Indonesia and Jordan in the near future.

Scott Paper Company is also moving its share of forest products through the port of Mobile. Recently the TOSKANA, a Greek vessel, delivered almost 30,000 tons of wood chips to a customer in Taiwan.

Pressley Jackson perhaps says it best. "A pine tree from Alabama can wind up in any part of the world in almost any form."

Alabama is blessed with tremendous forests and waterways. The Alabama State Docks effectively blends these resources for the good of Alabama's economy and the world's as well. Certainly, the Alabama State Docks helped to make the globalization of Alabama forest products possible.

References and Suggested Reading

Business Alabama Monthly, December, 1988, p. 34.

Port of Mobile, March, 1989, ppg. 4-8 ♠



Randy Quick March 4, 1956 – March 16, 1989

In Memorium

This issue of *Alabama's TREASURED Forests* is dedicated to the memory of Randy Quick, an Alabama Forestry Commission associate who worked in Lee County.

Randy was a friend to all who met him. We are all richer by having known him. His lust for life and strive for excellence was an influence to all who met him. Perhaps an excerpt from the poem, "A Psalm of Life," by Henry Wadsworth Longfellow, describes Randy's effect on others.

*Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on sands of time.*

*Footprints, that perhaps another
Sailing o'er life's Solemn main
A forlorn and shipwrecked brother,
Seeing, shall take heart again.*

Randy is missed by his friends, and though he is gone from this world, he is not forgotten.



PINELAND

A Second Look at Alabama's First TREASURE Forest

by LARKIN WADE, Extension Service, Auburn University and
KIM GILLILAND, Managing Editor

This year—1989—is the year of the Alabama Reunion. It is a time for friends and relatives to come home; to revisit their roots—their beginnings. In every issue of this magazine you read about outstanding TREASURE Forests

or Helene Mosley Memorial TREASURE Forest winners. In addition, in this issue of the magazine, we would like to revisit Alabama's first TREASURE Forest which was featured in the very first issue of *Alabama's TREASURED Forests* in

the fall of 1982.

Did you ever wonder how the TREASURE Forest program began?

In 1974, forestry was under siege by environmentalists and the public. Clear-cutting was a common perception of

forestry and foresters were made to look like villains. Forestry is more than trees, as we all know, but foresters were not conveying this idea to the public.

In August, 1974, the Alabama Forestry Planning Committee (AFPC) adopted the TREASURE Forest program and began to field testing the concept. Endorsements for the TREASURE Forest program were solicited and received from environmentalists, industrialists, and many others. In July, 1975, the first of four TREASURE Forests was certified—the property of W. Kelly Mosley in Marengo County, known as Pineland. Insofar as the public agencies were concerned, forestry was on the offensive again.

TREASURE Forest has its roots in Pineland, the 1,000-acre property owned by Mosley near Myrtlewood. It has its roots in issues related to our environment which are still current. The AFPC is comprised of those state and federal agencies having forestry responsibilities at the state level. One goal of the organization is to encourage landowners to manage their forests for timber, wildlife, outdoor recreation, aesthetics, and environmental enhancement. And so, the TREASURE Forest program was established.

Roots give rise to growth, and the growth of the TREASURE Forest program can be partly attributed to the Helene Mosley Memorial TREASURE Forest Awards. The awards annually recognize the most outstanding TREASURE Forests, especially with regard to educational value and use. These awards provide a high incentive for TREASURE Forest owners to teach others, and this has been a primary activity at Pineland.

Helene Mosley Award recipients have an almost unspeakable love of their land. Words do not articulate their feelings. And true to the nature of this spiritual reverence, their feelings convert to the enthusiastic application of improved practices on their own property and to encouraging others to do likewise.

And beyond TREASURE Forest? The owner of TREASURE Forest Number One challenges us all. “After Pineland was certified as a TREASURE Forest, I hoped we could continue to do the things in a way that it would deserve the recognition it had already been given,” Dr. Mosley said recently.

For Mosley, the 14 years following TREASURE Forest certification in 1975 have been as busy as the 10 years before certification. In 1985, at the age of 82, Kelly Mosley actively began his second TREASURE Forest.

He purchased 125 acres adjacent to Pineland from American Can Company and has carried out numerous cultural practices on these acres. On the original 960 acres the activity has been astounding. One can hardly recognize the property since the first certification in 1975.

Planted pine five years and younger has been pre-commercially thinned on 325 acres. All areas ready for prescribed burning have been burned one or more times, depending on conditions and age of pine stands. Approximately 312 acres with pine and mixed hardwood have been treated with hypohatchet and TORDON or sprayed with herbicides.

Close to 6,000 cords of hardwood pulpwood and 1,750,000 board feet of hardwood sawtimber have been harvested on the original 960 acres of Pineland. More than 2,000 cords of hardwood pulpwood, 300 cords of pine pulpwood, 370,000 board feet of hardwood sawtimber and 85,000 board feet of pine sawtimber have been cut from the 125-acre addition to Pineland. Approximately 15 acres of hardwood were left in an area to contrast before and after cutting.

Four additional game fields have been added, making a total of 12. They range in size from one-half to three acres.

Four of the fields have 1,000 bicolor planted on the edges for turkeys. Two hundred fifty sawtooth oaks have been planted to provide acorns for deer and turkey. Each year approximately 40 to 50 deer are killed, together with 6 to 8 turkeys.

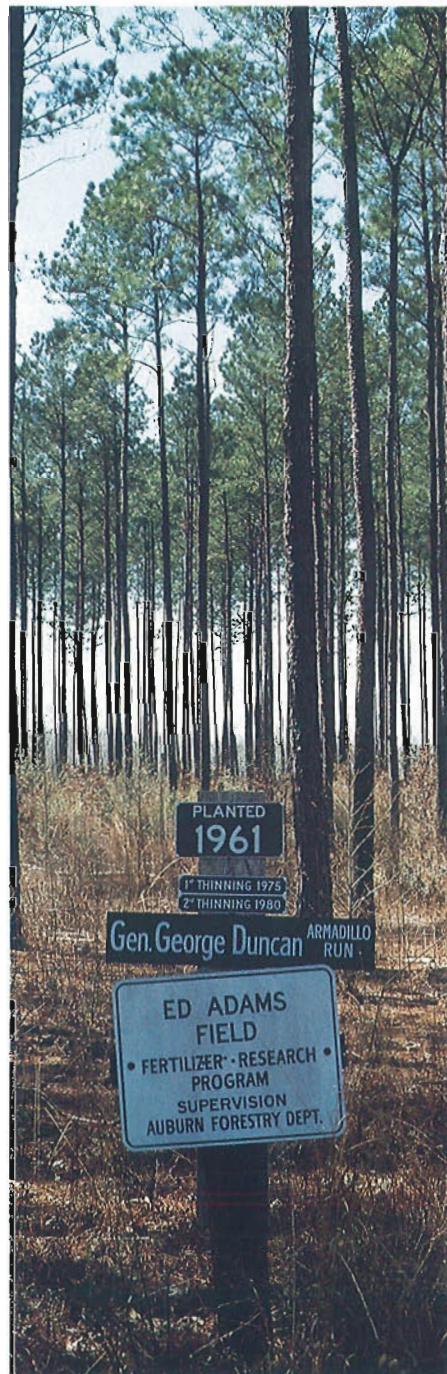
In the past six years approximately 1,675 pounds of bream have been taken out of two lakes, with about the same amount of bass.

Additional roads have been added bringing the total miles to 15. Each road has a sign bearing the name so that navigational directions are much easier to understand!

Since 1976, all pine seedlings have been of an improved quality and the growth continues to be excellent. Approximately 25 acres of sycamore planted over 20 years ago are now growing with mixed hardwoods along the creek bottom.

More than anything else, Pineland is a place where education occurs. Buck Compton, a cattle producer, first learned about Charolais cattle from a world traveling Eastern airline pilot when they were both visiting Pineland. Allen Black, Marengo County supervisor with the Alabama Forestry Commission, and his predecessor, the late Joe Watts, got their early prescribed burning experience on Pineland acres. Friends from Atlanta, Auburn, Linden, Myrtlewood, and all over have carried away ideas too numerous to list as a result of attending tours, field days, and informal gatherings.

In the words of a Quaker philosopher, “The most important thing one person can be to another is radiant and encouraging.” And the part of the TREASURE Forest program with its roots in Pineland challenges us again. TREASURE Forest owners have a responsibility. They need to educate others and help people they know to become TREASURE Forest owners. ♣

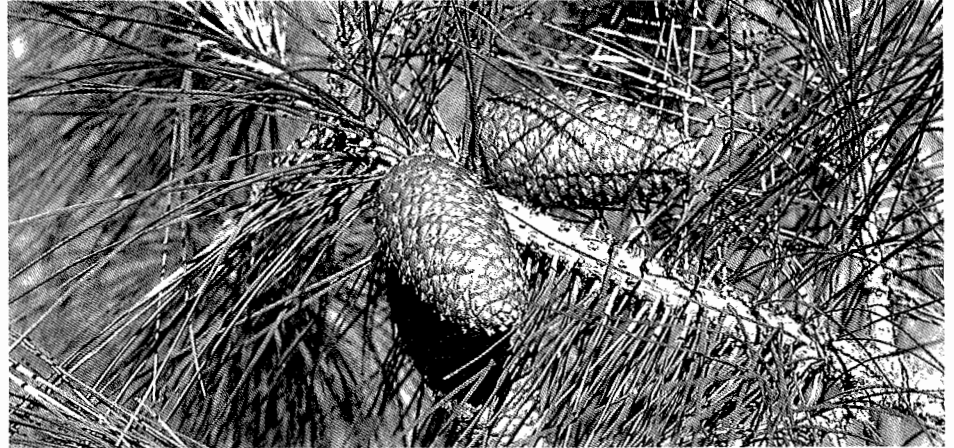


Cone And Seed Development in Southern Pines

by BILL PADGETT, Chief, Tree Improvement

The basic knowledge of the life cycle of a pine cone is paramount to realizing the diversity of forest management opportunities associated with the pine species. The pine is monoecious, producing male and female flowers, or strobili, on the same tree. The male flowers are usually produced in the lower part of the tree crown and the female flowers in the upper part of the crown. The pollen is wind disseminated but generally is not carried more than 300 to 500 feet in quantities large enough to be effective in pollination. The majority of the pollen falls closer to the parent tree.

The flower primordia is formed during mid-summer before pollination occurs the following spring. The male flower buds appear in the fall, followed



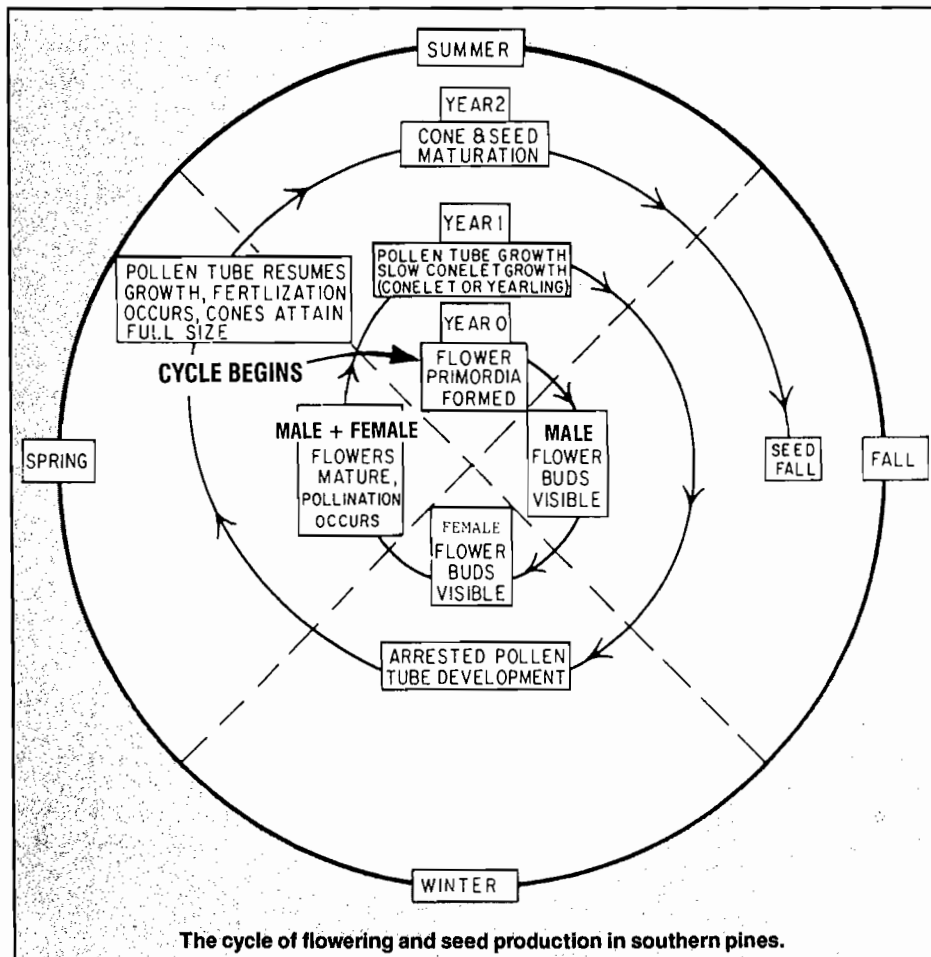
by the female buds in the winter with pollination occurring in the spring.

During the year following pollination,

the female flowers are called conelets (one year old cone). Growth of the conelets is rather slow during this period reaching approximately fifteen percent of the size of a mature cone.

In the second spring, when tree growth begins, the ovule (seed) also resumes development and enlarges. During the next 12 to 16 months as the seed is developing, the conelet also enlarges rapidly to form a full-size cone. Seeds are full size at the time of fertilization. Cones and seeds continue to mature until late summer or early fall.

The figure on this page illustrates the sequence from flower primordia formation to seed-fall. This development takes part of three growing seasons.



The cycle of flowering and seed production in southern pines.

References

- Bramlett, D.L.; Belcher, E. W. Jr.; Debarr, G. L.; Hertel, G. D.; Karrfalt, R. P.; Lantz, C. W.; Miller T.; Ware, K. D.; and Yates, H. O., III. "Cone Analysis of Southern Pines: A Guide Book," **General Technical Report SE-13**, USDA-Forest Service, Southeastern Forest Experience Station, Asheville, N.C. and Southeastern Area, S&PF, 1977, Atlanta, GA.
- Fowells, H. A. "Silvics of Forest Trees of the United States," USDA-Forest Service, **Agriculture Handbook No. 271**, 1965, Pg. 360-365.
- Wahlenberg, W. G. **Loblolly Pine**, 1960, Chapter 4, Pages 148-152. ♣

Sixth Alabama Landowner and TREASURE Forest Conference Civic Center—Montgomery, Alabama—August 10-11, 1989

Registration Form

Name _____
(type or print)

Company _____
(list names of all attendees)

Address _____

City _____ State _____ Zip _____

Phone _____ County _____

County where you own land _____
(Only one county please; if you own land in more than one county, list the county in which you own the majority of your land.)

Category of Participant (Check appropriate categories)

Private Forest Industry Deer Management Program Landowner TREASURE Forest Landowner
 Agency* Tree Farm Youth

*Employees of government agencies that are members of the Forestry Planning Committee. If you are a government agency employee and a landowner, check only the Agency Employee category.

Check Appropriate Choices:

I will attend the meeting on Thursday. I will attend the banquet on Thursday night.
 Youth will attend. Number _____ Ages _____ I need _____ additional banquet tickets at \$15.

Registration Fee

There will be a \$30 pre-registration fee. Registration at the door and late registration will be \$35. The registration fee includes both days' sessions and banquet ticket. The registration fee for youth (ages 6-14) is \$10 per youth. This includes cost of the banquet. *No registration fee refunds will be made after July 21.*

Pre-Registration Deadline

The pre-registration deadline is July 21. Your registration form must be postmarked by July 18. After this date your registration will be considered as at-the-door registration. Registration will be from 10 a.m. until 2 p.m. August 10. The program begins promptly at 2 p.m. August 10 and will conclude at 12 p.m. August 11.

Mail upper portion of form and fee (payable to Alabama Forestry Conference) to:

Mrs. Patricia Cairns, Alabama Forestry Commission, 513 Madison Avenue, Montgomery, AL 36130

Hotel/Motel Information

Arrangements and special rates have been made with the following hotels/motels for Landowner Conference attendees. Please specify you are attending the Conference when making your reservations. The cut-off date for these guaranteed rates is July 21. Any reservations made after this date will be made on a room availability basis only.

Madison Hotel
120 Madison Avenue
4 blocks from Civic Center
1-800-356-1744 \$40 Flat Rate

State House Inn
924 Madison Avenue
9 blocks from Civic Center
265-0741 \$38 Flat Rate

Econo Lodge
2625 Zelda Road
I-85 and Ann Street
15 minutes from Civic Center
269-9611 \$30 Flat Rate
(Includes free continental breakfast
and evening buffet dinner)

The Riverfront Inn
Coosa and Tallapoosa Streets
2 blocks from Civic Center
834-4300 \$38 Flat Rate

Sixth Annual Landowner and TREASURE Forest Conference

A Time for Reunion

August 10

Landowner Session

12:00—2:00 Registration
2:00—5:00 Game Management
Non-Game Management
Forest Economics
Wildflowers
Managing for Aesthetics
6:00—7:00 Social Hour
7:00—9:00 Banquet

County Committee Session

12:00—2:00 Registration
2:00—5:00 How to work together more effectively as
county forestry planning committees
Mission of county forestry planning
committees
Presentation of outstanding county
forestry planning committee awards
7:00—9:00 Banquet

Youth Program

12:00—2:00 Registration
2:00—5:00 Estimating Timber Size and Age
Tree Measurement Competition
Tree Identification and Compass
Tree Identification and Compass
Competition
7:00—9:00 Banquet

August 11

General Session

8:30—11:30 Wetlands
What's Happening in Forest Products
Hardwood Management
Deer Management
TREASURE Forest

Youth Program

8:30—11:30 Tour Montgomery Zoo
11:30—12:00 Drawing for Door Prizes



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